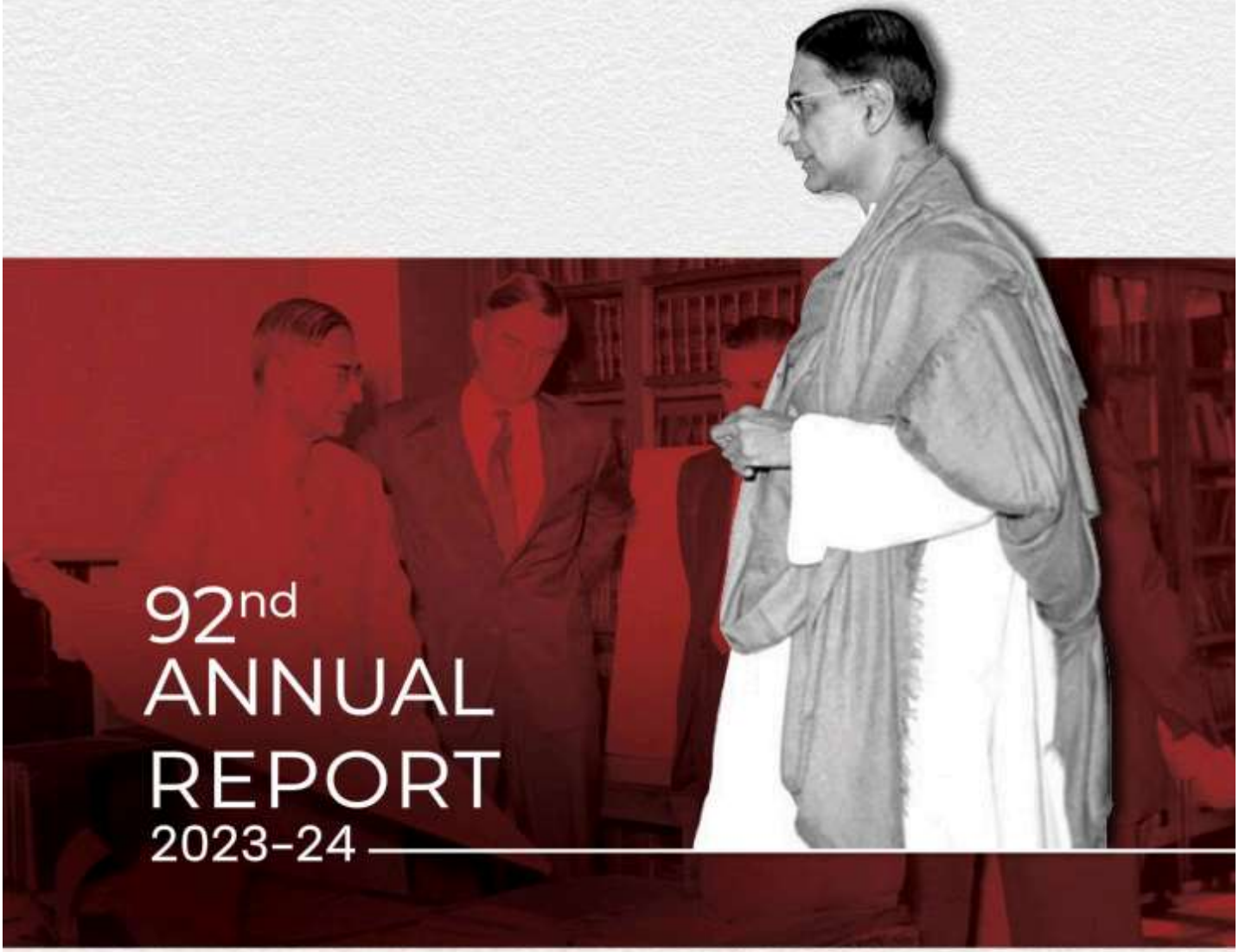
INDIAN STATISTICAL INSTITUTE

92nd ANNUAL REPORT 2023-24



92nd ANNUAL REPORT 2023-24

Indian Statistical Institute

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PREFACE

The Annual Report 2023-24 endeavours to summarize the salient research, teaching, training and consultancy activities which the ISI faculty members carried out during the period under review. While we celebrate the achievements of the ISI fraternity, we also miss the doyen of statistical world, Prof. C. R. Rao. He left us forever on 22nd August 2023. He was the right-hand man of Prof. Mahalanobis and the Director of the Institute. The Annual Report of this year devotes a few pages to his memory. I am grateful to my colleague Prof. Probal Chaudhuri for readily agreeing to write this piece.

In keeping with the times, this year we have tried to collect most of the relevant information from the faculty on-line. Since this is the first such attempt, there have been some hiccups. We shall take care and the process will hopefully improve next year. We aim to collect all the relevant information on-line next year.

The compilation of this report requires the support and co-operation of not only the scientific workers but also of the non-scientific workers. They are gratefully acknowledged. Our colleagues at the Reprography and Photography Unit deserve special mention for helping the Editorial Committee with the required photographs from their archives. My sincere thanks are due to our colleagues at the Public Relations Unit for tirelessly burning the mid-night oil for its completion. I am also grateful to my colleagues on the Editorial Board for their advice and support. Inadvertent errors and/or omissions are regretted.

M Z Anis
Chairperson

The Editorial Board

From the Desk of the DIRECTOR

Sanghamitra Bandyopadhyay

It is my privilege to present before you the Annual Report 2023-2024 of the Indian Statistical Institute. Founded in 1931 on the guiding principle of Unity in Diversity, ISI retains its unique interdisciplinary approach, encouraging close interaction between Statistics and the natural and social sciences for mutual development of Statistics and these sciences. The journey of more than ninety-two years has been eventful and fulfilling. Aspirations remain as high as ever as the Institute adjusts to the demands of the changing times, making significant strides in its academic programs, enhancing engagement with government and industry, and focusing on multidisciplinary research in data driven science.

The year 2023-24 saw the Institute continue to flourish under the able leadership and guidance of Prof Sankar Kumar Pal, the President of the Institute, and Dr. Pronab Sen, the Chairman of the ISI Council. The Institute celebrated the 93rd Foundation Day and conducted the 58th Convocation in December 2023. Professor Trevor J. Hastie, John A. Overdeck Professor of Mathematical Sciences, Professor of Statistics, Stanford University, was the Convocation speaker, while Prof. Nilanjan Chatterjee, an ISI alumnus and Professor at Johns Hopkins University, delivered the Foundation Day lecture.

The faculty and students continue to bring recognition to the Institute through their scientific endeavors. I mention some of the recognitions received by faculty members and scholars of the Institute in the past year. Arup Bose of the Theoretical Statistics and Mathematics Unit, Kolkata received the prestigious International Statistical Institute Mahalanobis International Award 2023. Arup Bose continues his J C Bose Fellowship for the period January 01, 2024-March 31, 2027. Neena Gupta of Theoretical Statistics and Mathematics Unit, Kolkata and B.S. Daya Sagar of Systems Science and Informatics Unit, Bangalore were elected Fellows of Indian National Science Academy (INSA). Neena Gupta has also received the 2023 TWAS-CAS Young Scientist Award in Mathematics. Sushmita Mitra of the Machine Intelligence Unit, Kolkata and Jaydeb Sarkar of Theoretical Statistics and Mathematics Unit, Bangalore were elected Fellows of the Indian Academy of Sciences (IASc). Utpal Garain of Computer Vision and Pattern Recognition Unit, Kolkata was elected as Fellow, Indian National Academy of Engineering (INAE). Souvik Roy of Applied Statistics Unit, Kolkata was selected for receiving the Social Choice and Welfare Prize for the year 2024 given by the Society for Social Choice and Welfare, France. Raghunath Chatterjee of Human Genetics Unit, Kolkata received the SERB Science and Technology Award for Research (STAR). Kiranmoy Das of the Interdisciplinary Statistical Research Unit, Kolkata is the recipient of IISA Early Career Award in Statistics and Data Science (Application Track). The Chief Librarian Kishor Chandra Satpathy received the Distinguished Alumni Award from Panjab University Alumni Association. Jaydeb Sarkar was also elected Fellow of the National Academy of Sciences, India (NASI). CNRS Postes Rouges Visiting Fellowship 2023 was awarded to Yogeshwaran Dhandapani of the Theoretical Statistics and Mathematics Unit, Bangalore. Kanishka Kacker of the Economics and Planning Unit, Delhi received the 2023 EfD Peter Berck best discussion

> ***The faculty and students continue to bring recognition to the Institute through their scientific endeavors. Much to our delight, our alumnus, Sourav Chatterjee, Professor of Statistics and Mathematics, Stanford University was elected a Fellow of the Royal Society. Another alumnus, Apoorva Khare, currently Professor at IISc Bangalore, was conferred the SS Bhatnagar Award.***
>
> ***After many years, the Institute is on the verge of launching its third Bachelors program, namely Bachelors of Statistical Data Science (BSDS). In line with the recommendation of the National Education Policy, BSDS is planned to be a four-year program with an exit option after three years, and an option for a Master's degree after fifth year of studies.***

paper award. Soham Sarkar of the Theoretical Statistics and Mathematics Unit, Delhi received the Inspire Faculty Fellowship for five years starting from September 2023. Abhiroop Mukhopadhyay of the Economics and Planning Unit was elected as a visiting fellow of Institute of Advanced Study, Princeton. Prof. Sankar Kumar Pal, President of the Institute and Emeritus Professor, received the Distinguished Alumni Award 2023 from Ramakrishna Mission Vivekananda Centenary College, Calcutta and the 30th Prasanta Chandra Mahalanobis Memorial Lecture Award, at the 30th West Bengal State Science & Technology Congress, Govt. of West Bengal in 2023. Prof. Partha P. Majumder has received the INSA Distinguished Lecture Fellowship (2023). Shri Uddalok Sarkar, JRF of the Advanced Computing and Microelectronic Unit (ACMU) received the prestigious Google PhD Fellowship in 2023. Snehinh Sen, a student of M. Math, secured first position in the CSIR-UGC NET. Students of ISI have performed excellently in the Madhava Mathematics Competition 2024. Much to our delight, our alumnus, Sourav Chatterjee, Professor of Statistics and Mathematics, Stanford University was elected a Fellow of the Royal Society. Another alumnus, Apoorva Khare, currently Professor at IISc Bangalore, was conferred the SS Bhatnagar Award. Many other faculty members and students of the Institute have received various recognitions. The full list is included in a part of this Annual Report. We are proud of the achievements of all of them.

As in every year, many workshops, training programs and conferences were conducted round the year. Institute faculty members, scholars and students have published more than 520 journal articles, besides many more in conferences and as book chapters. The institute faculty members have carried out many national and international assignments, including sponsored projects. They are regularly invited to various Universities around the world for research collaborations and for giving lectures and seminars. These are listed in different parts of this report. Several outreach programs were conducted by the Institute in various institutions, including schools and colleges, for popularization of Statistics, Mathematics and the other sciences.

After many years, the Institute is on the verge of launching its third Bachelors program, namely Bachelors of Statistical Data Science (BSDS). In line with the recommendation of the National Education Policy, BSDS is planned to be a four-year program with an exit option after three years, and an option for a Master's degree after fifth year of studies. Other recently launched programs, like the fully online Post Graduate Diploma in Applied Statistics, are progressing well. The two-year long tri-Institute Post Graduate Diploma in Business Analytics program, organized jointly by ISI, IIT Kharagpur and IIM Calcutta continues to garner deep interest from the students' community, with the placement record remaining very strong. The 4th ISI Review Committee had submitted its recommendations to the Ministry of Statistics and Program Implementation (MoSPI) in 2022. The administrative ministry has forwarded these to the Council of the Institute for its views. The Council is presently reviewing these recommendations.

The construction works in R. C. Bose Centre for Cryptology and Security and the ISI North East Centre in the North East are now in advanced stages. New academic buildings are also coming up in the Headquarters in Kolkata and the Centre in Bengaluru.

The Centre for Artificial Intelligence and Machine Learning (CAIML) remains engaged in carrying out research in several niche areas of artificial intelligence (AI) and machine learning (ML). One of these areas addresses advanced ML techniques for cryptanalysis for the Defence Research and Development Organisation. The Centre for research on the Economics of Climate, Food, Energy and Environment (CECFEE) in ISI Delhi has successfully taken up several studies related to the Environment and Climate, and was successful in attracting significant grants, including foreign grants. Other cells like the Cell for Collaboration with Academia, Industry and R&D labs (CCAIR), the PhD-DSc Cell, the Faculty Recruitment Cell and the Placement Cell have provided exemplary administrative support. Efforts are ongoing to streamline the faculty recruitment process. Several rounds of recruitment including Special Drives have been or are being launched. The Institute has signed/ extended several MoUs with other organizations from the government, industry and academia.

I remain grateful to the President of the Institute, Prof. Sankar K. Pal, the Chairman of the ISI Council, Dr. Pronab Sen, and all members of the ISI Council for their leadership and guidance, which has helped ISI in all its activities in 2023-2024. Thanks are due to the Secretary, Ministry of Statistics and Programme Implementation and all officials of the Ministry of Statistics and Programme Implementation, Government of India for their strong support. I thank all the scientific and non-scientific workers, students and all well-wishers of the Institute for extending their cooperation for the all-round development of the Institute.

Sanghamitra Bandyopadhyay

Chapter

1

The Institute

About The Institute

The Indian Statistical Institute, an Institute of National Importance, is a premier and internationally acclaimed research, teaching and training institute.

Founder: Professor Prasanta Chandra Mahalanobis

Vision:

To nurture Statistics as a unifying force across disciplines; encompass emerging areas of research in all our scientific divisions and strive towards advancing data driven strategies for national development and social welfare.

Mission:

- To promote the study and dissemination of knowledge of Statistics, to develop statistical theory and methods, and their use in research and practical applications at large, with special reference to problems of planning for national development and social welfare;
- To undertake research in various fields of natural and social sciences with a view to the mutual development of Statistics and these sciences;
- To provide for, and undertake, the collection of information, investigations, projects, and operational research for purposes of planning and the improvement of efficiency of management and production; and
- To undertake any other ancillary activities in fulfillment of the objectives stated above.

1.1 Locations

Campus Locations and Outlying SQC&OR Units

The Indian Statistical Institute was formally established in 1931. The Institute has its headquarters in Baranagar, Kolkata. It has four other centres at Delhi, Bangalore, Chennai and Tezpur, and a branch at Giridih. The R.C. Bose Centre for Cryptology and Security was created in 2014 and is also located in Kolkata. The various locations are shown on a map of India along with a separate list of units at each campus.

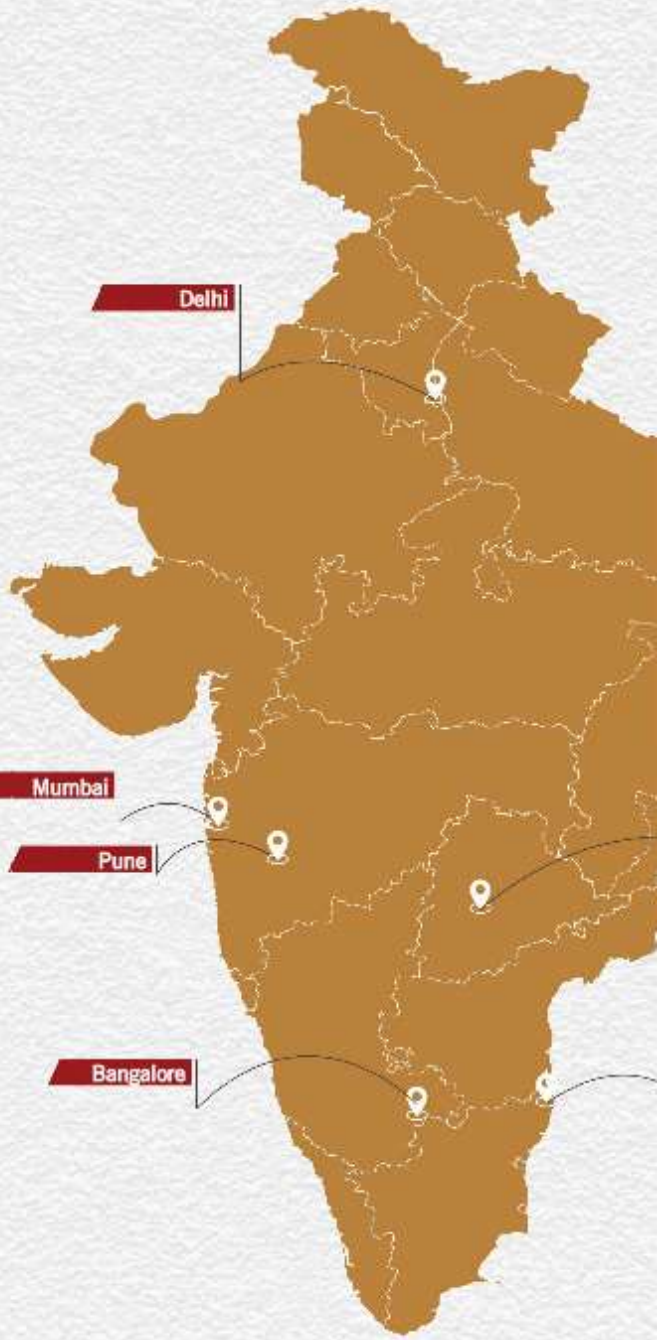
At Kolkata, West Bengal

I) The Head Quarters of ISI

The headquarters of the Institute, which shifted to its present campus in 1953, has a lush green sprawling campus in the northern fringe of the Kolkata metropolis. It has 19 academic units, a large and vibrant library, a computer and statistical services centre, two museums, two centres of excellence, two Associate Institution of ISI and a Technology Hub. They are listed below: -

1. Advanced Computing and Microelectronics Unit (ACMU)
2. Agricultural and Ecological Research Unit (AERU)
3. Applied Statistics Unit (ASU)
4. Biological Anthropology Unit (BAU)
5. Computer Vision and Pattern Recognition Unit (CVPRU)
6. Economic Research Unit (ERU)
7. Electronics and Communication Sciences Unit (ECSU)
8. Geological Studies Unit (GSU) and the Geology Museum
9. Human Genetics Unit (HGU)
10. Interdisciplinary Statistical Research Unit (ISRU)
11. International Statistical Education Centre (An Associate Institution of ISI)
12. Linguistic Research Unit (LRU)
13. Machine Intelligence Unit (MIU)
14. Physics and Applied Mathematics Unit (PAMU)
15. Population Studies Unit (PSU)
16. Psychology Research Unit (PRU)
17. Sampling and Official Statistics Unit (SOSU)
18. Sociological Research Unit (SRU)
19. Statistical Quality Control & Operations Research Unit (SQC&ORU)
20. Stat-Math Unit (SMU)
21. Library and the PCM Memorial Museum and Archives (PCMMMA)
22. Center for Soft Computing Research (CSCR): A National Facility (An Associate Institution of ISI)
23. Centre for Artificial Intelligence and Machine Learning (CAIML)
24. Computer and Statistical Services Centre (CSSC)
25. Technology Innovation Hub (TIH)

The TIH centre was established on March 16, 2021 pursuant to the decision of the ISI Council in its meeting held on December 22, 2020



II) The RC Bose Centre

The R.C. Bose Centre for Cryptology and Security at Kolkata was created in 2014 as a national hub for cryptographic requirements. This Centre has only one Unit at present.

- Cryptology and Security Research Unit (CSRU)

The Bangalore Centre, Karnataka

The Bangalore Centre was conceived by Professor P.C. Mahalanobis during the 1960s. The Statistical Quality Control Unit had been functioning in Bangalore since 1956 and the Documentation Research and Training Centre was set up in 1962. The activities of the Bangalore Centre started in September 1978 in a rented building and the various units moved to the present campus in May 1985. The Bangalore Centre was formally declared as a Centre of ISI in September 1996. The present campus, full of eucalyptus trees, is located on Mysore Road on the outskirts of the city and is close to the Bangalore University campus. Presently the Centre has six units and a library, namely –

- Applied Statistics Unit (ASU)
- Documentation Research and Training Centre (DRTC)
- Economic Analysis Unit (EAU)
- Statistical Quality Control & Operations Research Unit (SQC&ORU)
- Stat-Math Unit (SMU)
- Systems Science and Informatics Unit (SSIU)
- Library

The Statistical Quality Control & Operations Research (SQC & OR) Units

The Institute has a network of seven Statistical Quality Control & Operations Research (SQC&OR) units spread across the country. In addition to the units functioning from its headquarters at Kolkata and from other centres in Delhi, Bengaluru and Chennai, the other three units are located in-

- Hyderabad, Telangana
- Mumbai, Maharashtra
- Pune, Maharashtra

The Delhi Centre, Delhi

The Delhi Centre was established in 1974 within the Planning Commission premises. It shifted to its present campus in 1975. It is located in a part of South Delhi known as the Qutub Institutional Area. The Centre is composed of the following:

- Economics and Planning Unit (EPU)
- Stat-Math Unit (SMU)
- Statistical Quality Control & Operations Research Unit (SQC&ORU)
- Library
- Centre for research on the Economics of Climate, Food, Energy and Environment (CECFEE)

The CECFEE centre was established on July 24, 2020 pursuant to the decision of the ISI Council in its meeting held on June 09, 2020.

The Chennai Centre, Tamil Nadu

The Chennai Centre came into existence in 2008 and is presently located at 37, Nelson Manickam Road (First Floor), Aminjikarai, Chennai. The Centre has three units and a library, namely -

- Applied Statistics Unit (ASU)
- Computer Science Unit (CSU)
- Statistical Quality Control & Operations Research Unit (SQC&ORU)
- Library

The North-East Centre at Tezpur, Assam

The North-East Centre at Tezpur was established in 2011 and is presently located at Punioni, Solmara which is north of Tezpur and is close to Tezpur University, and the Defence Research Laboratory (DRL) of the Defence Research & Development Organization (DRDO). The Centre has the following three units and a library-

- Applied and Official Statistics Unit (AOSU)
- Socio-Economic Research Unit (SERU)
- Theoretical and Applied Sciences Unit (TASU)
- Library

The Giridih Branch, Jharkhand

The Giridih branch was started in 1931 and is situated at the heart of Giridih town. The sprawling campus of the Giridih branch includes three land parcels. Besides the office buildings, Giridih has two large agricultural farms adjacent to the river Ushri. The farms with different land situations (high, mid and low) are ideal for conducting agricultural experiments and have well-equipped laboratories as well. The Giridih branch has two operational units functioning under the respective units in Kolkata-

- Agricultural & Ecological Research Unit (AERU)
- Sociological Research Unit (SRU)

1.2 Organizational Chart

Academic Divisions

1. Applied Statistics Division (ASD)

- Applied and Official Statistics Unit (AOSU), North-East Centre, Tezpur
- Applied Statistics Unit (ASU), Bangalore
- Applied Statistics Unit (ASU), Chennai
- Applied Statistics Unit (ASU), Kolkata
- Interdisciplinary Statistical Research Unit (ISRU), Kolkata

2. Biological Sciences Division (BSD)

- Agricultural & Ecological Research Unit (AERU), Kolkata & Giridih
- Biological Anthropology Unit (BAU), Kolkata
- Human Genetics Unit (HGU), Kolkata

3. Computer and Communications Sciences Division (CCSD)

- Advanced Computing and Microelectronics Unit (ACMU), Kolkata
- Computer Science Unit (CSU), Chennai
- Computer Vision and Pattern Recognition Unit (CVPRU), Kolkata
- Cryptology and Security Research Unit (CSRU), Kolkata
- Documentation Research and Training Centre (DRTC), Bangalore
- Electronics and Communication Sciences Unit (ECSU), Kolkata
- Machine Intelligence Unit (MIU), Kolkata
- Systems Science and Informatics Unit (SSIU), Bangalore

4. Library, Documentation and Information Sciences Division (LDISD)

- Library, Bangalore
- Library, Chennai
- Library, Delhi
- Library, Kolkata
- Prasanta Chandra Mahalanobis Memorial Museum & Archives
- Library, North-East Centre, Tezpur

5. Physics and Earth Sciences Division (PESD)

- Geological Studies Unit (GSU), Kolkata
- Geological Museum
- Physics and Applied Mathematics Unit (PAMU), Kolkata
- Theoretical and Applied Sciences Unit (TASU), North-East Centre, Tezpur

6. Social Sciences Division (SSD)

- Economic Analysis Unit (EAU), Bangalore
- Economics and Planning Unit (EPU), Delhi
- Economic Research Unit (ERU), Kolkata
- Linguistic Research Unit (LRU), Kolkata
- Population Studies Unit (PSU), Kolkata
- Psychology Research Unit (PRU), Kolkata
- Sampling and Official Statistics Unit (SOSU), Kolkata
- Socio-Economic Research Unit (SERU), North-East Centre, Tezpur
- Sociological Research Unit (SRU), Kolkata & Giridih

7. Statistical Quality Control and Operations Research Division (SQCORD)

- SQC & OR Unit, Bangalore
- SQC & OR Unit, Chennai
- SQC & OR Unit, Delhi
- SQC & OR Unit, Hyderabad
- SQC & OR Unit, Kolkata
- SQC & OR Unit, Mumbai
- SQC & OR Unit, Pune

8. Theoretical Statistics and Mathematics Division (TSMD)

- Theoretical Statistics and Mathematics Unit (SMU), Bangalore
- Theoretical Statistics and Mathematics Unit (SMU), Delhi
- Theoretical Statistics and Mathematics Unit (SMU), Kolkata

Teaching and Training

1. Dean's Office
2. Placement Cell

Associate Institutions

1. Center for Soft Computing Research (CSCR): A National Facility, Kolkata
2. International Statistical Education Centre (ISEC), Kolkata

Centres of Excellence

1. Centre for Artificial Intelligence and Machine Learning (CAIML)
2. Centre for Research on the Economics of Climate, Food, Energy and Environment (CECFEE)

Technology Innovations Hub (TIH)

Computer and Statistical Service Centre (CSSC), Kolkata

Administrative Services Division

1. Director's Office

- Cell for Co-operation with Academia, Industry & Research labs (CCAIR)
- Faculty Recruitment Cell
- PhD/ DSc Cell
- ST/SC/OBC Liaison Cell

2. CE (A&F)'s Office

- Accounts Section
- Audio Visual Unit
- Canteen
- Cash Unit
- Central Despatch Unit
- Council Section
- Electrical Maintenance Unit
- Engineering Unit
- Estate Office
- Guest House
- Hostels
- House Building Advance Cell
- Human Resource Development Unit
- Import/ Travel Cell
- Internal Audit Cell
- Legal Cell
- Medical Expenses Reimbursement Unit
- Medical Welfare Unit
- Official Language Cell
- Personnel Unit
- Provident Fund Unit
- Public Relations Unit
- Printing and Publication Unit
- Retirement Benefit Cell
- RTI, Grievance, Complain Cell
- Security Unit
- Stores and Purchase Unit
- Telephone Unit
- Transport Unit

1.3 ISI: Course of Important Events

Snapshots!

1931 – 1980:

- PC Mahalanobis establishes ISI in 1931
- First international journal of Statistics in India, Sankhya, foreword by Rabindranath Tagore in 1933
- Path-breaking discoveries by ISI scientists:

  Mahalanobis distance, large scale sample survey method - PC Mahalanobis

  Cramer-Rao Bound, Rao-Blackwell Theorem - CR Rao

  BCH Error-correcting codes - RC Bose

  Theory of large deviations - SRS Varadhan

  Bahadur Efficiency and Basu's Theorem in Statistics
- National Sample Survey (NSS) was conceived for the collection of socio-economic data in 1950
- UNESCO empowers ISI to train statisticians of developing countries – International Statistical Education Centre (ISEC) established in 1950
- Second Five-Year Plan drafted in 1954
- ISI designs the first analog computer in India in 1954
- ISI imports and installs the first digital computer in India, HEC-2M, in 1955
- Dinosaur fossil, Barapasaurus tagorei, discovered by ISI geologists in 1957
- ISI was recognized as an Institute of National Importance by a Central Act in 1959
- First digital computer (ISI-JU-1) built and commissioned (1961-1966)
- Delhi Centre of ISI established in 1974
- Bangalore Centre of ISI established in 1978

1981 – 2004:

- M. Tech Program in Computer Science [M.Tech (CS)] started in 1981.
- Nodal Centre for a 5th Generation Knowledge-Based Computer Systems (FGCS/ KBCS) in the fields of Pattern Recognition, Computer Vision, Image Processing and Artificial Intelligence established in 1987
- M. Tech Program in Quality, Reliability & Operations Research [M.Tech (QROR)] started in 1989.
- M. S. Program in Quantitative Economics [MS (QE)] started in 1996.
- Computer-based dictionary in the Indian Language (Bangla) developed for use by blind persons in 1996
- Bachelor's Program in Mathematics [B.Math] started in 2000
- Master's Program in Mathematics [M.Math] started in 2003

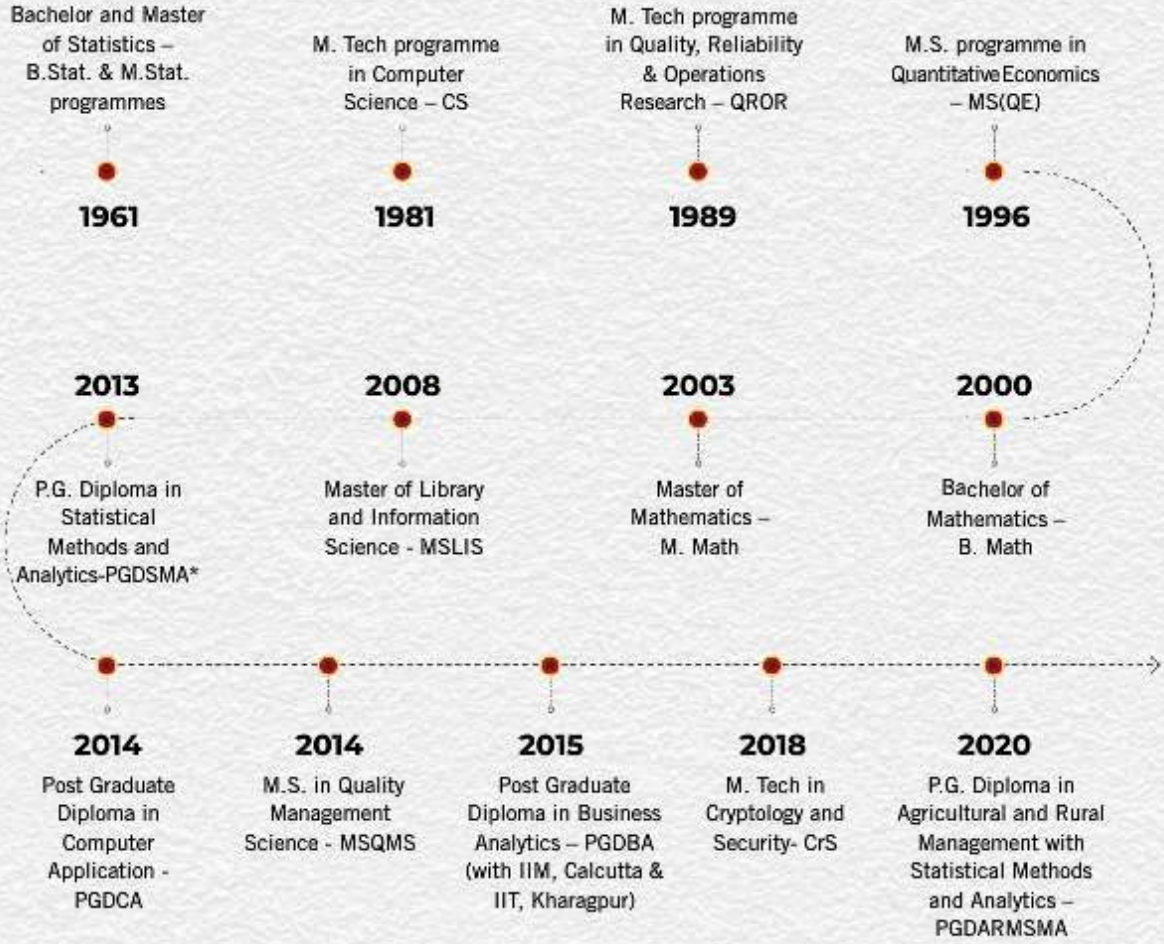
2005 – till date:

- Introduction of Soft Computing in India and establishment of the first Centre for Soft Computing Research in Asia in 2005
- Outreach program: North-East in 2005
- 29th June declared as the National Statistics Day during the Platinum Jubilee celebrations at ISI by the then Prime Minister, Dr. Manmohan Singh in 2006
- Chennai Centre of ISI established in 2008
- M. S. Program in Library & Information Science [MS (LIS)] started in 2008
- Adoption of IISc faculty pay scale replacing UGC pay scale in 2009
- Pioneering work in Artificial Intelligence and Machine Learning, Bioinformatics, Computational Genetics, Cryptology, Indian Language Technologies, Population Genomics, Soft Computing Technology
- The Center of Soft Computing Research has been declared an "Associate Institution" of ISI in 2010
- North-east Centre of ISI established for the development of the region in 2011
- M. S. Program in Quality Management Science [MS (QMS)] started in 2014.
- RC Bose Centre for Cryptology and Security established in 2014
- Teaching and training in Official Statistics & Policy Research initiated
- Seminal contributions in Game theory, Algebraic Geometry, Poverty and Inequality measures, Disease Genetics, Granular Computing
- A tri-institute Post-Graduate Program in Business Analytics [PGDBA] started in 2015.
- Discovery of Shringasaurus indicus in 2017
- M. Tech Program in Cryptology & Security [M. Tech (CrS)] started in 2018.
- Centre for Artificial Intelligence and Machine Learning established in 2019
- Computational and experimental biology research; cancer, auto-immune and neuro-degenerative diseases
- Centre for Research on the Economics of Climate, Food, Energy and Environment, Delhi recognized as Centre and Technology Innovation Hub, Kolkata established in 2020
- Technology Innovation Hub established in 2020
- Coal Index developed and adopted by Coal Ministry
- Development of an Integrated Solution for Automatic Assessment of Autism using visual attention, facial expression and vocal emotion cues.
- Development of a computer vision-based vehicle type and vehicle number detection system
- Development of National Mineral Index

Thinking ahead of times!

Academic programmes introduced in ISI

- The Institute began offering its internationally-acclaimed UG and PG programmes in Statistics, (B.Stat. and M.Stat.) in 1961, empowered by The Indian Statistical Institute Act of 1959 to award degrees.
- This Act was amended by the Parliament of India in 1995 to empower the Institute to award Degrees/Diplomas not only in Statistics but also in Mathematics, Quantitative Economics, Computer Science and other subjects related to Statistics as may be determined by the Institute from time to time.
- ISI also started awarding Ph.D. degrees in the areas of Mathematics, Quantitative Economics, Computer Science as well as Quality, Reliability and Operations Research, in addition to the original discipline, namely, Statistics.
- Several degree/diploma programmes have been introduced subsequently. A timeline of the innovative programmes introduced in ISI are as follows –



PGDSMA program

*The PGDSMA was initially introduced in 2011-12 as PG Diploma in Statistical Methods with Applications at the North-East Centre and later renamed in 2013. The programme has been running successfully at Tezpur, with 50% of its seats reserved for candidates domiciled in the Northeast region. Since 2019, this programme is also being offered simultaneously at the Chennai centre for candidates from all over India.

1.4 A Brief History of the Institute

In the 1920's, Prasanta Chandra Mahalanobis, then a Professor of Physics at Presidency College, Calcutta conducted several studies employing statistical methods with results that vindicated his ideas about the efficacy and possibilities of the emerging science of Statistics.

The Indian Statistical Institute (ISI) was formally established on 17 December 1931 in a meeting presided by Sir R.N. Mukherjee, the first President of the Institute, and Prasanta Chandra Mahalanobis was appointed as the Honorary Secretary.

On April 28, 1932, the Indian Statistical Institute was registered as a non-government and non-profit distributing learned society under the Societies Registration Act No. XXI of 1860. The Institute is now registered under the West Bengal Societies Registration Act XXVI of 1961, as amended in 1964.

The Institute started functioning initially from a room of the then Presidency College (now Presidency University) with enduring support from several distinguished personalities and devoted scholars in Calcutta. Over the first two decades, which turned out to be a glorious chapter in the annals of Indian science and institution building, the ISI embarked upon a series of pioneering programmes involving the application of Statistics in search of solution to the urgent and live problems of the country. Such programmes included innovative projects on sample surveys of yield and land utilization of crops, socio-economic after-effects of the Bengal famine and problems of flood research. These innovations and methodological research have since become classics in Statistics. At the same time, the training of scientific personnel began to grow. This also encouraged high-level research and brought into focus the need for publication of the research results, for which Sankhy, the first international journal of Statistics in the country came into being in 1933.

When India became independent, the Institute played a pivotal role in the task of nation-building through the brilliant choice of the area of surveys, which were socially and nationally relevant. The patronage and invaluable contribution of Sir Ronald A. Fisher played an important role. Led by Professor Mahalanobis and a very capable group of younger statisticians including R.C. Bose, S.N. Roy and C.R. Rao, the Institute was poised to take on the larger role. In 1954 Pandit Jawaharlal Nehru, the then

Prime Minister of India, entrusted Professor Mahalanobis and ISI with the responsibility of preparing the draft Second Five-Year Plan for the country. The draft submitted by Professor Mahalanobis and the planning models formulated by him and his colleagues have since been regarded as major contributions to economic planning in India. The formal recognition came in December 1959, when the then Prime Minister, Pandit Jawaharlal Nehru himself piloted the enactment of the Indian Statistical Institute Act of 1959 in the Parliament. This Act designated ISI as an 'Institution of National Importance'. The activities of ISI steadily grew, existing interests became more broad-based and a number of science units were created in the interest of live interaction between Statistics and Natural and Social Sciences. Empowered by the Act to award degrees, the Institute started the B. Stat. and M. Stat. programs. An excellent library was established at Kolkata and the Documentation Research and Training Centre began functioning in Bangalore. Other developments in infrastructure also began.

The Indian Statistical Institute Act of 1959 was amended by the Parliament in 1995 to empowering the Institute to award Degrees/Diplomas not only in Statistics, but also in Mathematics, Quantitative Economics, Computer Science and such other subjects related to Statistics as may be determined by the Institute from time to time. Several degree/diploma programmes have been introduced subsequently, The detailed list is given on page 29.

On December 24, 2006, during the inauguration of the Platinum Jubilee celebrations of the Institute (2006-07), Dr. Manmohan Singh, the then Prime Minister of India declared the birth anniversary (29th June) of Prof. P.C. Mahalanobis as the National Statistics Day.

Visitors:

The Institute, since its formative period till present times, has had many eminent visitors, some of whom were Nobel Laureates. Besides Ronald A. Fisher, J.B.S. Haldane and Walter A. Shewhart, the luminaries included Frederic and Irene Curie, Neils Bohr, A.N. Kolmogorov, P.M.S. Blackett, J.D. Bernal, Joan Robinson, William Edwards Deming, Joseph M. Juran, Genichi Taguchi and George Akerlof (Nobel prize in economics, 2001). Incidentally, George Akerlof was a visiting professor at ISI during 1967-68. During recent times, the visit of Amartya K. Sen, Robert Aumann, Lotfi A. Zadeh, Roger Penrose, Joseph E. Stiglitz, Sir James A. Mirrlees, Eric Maskin, Ei-ichi Negishi, Ada Yonath, David Jonathan Gross, S.R.S. Varadhan (Winner of Abel Prize, 2007 for his contributions to probability theory and an alumnus of the institute), Leslie Gabriel Valiant, Meghnad Desai and Trevor Hastie may be specially mentioned. The Institute is proud to have C.R. Rao, who was among the world leaders in statistical science, in its list of illustrious alumni.

Niels Bohr with P.C. Mahalanobis at Indian Statistical Instutute on 16th January, 1960.

PCM explaining an exhibit to Mr. Chivu Stoica, Romanian Prime Minister (centre), at the Museum on 21st March, 1958.

Prasanta Chandra Mahalanobis and Nirmal Kumari Mahalanobis with the King and Queen of Nepal at Amrapali on 2nd December, 1955

1.5 C.R. Rao: In Memoriam

C.R. Rao was born on 10th September, 1920, in Hoovina Hadagali, now a small town in Karnataka, but originally in the Madras Province of British India. His father CD Naidu was an inspector of police and his mother Lakshikanthamma was a housewife. Rao was the 8th child of his parents and following a general custom in South India, as mentioned by Rao himself in his autobiography, he was named Radhakrishna after Lord Krishna, who, according to the mythology, was the 8th child of his parents.

Rao graduated with a degree in Mathematics from Andhra University in 1940, but failed to obtain a scholarship to do research in the same university because his application came in late. He then came to Kolkata to appear for an interview for the position of a mathematician at the army survey unit, and was not selected for that job either. Later, when Calcutta University started a Master's degree programme in Statistics in 1941, he joined that as a student. He passed the MA degree examination in 1943 with a first class and secured the first rank. Rao was one of the first five students, who graduated from Calcutta University with a Master's degree in Statistics.

In one of his autobiographical essays, Rao gave an entertaining description of that postgraduate degree programme that is worth quoting here. "None of the teachers had any experience in teaching Statistics and, further, they were as ignorant as the students in some areas of Statistics. As there were no textbooks on Statistics, the teachers had to learn by reading original papers and then teach. The courses given in the first two years benefitted the faculty as well as the students."

Rao joined Indian Statistical Institute (ISI) as a statistical apprentice in 1943 and decided to settle down in the city of Kolkata. He started teaching soon after joining the institute, and it was in the course of his interactions with the students that he co-invented his famous Cramér–Rao Lower Bound and Rao–Blackwell Theorem.

At ISI, one of Rao's several responsibilities was the analysis of anthropometric data on different castes and tribes collected during the decennial census of the Indian population in 1941. In 1946, J.C. Trevor, a Cambridge University anthropologist, requested ISI to depute a scholar, who would analyse some anthropometric data collected by the Cambridge University Anthropological Museum. Rao was deputed, and he arrived in England in August 1946. According to Rao, he sailed for England by a steamship named Andes that was carrying mostly Italian prisoners of the Second World War from Mumbai to Naples. The Italian soldiers were captured in Africa and detained in India.

Soon after arriving in Cambridge, Rao took admission as a research scholar at King's College. This was in addition to Rao's assignment at the Anthropological Museum at Duckworth Laboratory at Cambridge. Ronald Fisher was the Balfour Professor of Genetics at Cambridge at that time. Rao requested Fisher, whom he met in 1944, to accept him as a PhD student. Fisher agreed and suggested that he should work in the genetics laboratory to gain experience with breeding of mice for linkage studies. On the other hand, Rao's assignment at the Anthropological Museum involved analysis of measurements taken of skeletal materials excavated by a British expedition in the ancient graves in Jebel Moya in North Africa.

The general theme of Rao's PhD research was discriminant analysis using multivariate data, and it was deeply connected with Fisher's work on discriminant analysis. Towards the end of his two-year-long stay at Cambridge, Rao met H.E. Daniels, who asked him to submit a discussion paper to the Royal Statistical Society based on his PhD research. The paper that was submitted by Rao was titled "The Utilization of Multiple Measurements in Problems of Biological Classification". Rao's paper was accepted for a discussion at the Royal Statistical Society, and it was read before the Research Section of the society in 1948. It was also published in the Journal of the Royal Statistical Society, Series B (Methodological) in the same year.

Rao extended Fisher's discriminant analysis for more than two populations. He also established the Bayes risk optimality of Fisher's linear discriminant function for multivariate Gaussian populations. Another significant part of Rao's paper is the development of a graphical tool for visual representation of multivariate populations by projecting them into some appropriate lower dimensional spaces so that observations from different populations cluster into groups of similar populations.

Rao's 1948 paper is a fundamental contribution in discriminant analysis that has influenced several generations of research in multivariate statistics. While discussing

his PhD research, Rao once wrote, "For my PhD thesis, I wanted a theoretical topic. I asked Fisher to suggest some problem on which I could work. He said: 'Problem must be yours and I shall help you if I can'. I wrote my PhD thesis on classification problems extending Fisher's work on the discriminant function to more than two populations, which arose in my work at the museum. I did not take much help from Fisher. Finally, when I showed him the thesis, he said, 'The problem was worth investigating'."

After returning to India from Cambridge in the August of 1948, Rao joined the Indian Statistical Institute as a professor, when he was only 28 years old. At that time, ISI was getting reorganised as the Government of India agreed to give a recurring grant to support the research and training activities of the Institute. Prior to this government grant, ISI depended mainly on money earned through project work involving large scale sample surveys. Rao was appointed the Head of the Research and Training School of ISI, and he created an internationally renowned teaching and research programme in statistics. After the death of Mahalanobis, Rao was made the Director and Secretary of ISI, a designation which Mahalanobis had as the Chief of the Institute. He gave up that position in 1976 and was appointed as the Jawaharlal Nehru Professor of ISI. Rao gave up this professorship and retired from ISI in 1984. In 1985, he became a National Professor.

Other distinguished positions that C.R. Rao held included Distinguished Professorship at University of Pittsburgh and the Eberly Professorship at Pennsylvania State University, both in the US. In 2002, Rao established the C.R. Rao Advanced Institute of Mathematics, Statistics, and Computer Science in Hyderabad.

Rao's contributions to statistical theory and applications have become part of the undergraduate and postgraduate

curricula in statistics, econometrics, electrical engineering, and many other disciplines at most universities worldwide. His work has had a profound influence on the theory and application of statistics in diverse fields.

Rao was the recipient of many prestigious awards, including the US National Medal of Science awarded by the President of the US, and the Padma Vibhushan awarded by the Government of India. He was a Fellow of the Royal Society, and served as the President of the International Statistical Institute, the Institute of Mathematical Statistics, and the International Biometric Society.

Rao passed away in Buffalo, New York on 22nd August, 2023.

A. N. Kolmogorov with C. R. Rao and P. C. Mahalanobis at the Special Convocation on 28.04.1962

1.6 Distinguished Scientists and Statesmen who have served the Institute since inception

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1	Sir Rajendra Nath Mookerjee	1932-35
2	Shri E.C. Benthall	1936-37
3	Shri James Reid-Kay	1938
4	Shri Badridas Goenka	1939-41
5	Dr. Nalini Ranjan Sarkar	1942-43
6	Dr. Chintaman D. Deshmukh	1944-63
7	Shri Y.B. Chavan	1964-66
8	Prof. Satyendra Nath Bose	1967-75
9	Shri Subimal Dutt	1976-89
10	Prof. M.G.K. Menon	1990-2012
11	Dr. C. Rangarajan	2012-16
12	Dr. Vijay Kelkar	2016-18
13	Shri Bibek Debroy	2018-22
14	Prof. Sankar K. Pal	2022-till date

Chairpersons

1	Shri B. Rama Rao	1954
2	Shri D.N. Mitra	1955-63
3	Shri K.P.S. Menon	1964-70
4	Shri S.C. Roy	1971
5	Dr. Atma Ram	1972
6	Shri P.N. Haksar	1973-97
7	Dr. Bimal Jalan	1998-2001
8	Dr. N.R. Madhava Menon	2002-03
9	Shri Pranab Mukherjee	2004-12
10	Shri A.K. Antony	2012-14
11	Dr. Arun Shourie	2014-16
12	Prof. Goverdhan Mehta	2016- 20
13	Dr. Ashok Kumar Lahiri	2020-22
14	Dr. Pronab Sen	2022- till date

Directors

1	Prof. P.C. Mahalanobis	Dec	1931	-	June	1972
2	Prof. C.R. Rao	July	1972	-	June	1976
3	Prof. G. Kallianpur	July	1976	-	Sept	1978
4	Prof. B.P. Adhikari	Aug	1979	-	Oct	1983
5	Prof. Ashok Maitra	April	1984	-	Jan	1987
6	Prof. J.K. Ghosh	Jan	1987	-	Jan	1992
7	Prof. B.L.S. Prakasa Rao	Jun	1992	-	Feb	1995
8	Prof. S.B. Rao	July	1995	-	July	2000
9	Prof. K.B. Sinha	Aug	2000	-	July	2005
10	Prof. Sankar K. Pal	Aug	2005	-	July	2010
11	Prof. Bimal K. Roy	Aug	2010	-	July	2015
12	Prof. Sanghamitra Bandyopadhyay	Aug	2015	-	July	2020
13	Prof. Sanghamitra Bandyopadhyay	Sep	2020	-	till Date	

D.Sc. (Honoris Causa) awardees

Feb 1962	Prof. Satyendra Nath Bose, Prof. Ronald A. Fisher, Pandit Jawaharlal Nehru, Dr. Walter A. Shewhart
Apr 1962	Prof. A.N. Kolmogorov
May 1965	Dr. Chintaman Dwarkanath Deshmukh
Dec 1974	Prof. Raj Chandra Bose, Dr. M.V. Keldysh, Prof. Jerzy Neyman
Feb 1977	Prof. Harald Cramer
Feb 1978	Shri Morarji Desai, Prof. L.V. Kantorovich
Dec 1989	Prof. C.R. Rao
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Feb 2004	Prof. S.R. Srinivasa Varadhan
Mar 2006	Prof. L.A. Zadeh
Dec 2006	Dr. Manmohan Singh
Feb 2011	Dr. Subhas Mukherjee (Posthumously)
Jan 2013	Prof. K.R. Parthasarathy, Prof. Jayanta Kr. Ghosh, Prof. Pranab Bardhan

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Dr. Anurag Agarwal Former Director, CSIR –Institute of Genomics and Integrative Biology (IGIB) Dean Biosciences and Health Research, Ashoka University	
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Prof. B. Mohan Reddy Hyderabad	
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Dr. Utsav Chowdhury Representative of the Scientific Workers (01.04.2023 – 06.08.2023)	**Shri Swarup Ghara** Representative of the Non-Scientific Workers
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1.8 Funding

The Ministry of Statistics & Programme Implementation, Government of India provides full funding to the Institute. Their support and constant encouragement are among the major factors that help the Institute to sustain its academic growth and excellence.

Chapter

2

Teaching and Training

Dean of Studies: Gopal Krishna Basak
Office: 5th floor, S.N. Bose Bhawan, ISI, Kolkata-700 108

No of Scientific Staff: up to January 2024 - 3 (Male)
February – March 2024- 2 (Male)

No of non-scientific staff: 12 (Male-10 and Female-2)

Admission Across Programmes

UG (3 year) : 114	100	14
PG (2 year) : 270	230	40
PG (Diploma) : 117	93	24
PG (Diploma) : 183	(Online Programme)	
Ph. D. : 61	45	16

Human Resources Generated

UG (3 year) : 57	50	7
PG (2 year) : 235	198	37
PG (Diploma) : 44	35	9
PG (Diploma) : 43	37	6
Ph. D. : 40	31	9

2.1 Programmes Offered

ISI, a premier institute in India, is renowned for its first internationally acclaimed undergraduate and postgraduate degree programmes in Statistics introduced by its founder, Prof. P.C. Mahalanobis in 1961. Over the years, more academic programmes have been added.

The following academic programmes were offered during the academic session 2023-24:

Name of Programme	Centre(s) at which offered
Undergraduate Programmes (three-year)	
Bachelor of Statistics - B. Stat. (Hons.)	Kolkata
Bachelor of Mathematics - B. Math. (Hons.)	Bengaluru
Postgraduate Programmes (two-year)	
Master of Statistics - M. Stat.	Delhi & Kolkata
Master of Mathematics - M. Math.	Kolkata & Bengaluru
Master of Science in Quantitative Economics - MSQE	Delhi & Kolkata
Master of Science in Quality Management Science - MSQMS	Bengaluru and Continuing second year at Hyderabad
Master of Science in Library and Information Science – MSLIS	Bengaluru
M. Tech. in Computer Science (CS)	Kolkata
M. Tech. in Cryptology and Security (CrS)	Kolkata
M. Tech. in Quality, Reliability and Operations Research (QROR)	Kolkata
Postgraduate Diploma Programmes (two-year)	
Post Graduate Diploma in Business Analytics (PGDBA) Jointly conducted by IIM Kolkata, IIT Kharagpur and ISI Kolkata	Kolkata
Postgraduate Diploma Programmes (one-year)	
Post Graduate Diploma in Statistical Methods and Analytics (PGDSMA)	Chennai and North-East Centre, Tezpur
Post-Graduate Diploma in Agricultural and Rural Management with Statistical Methods and Analytics (PGDARSMA)	Giridih
Post Graduate Diploma in Applied Statistics (PGDAS)	Online Programme
Doctoral Programmes	
Research Fellowships and degrees awarded by ISI in Statistics, Mathematics, Quantitative Economics, Computer Science, Quality, Reliability and Operations Research	Bangalore, Chennai, Delhi, Giridih, Hyderabad/ Mumbai & Kolkata
Research Fellowships awarded by ISI and degrees awarded by other academic bodies in areas including Biological Sciences (Agricultural and Ecological Research), Library & Information Science, Sociology and Physics & Applied Mathematics.	
Research Fellowships awarded by government bodies (e.g. CSIR, DST, INSPIRE, NBHM, UGC) and degrees awarded by ISI/other academic bodies.	
Short-term Training Programmes (4 weeks-6 months)	

This training is provided to UG/PG students from other reputed Universities/Institutions as part of their curriculum requirements/ for enhancement of knowledge and application skills, under the guidance of faculty members of the Institute.

2.2 Admissions

Degree, Diploma and Ph.D. Programmes

An all-India entrance examination is conducted annually by the Dean's Office for all programmes (except Post Graduate Diploma in Business Analytics).

The two-year Post Graduate Diploma in Business Analytics (PGDBA) programme, jointly offered with IIM Calcutta and IIT Kharagpur, aims to deliver a cutting-edge interdisciplinary educational experience to graduates aspiring to build a career in the rapidly expanding field of business analytics. The first semester of this programme is conducted every year in ISI. The selection and admission process for the programme is carried out by the three institutes on a rotation basis.

Date of ISI Admission test: 14 May 2023

Date of PGDBA Admission test: 26 March 2023

Programmes	Number of Applications Received	Number of Applicants Taking the Admission Test	Number of Applicants Shortlisted for Interview	Number of Applicants Offered Admission	Number of Women Applicants Offered Admission	Number of SC, ST, OBC, EWS, PwBD Applicants Offered Admission
Bachelor of Statistics - B. Stat. (Hons.)	6029	3892	181	71	10	SC-12, ST-01 OBC-16, EWS-07
Bachelor of Mathematics - B. Math. (Hons.)	5100	3342	183	68	12	SC-07, ST-01 OBC-23, EWS-02
Master of Statistics - M. Stat.	1072	797	57	30	04	SC-04, ST-01 OBC-05, EWS-02
Master of Mathematics - M. Math.	746	500	80	29	01	SC-03, OBC-07 EWS-01
Master of Science (M.S.) in Quantitative Economics - MSQE	1753	1285	94	45	13	SC-01, ST-01 OBC-05, EWS-03
Master of Science (M.S.) in Quality Management Science - MSQMS	399	299	46	18	01	SC-04, OBC-06 EWS-04
Master of Science (M.S.) in Library and Information Science – MSLIS	97	67	34	13	06	SC-02, ST-01 OBC-06, EWS-01
M. Tech. in Computer Science (CS)	960	600	87	35	03	SC-03, OBC-11 EWS-06
M. Tech. in Cryptology and Security (CrS)	209	160	60	24	05	SC-05, OBC-07 EWS-03
M. Tech. in Quality, Reliability and Operations Research (QROR)	202	120	45	28	-	SC-03, ST-01 OBC-11, EWS-03
Post Graduate Diploma in Business Analytics (PGDBA)	1974	1497	329	61	06	SC-10, ST-01 OBC-20, EWS-06
Post Graduate Diploma in Statistical Methods and Analytics (PGDSMA)	144	102	86	48	14	SC-04, OBC-16 EWS-07

Programmes	Number of Applications Received	Number of Applicants Taking the Admission Test	Number of Applicants Shortlisted for Interview	Number of Applicants Offered Admission	Number of Women Applicants Offered Admission	Number of SC, ST, OBC, EWS, PwBD Applicants Offered Admission
Post Graduate Diploma in Agricultural and Rural Management with Statistical Methods and Analytics	25	15	15	12	03	OBC-05 EWS-01
Post Graduate Diploma in Applied Statistics (PGDAS)	118	79	61	25	-	SC-03, OBC-08 EWS-02
Junior Research Fellowship	1206	738	149	58	13	SC-05, OBC-10 EWS-04

Enrollment in Degree-Diploma Programmes

Programme	Number Enrolled	Number of Women Enrolled	Number of SC, ST, OBC, EWS, PwBD Enrolled
Undergraduate Programmes (three-year)			
Bachelor of Statistics - B. Stat. (Hons.)	58	08	SC-06, OBC-10 EWS-05
Bachelor of Mathematics - B. Math. (Hons.)	56	06	SC-05, ST-01 OBC-12, EWS-01
Postgraduate Programmes (two-year)			
Master of Statistics - M. Stat. (including B. Stat to M. Stat. : 35 and ISI-Test channel: 30)	65	11	SC-09, OBC-10 EWS-01
Master of Mathematics - M. Math. (including B. Math to M. Math. : 13 and ISI-Test channel: 27)	40	02	SC-02, OBC-07 EWS-01
Master of Science (M.S.) in Quantitative Economics - MSQE	45	12	SC-01, ST-01 OBC-04, EWS-03
Master of Science (M.S.) in Quality Management Science - MSQMS	17	03	SC-03, OBC-05 EWS-03
Master of Science (M.S.) in Library and Information Science - MSLIS	11	04	SC-02, ST-01 OBC-06
M. Tech. in Computer Science (CS)	36	03	SC-05, OBC-10 EWS-04
M. Tech. in Cryptology and Security (CrS)	25	05	SC-05, OBC-06 EWS-03
M. Tech. in Quality, Reliability and Operations Research (QROR)	31	-	SC-04, ST-01 OBC-11, EWS-02
Postgraduate Diploma Programmes (two-year)			
Post Graduate Diploma in Business Analytics (PGDBA)	61	06	SC-10, ST-01 OBC-20, EWS-06
Postgraduate Diploma Programmes (one-year)			
Post Graduate Diploma in Statistical Methods and Analytics (PGDSMA)	46	15	SC-04, OBC-12 EWS-04
Post-Graduate Diploma in Agricultural and Rural Management with Statistical Methods and Analytics (PGDARSMA)	10	03	OBC-05, EWS-01

Programme	Number Enrolled	Number of Women Enrolled	Number of SC, ST, OBC, EWS, PwBD Enrolled
Post Graduate Diploma in Applied Statistics (PGDAS) (159 candidates were registered for the regular channel and 24 candidates were registered through tuition waived channel)	183	37	Data not collected as there are many foreign students
ISI JRF Programmes			
Mathematics	10	01	SC-02, OBC-02
Statistics	07	01	OBC-02
Computer Science	20	06	SC-02, OBC-02
Economics	05	02	OBC-01
Quality Reliability and Operations Research	02	-	OBC-01
Physics and Applied Mathematics	10	03	SC-01, OBC-03 EWS-02
Sociology	01	-	EWS-01
Biological Science (Agricultural and Ecological Research)	01	-	
Library and Information Science	01	01	
Externally-funded JRF Programmes			
Physics	02	01	
Biological Science	02	01	SC-01

Short-term Training Programmes

Division/Centre	Unit	Number of Trainees	Number of Women Trainees
Applied Statistics Division			
	ASU Kolkata	01	01
	ISRU	02	
Biological Sciences Division			
	AERU Kolkata	31	17
Computer & Communication Sc. Div			
	ACMU	01	
	CVPRU	10	02
	ECSU	04	01
	DRTC	01	
Physical & Earth Sciences Division			
	GSU	12	05
	PAMU	06	01
Social Sciences Division			
	SOSU	01	
SQC&OR Division			
	SQCORU Kolkata	04	
Total		**73**	**27**

2.3 Graduating Students

The number of students graduating, under the different programmes, are as follows-

Programme	Number Graduating	Number of Women Graduating
Undergraduate Programmes (three-year)		
Bachelor of Statistics - B. Stat. (Hons.)	36	06
Bachelor of Mathematics - B. Math. (Hons.)	21	01
Postgraduate Programmes (two-year)		
Master of Statistics - M. Stat.	60	08
Master of Mathematics - M. Math.	35	03
Master of Science (M.S.) in Quantitative Economics - MSQE	40	10
Master of Science (M.S.) in Quality Management Science - MSQMS	13	03
Master of Science (M.S.) in Library and Information Science - MSLIS	13	07
M. Tech. in Computer Science (CS)	33	02
M. Tech. in Cryptology and Security (CrS)	19	03
M. Tech. in Quality, Reliability and Operations Research (QROR)	22	01
Postgraduate Diploma Programmes (one-year)		
Post Graduate Diploma in Statistical Methods and Analytics (PGDSMA)	38	08
Post-Graduate Diploma in Agricultural and Rural Management with Statistical Methods and Analytics (PGDARSMA)	06	01
Post-Graduate Diploma in Applied Statistics (PGDAS)	43	06
Ph.D. Degrees		
Mathematics	07	02
Statistics	02	01
Computer Science	19	02
Economics	04	03
Quality Reliability and Operations Research	02	-
Physics	01	-
Geology	01	-
Biological Science	03	01
Externally-funded Ph.D. Degrees		
Geology	01	-

Recipients of Prizes

During the 58th Convocation of the Indian Statistical Institute was held on 19th December, 2023, students were felicitated with medals and prizes in recognition of their outstanding performance for the session ending 2024, under the following programmes –

Undergraduate

Aytijhya Saha
B.Stat.
ISIAA – Mrs. M. R. Iyer Memorial Gold Medal for outstanding overall performance

Arunav Bhowmick
B.Stat.
D. Basu Memorial Gold Medal for outstanding performance

Aytijhya Saha
B.Stat.
Nikhilesh Bhattacharya Memorial Gold Medal for best performance in Statistics

Rupsa Ray
B.Stat.
Mukul Chaudhuri Cash Award for the best female student in the first year (2022-23)
Mukul Chaudhuri Cash Award for the best female student in the second year

Aytijhya Saha
B.Stat.
Usri Gangopadhyay Memorial Medal for the best female student in B. Stat. (Hons.) Programme

Aprameya Girish Hebbar
B.Math.
S. H. Aravind Gold Medal for outstanding performance

Postgraduate

Anvit Garg
M.Stat.
ISIAA – J. K. Ghosh Memorial Gold Medal for outstanding performance

Manit Paul
M.Stat.
P. C. Mahalanobis Memorial Gold Medal for outstanding performance

Sreejit Roy
M.Stat.
Sabyasachi Roy Memorial Gold Medal for doing the best project work in second year

Tathagata Sadhukhan
M.Stat.
Certificate of Honourable Mention in connection with Sabyasachi Roy Memorial Gold Medal for doing an excellent project work in the second year

Aritra C Bhattacharya
M. Math.
ISIAA – P. C. Panesar Memorial Gold Medal for outstanding overall performance

Kaustav Sen
MS (QE)
Dr. N. S. Iyenger Award for best student of Econometrics

Sanyam Agarwal
MS (QE)
Sanghamitra Das Memorial Gold Medal for outstanding overall performance

Debarshi Chanda
M.Tech. (CS)
ISIAA – Rashi Ray Memorial Medal for outstanding overall performance

Sahil Sharma
M.Tech. (CS)
Sunity Kumar Pal Memorial Gold Medal for best dissertation

Partho Roychoudhury
M.Tech. (QROR)
ISIAA – Mrs. M. R. Iyer Memorial Gold Medal for outstanding overall performance

PhD Degrees Awarded by ISI

The following students were conferred PhD degrees after having successfully completed their requirements for the award of PhD degree –

Ph.D. degrees awarded by ISI				
Sl. No.	Name of the Scholar (Name of Women Scholar is highlighted)	Name(s) of the Supervisor(s)	Title of the Thesis	Subject Area
1.	Atanu Kumar Ghosh	Dr. Arnab Chakraborty, ASU, ISI, Kolkata	Data Reduction Using EM Algorithm with Deliberately Introduced Missingness	Statistics
2.	Damitri Kundu	Dr. Kiranmoy Das, ISRU, ISI, Kolkata	Bayesian joint modeling of multivariate longitudinal and event-time outcomes with applications to ALL maintenance studies	Statistics
3.	Sourjya Banerjee	Prof. Mrinal Kanti Das, SMU, ISI, Kolkata	Projective modules and complete intersection ideas over affine algebras	Mathematics
4.	Susmita Das	Prof. Jaydeb Sarkar, SMU, ISI, Bangalore	Tridiagonal shifts and analytic perturbations	Mathematics
5.	Md Nurul Molla	Prof. Biswaranjan Behera, SMU, ISI, Kolkata	Weighted inequalities for maximal operators and the Hardy space H1 on LCA groups	Mathematics
6.	Sayantan Maitra	Prof. Siva Athreya, SMU, ISI, Bangalore	Stochastic Equations Driven by Levy Processes	Mathematics
7.	Priyanka Sen	Prof. Arup Bose, SMU, ISI, Kolkata	Limiting Spectral distribution of some patterned random matrices with independent entries	Mathematics
8.	Sk Asfaq Hossain	Prof. Debashish Goswami, SMU, ISI, Kolkata	Quantum symmetry in multigraphs and its applications in physical models	Mathematics
9.	Deepak Kathikulath Dilip	Prof. Jaydeb Sarkar, SMU, ISI, Bangalore	Commutant lifting, Interpolation and Toeplitz operations in several variables	Mathematics
10.	Ahana Basistha	Prof. Farzana Afridi, EPU, ISI, Delhi	Essays on Corruption – The Role of Information, Beliefs and Incentives	Quantitative Economics
11.	Sujaya Sircar	Prof. Tridip Ray, EPU, ISI, Delhi	A Weather Eye on Employment and Education: Essays on Employment Polarization, Technology and Human Capital Formation	Quantitative Economics
12.	Siddharth Chatterjee	Prof. Arunava Sen, EPU, ISI, Delhi	Essays on Games and Decisions	Quantitative Economics

Ph.D. degrees awarded by ISI				
Sl. No.	Name of the Scholar (Name of Women Scholar is highlighted)	Name(s) of the Supervisor(s)	Title of the Thesis	Subject Area
13.	Nikita Sangwan	Prof. Farzana Afridi, EPU, ISI, Delhi	Technology, shocks, and labor response: A gendered perspective	Quantitative Economics
14.	Arun Kumar Das	Prof. Sandip Das, ACMU, ISI, Kolkata	Some Geometric Problems on Location Detection	Computer Science
15.	Subhadeep Ranjan Dev	Prof. Sandip Das, ACMU, ISI, Kolkata	Center Location and Related Problems on Graphs and Polyhedral Space	Computer Science
16.	Bishwajit Chakraborty	Prof. Mridul Nandi, ASU, ISI, Kolkata	Design and Analysis of Lightweight Authenticated Encryption with Associated Data	Computer Science
17.	Abhinav Chakraborty	Prof. Krishnendu Mukhopadhyaya, ACMU, ISI, Kolkata	Gathering at Fixed Nodes by Oblivious Mobile Robots	Computer Science
18.	Soumya Chattopadhyay	Prof. Mridul Nandi, ASU, ISI, Kolkata	Tight Security of PMAC-type and CBC-type Message Authentication Codes	Computer Science
19.	Subhadip Singha	Prof. Palash Sarkar, ASU, ISI, Kolkata	On the Tightness Gap Analysis of Reductions of some Lattice Problems to the Learning with Error Problem	Computer Science
20.	Chandan Biswas	Dr. Ujjwal Bhattacharya, CVPRU, ISI, Kolkata and Dr. Debasis Ganguly, University of Glasgow, U.K.	Privacy Aware Machine Learning	Computer Science
21.	Sayantan Sen	Prof. Sourav Chakraborty, ACMU, ISI, Kolkata	Sample and Query Complexities of Some Estimation Problems	Computer Science
22.	Subhasis Koley	Prof. Sasthi Charan Ghosh, ACMU, ISI, Kolkata	Improved lower and upper bounds on the span of distance labelling for some infinite regular grids	Computer Science
23.	Bibhuti Das	Prof. Krishnendu Mukhopadhyaya, ACMU, ISI, Kolkata	Distributed k-Circle Formation by Mobile Robots	Computer Science
24.	Aniruddha Biswas	Prof. Palash Sarkar, ASU, ISI, Kolkata	Studies in Boolean Function Analysis	Computer Science
25.	Manish Kumar	Dr. Anisur Rahaman Molla, CSRU, ISI, Kolkata	Message Efficient Fault-Tolerant Distributed Computations	Computer Science
26.	Subhojit Sarkar	Prof. Sasthi Charan Ghosh, ACMU, ISI, Kolkata	Obstacle Detection and Infrastructure Deployment for Efficient Millimeter-wave Communications	Computer Science
27.	Rathindra Nath Dutta	Prof. Sasthi Charan Ghosh, ACMU, ISI, Kolkata	On Resource Efficient and Obstacle A ware Link Selection in D2D Communications	Computer Science
28.	Manobendra Nath Mondal	Prof. Susmita Sur-Kolay, ACMU, ISI, Kolkata and Prof. Bhargab B. Bhattacharya, ACMU, ISI, Kolkata	Memoristive Crossbars: ALU Design, Testing, and Fault Analysis for Neuromorphic Applications	Computer Science
29.	Debamita Kumar	Prof. Pradipta Maji, MIU, ISI, Kolkata	Discriminative Deep Joint Subspace Analysis for Multi-View Data: Correlation, Dependency to Spatial Proximity	Computer Science
30.	Suchismita Das	Prof. Nikhil Ranjan Pal, ECSU, ISI, Kolkata	Dimensionality Reduction for Data Visualization and Classification	Computer Science
31.	Susanta Samanta	Prof. Kishan Chand Gupta, ASU, ISI, Kolkata	Design and analysis of MDS and Near-MDS Matrices and their application to lightweight cryptography	Computer Science

Ph.D. degrees awarded by ISI				
Sl. No.	Name of the Scholar (Name of Women Scholar is highlighted)	Name(s) of the Supervisor(s)	Title of the Thesis	Subject Area
32.	Jyotirmoy Basak	Prof. Subhamoy Maitra, ASU, ISI, Kolkata	Studies on the Quantum Private Query Primitive in the Device-Independent Paradigm	Computer Science
33.	Arindam Panja	Prof. Biswabrata Pradhan, SQC & OR Unit, Kolkata	On Some Issues of Stochastic Comparisons & Their Applications	Quality, Reliability and Operations Research
34.	Siddhartha Chakraborty	Prof. Biswabrata Pradhan, SQC & OR Unit, Kolkata	On Cumulative Information Measures: Properties, Inferences and Applications	Quality, Reliability and Operations Research

Ph.D. Degrees Awarded by Other Academic Bodies

A. Research Fellows (with ISI-fellowships) who have been awarded Ph.D. degree by Academic Bodies other than ISI for work done in ISI.

Ph.D. degrees awarded to ISI Research Fellows by other Academic bodies				
Sl. No.	Name of the Scholar (Name of Women Scholar is highlighted)	Name(s) of the Supervisor(s)	Title of the Thesis	University
1.	Ekta Bhattacharya	Dr. Suparna Mandal Biswas, AERU, ISI, Kolkata	Translating the Chemical Vocabulary of Plants by Interpreting the Bioremediation Efficacy of Cleome rutidosperma DC	Jadavpur University
2	Naresh Saha	Prof. Barnana Roy, PAMU ISI, Kolkata	Nonlinear Waves And Localized Structures	University of Calcutta
3.	Kanishka Bose	Dr. Shiladri Shekhar Das, GSU, ISI, Kolkata	Systematics, Diversity, Palaeobiogeography, and Palaeoecology of Miocene Gastropods of Dwarka Basin, Gujarat, India	University of Calcutta
4.	Abhishek Bhattacharya	Prof. Rabi Ranjan Chattopadhyay, AERU, ISI, Kolkata	Development of novel natural food preservatives from phenolics of peels of five selected varieties of potato with special emphasis on omega-3 fatty acids fortified functional foods	Jadavpur University
5.	Supriya Majumder	Prof. Pabitra Banik, AERU, ISI, Kolkata and Dr. Pabitra Kumar Biswas, Visva Bharati University	Chemistry of Arsenic dynamics in paddy soils and its bioavailability to rice under different rice ecosystems from an Arsenic affected area of West Bengal	Visva-Bharati University

B. Research Fellows (with other fellowships)/Personnel who have been awarded Ph. D degree by Academic Bodies other than ISI for work done in ISI.

Ph.D. degrees awarded to ISI Research Fellows by other Academic bodies				
Sl. No.	Name of the Scholar	Name(s) of the Supervisor(s)	Title of the Thesis	University
1.	Sandip Saha	Dr. Shiladri Shekhar Das, GSU, ISI, Kolkata and Dr. Subhronil Mondal, University of Calcutta	Systematics, Diversity, Palaeobiogeography, And Palaeoecology Of The Jurassic Gastropods From Western India	University of Calcutta

2.4 Placement

During 2023-24 Indian Statistical Institute had offered the following degree and diploma courses B. Stat, B. Math, M. Stat, M. Math, MS(QE), MSQMS, MSLIS, M. Tech (CS), M. Tech (CrS), M. Tech (QROR), PGDBA, PGDSMA, and PGDARSMA. ISI also offers PhD programs in various disciplines. All the PhD scholars are fully absorbed in various institutes, universities and other sectors. Generally, students of B. Stat and B. Math programs do not opt for jobs but enrol into M. Stat and M. Math programs respectively. Some students after completion of their programs, opt for higher education and enrol at the PhD programs in the country or foreign universities or institutes. All the other remaining students go for jobs through the ISI placement cell (or otherwise). Some students during master and diploma programs work as interns in various companies for a short- or medium-term period. Tables with course-wise information about placements and corresponding salary offered are given subsequently.

Higher Education

Given the excellent education that students receive under the well-designed, modern curriculum at ISI, a majority of them opt for higher education by joining PhD programmes in world-renowned universities and institutions (national and international), after completing their post-graduate education in ISI.

At the conclusion of the academic year 2022-23, a large number of students completing various Master's degree programmes at ISI, secured admission to PhD programmes conducted by prestigious national and international universities, very often after a highly competitive selection process.

The Universities/ Institutions in which these students joined PhD programmes in 2023-24 are listed below:

National Institutes/Universities: Indian Institute of Management Bangalore; Babasaheb Bhimrao Ambedkar University, Lucknow; Indian Statistical Institute. Total (56)

Placement in Industry

Course-wise Recruitments and Salary

Name of Program	No. of Job Market Candidates	No. of Candidates Offered Jobs	Highest Salary Offered (in LPA)	Median Salary Offered (in LPA)
M Tech (CS) Kolkata	24 (Male 22, Female 2)	24	37	20
M Stat (Kolkata)	34 (Male 29, Female 5)	34	37.5	22
M Math (Kolkata)	2 (Male)	2	20	17.5
MS(QE) Kolkata	15 (Male 9, Female 6)	15	34	20

Name of Program	No. of Job Market Candidates	No. of Candidates Offered Jobs	Highest Salary Offered (in LPA)	Median Salary Offered (In LPA)
MS(QE) Delhi	28 (Male-23, female-5)	28	26	18
M Tech (CrS) Kolkata	6 (Male 5, Female 1)	6	20	18.5
M Tech QROR Kolkata	23 (Male 21, Female 2)	34	29	20.5
MSQMS (Bangalore / Hyderabad)	13	13	52.92	18.19
MSLIS (Bangalore)	11 (Male-5, Female-6)	11	8	5.5

Name of some companies who recruited

Diploma Course-wise Recruitments and Salary

Name of Program	No. of Job Market Candidates	No. of Candidates Offered Jobs	Highest Salary Offered (in LPA)	Median Salary Offered (In LPA)
PGDSMA (Tezpur)	14 (male-8, Female-6)	14	15	8.75
PGDSMA (Chennai)	7 (Male-4, Female-3)	7	7.0	5.83

Name of some Companies who recruited

2.5 International Training Programme - International Statistical Education Centre (ISEC)

Member Secretary: Prof. Amita Pal (1st April - 31st December 2023)
Dr. Md. Zafar Anis (1st January – 31st March 2024)

Office: C.D. Deshmukh Bhawan, 202, B.T. Road, ISI, Kolkata

No of Scientific Staff: One (1)

No of Non-scientific Staff: Four (4)

The International Statistical Education Centre (ISEC) was founded in 1950 at Kolkata through the initiative of Professor P.C. Mahalanobis, based on an agreement between the International Statistical Institute and the Indian Statistical Institute (ISI). It is an Associate Institution of ISI as per Regulation no. 14 of the Institute. It functions under a Board of Directors, which has members from ISI, MoSPI and the Ministry of External Affairs (MEA), and whose current Chairman is Professor S. P. Mukherjee. The centre aims to provide training in theoretical and applied statistics at various levels to selected participants from countries of the Middle East, the Far East, South and South-East Asia, as well as the Commonwealth countries of Africa. The primary training programme is a 10-month regular course in Statistics (titled Statistical Theory and Applications) leading to a Diploma. In addition, special courses on different topics of varying duration are also organized for international participants. In the current financial year (2023-24), two such short-duration courses were organized.

Regular Course

The 75th term of the regular course titled Statistical Theory and Applications commenced on 1st September, 2023 with 14 trainees. The trainees are from thirteen different countries, namely Burundi, Bangladesh, Botswana, Ivory Coast, Democratic Republic of the Congo, Ethiopia, Fiji, Gambia, Kenya, Madagascar, Myanmar, Malawian, Niger.

ISEC Regular Course 75th Batch				
Sl. no.	Name of Trainee	(Male/ Female)	Country	Supported by
01.	Mbabarempore Celestin	Male	Burundi	Ministry of External Affairs (MEA)
02.	Iqbal Kobir	Male	Bangladesh	Ministry of External Affairs (MEA)
03.	Gomotsegang Khudu	Female	Botswana	Ministry of External Affairs (MEA)
04.	Yapi Eloge Odilon	Male	Ivory Coast	Ministry of External Affairs (MEA)
05.	Allade Hermann N"da Assamoi	Male	Ivory Coast	Ministry of External Affairs (MEA)
06.	Kasongo Chris Katari Regis	Male	Democratic Republic of the Congo	Ministry of External Affairs (MEA)
07.	Desta Yohannis Hemade	Male	Ethiopia	Ministry of External Affairs (MEA)
08.	Matelita Drodro	Female	Fiji	Ministry of External Affairs (MEA)
09.	Lamin Fadera	Male	Gambia	Ministry of External Affairs (MEA)
10.	Elizabeth Mbatha Mutua	Female	Kenya	Ministry of External Affairs (MEA)
11.	Fandresena Mbolatiana Rakotozafy	Female	Madagascar	Ministry of External Affairs (MEA)
12.	Mi Si Si San	Female	Myanmar	Ministry of External Affairs (MEA)
13.	Kabononkhola Henderson Chihana	Male	Malawian	Ministry of External Affairs (MEA)
14.	Abdoul Rachid Alio Mahamane	Male	Niger	Ministry of External Affairs (MEA)

Special Course

Sl. No.	Name of Special Course	Duration	No. of Participants		Composition (by Country)
01.	Sampling Methodologies for Conducting Household Surveys	October 30 to November 10, 2023	Male	Female	Ghana, Jamaica, Maldives, Tanzania, South Sudan, Vietnam, Thailand
			06	07	
	Objective: The objective of this course was to provide participants with an overview of available sampling methodologies for conducting household surveys.				
02.	Data Analytics for Decision Making	March 4-22, 2024	05	10	Bhutan, Ethiopia, Kenya, Lesotho, Mauritius, Mongolia, Myanmar, Niger, Nigeria, Uganda
	Objective: In today's digital economy, data is the key to business and improvement. Extracting useful insights from data helps BIG (Business, Individuals and Governments) to cultivate huge rewards. Data Science and Analytics involves using scientific methods to extract, process and organize structured and unstructured data to derive valuable insights used for decision making.				

Chapter

3

Research Activities

70
No. of Internal Projects

11 New

37 Ongoing

22 Completed

176
No. of External Projects

38 New

77 Ongoing

61 Completed

08
No. of Government Projects

01 New

05 Ongoing

02 Completed

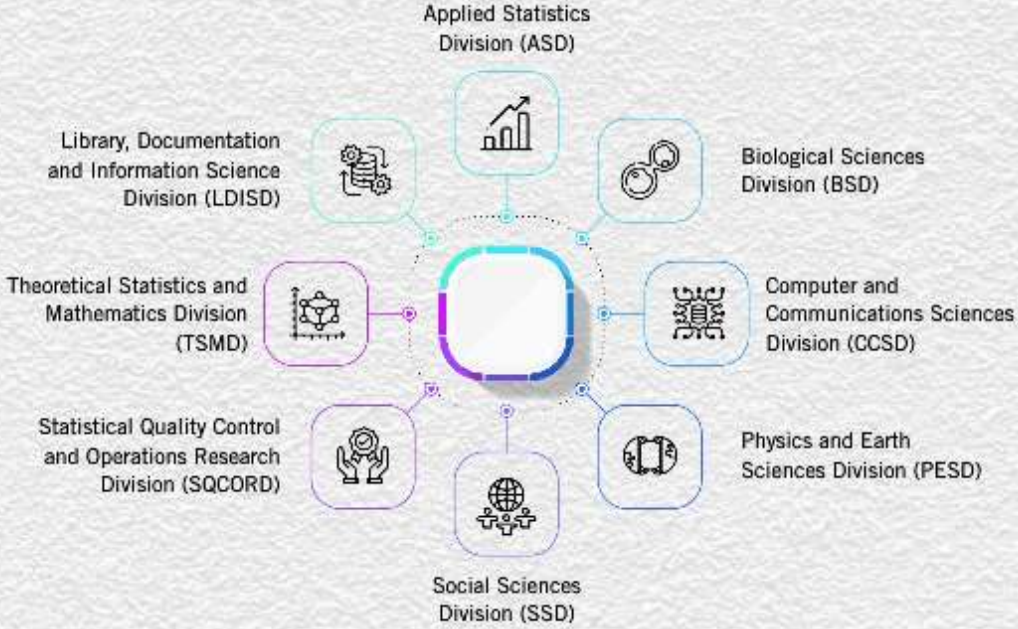
Research Activities

The major thrust of the Institute is on research in various disciplines and the activities of the Institute are organized into Divisions. These Divisions have multi-locational units (vide the Locations page, Chapter 1). Scientists of the Institute carry out independent research in their own basic discipline and also undertake interdisciplinary research in collaboration with other units within the Institute and also with other organizations. The Institute also takes up various internally and externally funded projects in diverse fields on challenging problems of national and international importance. As a part of research activities, the scientists of the Institute are also involved in consultancy work.

The Institute has a network of units under the Statistical Quality Control and Operations Research Division which, in addition to research and training activities, also specialize in providing technical consultancy to a wide range of public and private organizations for developing quality management systems and in solving critical problems of quality, reliability and productivity.

This chapter provides the principal areas of work and the projects undertaken by the faculty, of the different Divisions, during 2023-2024.

The eight Divisions for research, development and consultancy activities are



One Division providing services -

Computer and Statistical Services Centre (CSSC), Kolkata

Additionally, there are five national facilities

- The Centre for Artificial Intelligence and Machine Learning (CAIML), Kolkata
- The Centre for research on the Economics of Climate, Food, Energy and Environment (CECFEE), Delhi
- The Centre for Soft Computing Research (CSCR), Kolkata
- The R. C. Bose Centre for Cryptology and Security (RCBCCS), Kolkata
- Technology Innovations Hub (TIH), Kolkata

3.1 Applied Statistics Division (ASD)

Professor In-Charge: SMARAJIT BOSE, ISRU, Kolkata

Office: 4th floor, R.A. Fisher Bhavan, ISI, Kolkata 700108

1. Applied Statistics Unit (ASU), Bangalore

- Head of Unit: Rituparna Sen
- Number of Faculties: 1 (Female: 1)
- Number of Scientific Worker: 1 (Female: 1)
- Number of Research Scholar: 1 (Female: 1)
- Office: 8th Mile, Mysore Rd, RVCE Post, ISI, Bengalore, Karnataka 560059

2. Applied Statistics Unit (ASU), Chennai

- Head of Unit: Sudheesh Kumar Kattumannil
- Number of Faculties: 1 (Male: 1)
- Office: 37, Nelson Manickam Road, Aminjikarai, ISI, Chennai, Tamilnadu –600029

3. Applied Statistics Unit (ASU), Kolkata

- Head of Unit: Subhamoy Maitra
- Number of Faculties: 15 (Male: 15)
- Number of Scientific Worker: 2 (Male: 2)
- Number of Non-Scientific Worker: 2 (Male: 2)
- Number of Research Scholar: 48 (Male: 40, Female: 8)
- Office: 203 B.T. Road, 8th Floor, S.N. Bose Bhavan, ISI, Kolkata 700108

4. Interdisciplinary Statistical Research Unit (ISRU), Kolkata

- Head of Unit: Amita Pal
- Number of Faculties: 9 (Male: 8, Female: 1)
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 3 (Male: 1, Female: 2)
- Number of Research Scholar: 14 (Male: 13, Female: 1)
- Office: 4th Floor, R A Fisher Bhavan, ISI, Kolkata - 700 108

1. Applied Statistics Unit (ASU), Bangalore

Research

The unit carries out research in applied statistics especially in the area of financial statistics and risk management. In addition it participates in consulting and teaching.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Rituparna Sen	Energy Finance	Soudeep Deb, IIM Bangalore
	Risk Management	Suparna Biswas

Projects

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Functional Time Series	E-517	Feb 23, 2021	3 years	Rituparna Sen	SERB	6,60,000.00
2	Estimation of Risk Measures	E-515	Dec 22, 2020	3 years	Suparna Biswas, ASU Bangalore	DST	28,24,416.00

2. Applied Statistics Unit (ASU), Chennai

Research

The faculty member is doing research in the area of Reliability and Survival Analysis, Non-parametric inference and empirical likelihood inference. Helping IIT Tirupati with teaching activities.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Sudheesh Kumar Kattumannil	Emprirical Likelihood inference	Dr. Saparya Suresh, IIM Kozhikode
	Mathematical Statistics	Prof. Balakrishanan N, MacMaster University Dr. Deepesh Bhati, Central University of Rajasthan Dr. Sreedevi E P, Cochin Univrsity of Sceince and Technology
	Survival Analysis	Prof. P G Sankaran, Cochin University of Science and Technology

3. Applied Statistics Unit (ASU), Kolkata

Research

Cryptology, and Security, Digital Watermarking, Sensor Networks, Quantum Information, Combinatorics, Theoretical Computer Science, Discrete Logarithm Problem, Computation using Kummer Line, Lattice Based Cryptography, Symmetric Key Cryptography.

Problems related to Discrete-Valued Time Series, Sequential Analysis and Clinical Trials, among others Multivariate Analysis, Inference, Bio-Statistics, Signal Processing, Big Data Analysis, Regression and Data Science.

Copula based Methods and Inference with focus on Multivariate Longitudinal Models.

High-Dimensional Statistics, Model Selection, Multiple Hypothesis Testing.

Applied Statistics, Pattern Recognition, E M Algorithm.

Game Theory, High dimensional Inference, Change-point Detection in Random Networks, Large-Scale Multiple Testing for Sequential Data

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Anup Dewanji	Reliability	Farha Sultana, Prajamitra Bhuyan, Dhrubasish Bhattacharya, Debashis Kushary
	Survival Analysis	Biswadeep Ghosh, Tamalika Koley, Sudipta Das, G Asha, CS Soorya
Arijit Chakrabarti	Model selection and inference in High-Dimensional Problems	Sayantan Paul, SRF, ISI Kolkata, Prof. Tapas Samanta, ISI Kolkata, Dr. Prasenjit Ghosh, Texas A & M University, USA
Bimal Kumar Roy	Combinatorics, Design of Experiments, Optimization, Cryptology, Data obfuscation, Design of secure Electronic voting machine	
Debasis Sengupta	Environmental and health statistics	Dr. Nachiketa Chattopadhyay, SOSU, ISI
	Modeling and analysis of climate and environmental data	Prof. Debashis Paul
	paleoclimatic data modeling	Dr. Radhendushka Srivastava, IIT Bombay and Dr. Prosenjit Ghosh, IISc Bangalore
Mridul Nandi	Symmetric Key Design, Provable Security, Cryptanalysis and Implementation, Hash Function, Authenticated Encryption and its Applications, Quantum Symmetric Key	
Palash Sarkar	Cryptology, Combinatorics, Theoretical Computer Science, Discrete Logarithm Problem, Computation using Kummer Line, Lattice based cryptography, Symmetric Key cryptography	
Shyamal Krishna De	functional data analysis, high-dimensional statistics	Dr. Anirvan Chakraborty, Indian Institute of Science Education and Research Kolkata
	multiple hypothesis testing, sequential analysis	Prof. Subir Kumar Bhandari, ISRU, ISI Kolkata
	Multiple testing in response adaptive designs	Prof. Atanu Biswas, ASU, ISI Kolkata
Souvik Roy	Game Theory (non-cooperative and cooperative); Stochastic Game Theory; Evolutionary Game Theory; Decision Theory; Percolation Game Theory; Combinatorial Game Theory; Computational Game Theory; Probability Theory (Percolation, Random Graphs); Stochastic Block Model; Exponential Random Graph Model; Bayesian Learning; Image Processing; Algebraic Graph Theory; Social Choice Theory; Matching Theory; Mechanism Design with Transfer;	Ujjwal Kumar, Hausdorff Center for Mathematics, Germany Sayar Karmakar, University of Florida Moumanti Podder, Indian Institute of Science Education and Research Pune Soumyarup Sadhukhan, IIT Kanpur Ratul Lahkar, Ashoka University Surajit Borkotokey, Dibrugarh University Dipjyoti Majumdar, Concordia University Montreal Soumendu Sundar Mukherjee, ISI Kolkata Yadati Narahari, IISc Bangalore Sukanta Pati, IIT Guwahati Raghul S Venkatesh, IISER Bhopal
Subhamoy Maitra	Cryptology and Security, Digital Watermarking, Sensor Networks, Quantum Information	

Projects

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Analysis of Cryptographic Algorithms & protocols used in Wireless Mobile Communications	E-215	Jun 06, 2023	30 months	PI:Subhamoy Maitra, Co-PI: Mridul Nandi (ASU), Sabyasachi Karati (RCBCCS)	DRDO	1,10,33,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Research & Development of stream encryption Algorithm	E-176	Mar 17, 2021	36 months	PI: Mridul Nandi (ASU)	DST,GOI	15,21,816.00

4. Interdisciplinary Statistical Research Unit (ISRU), Kolkata

Research

This unit was formed in 2006, and was known as BIRU until 2015. The unit had 9 faculty members during this period. The research areas covered by the unit include robust inference, machine learning, pattern recognition, classification and clustering, Bayesian inference, spatio-temporal data analysis, high dimensional statistics, multiple hypothesis testing, statistical image analysis, directional data analysis, big data analytics, bioinformatics, computational neuroscience and many others. The faculty maintain research collaborations with scientists from various national and international organizations. Each and every faculty member of the unit take regular part in teaching -- not only in the courses under the curriculum of the Institute as approved by the Academic Council -- but also in Summer/Winter Schools, Workshops and ISEC courses. The faculty members are also active in supervising doctoral and master's degree programs, and serve in the editorial board of several international journals.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Abhik Ghosh	Applications of Statistics within Econophysics & Socio-economic Applications	Prof. Banasri Basu, ISI Kolkata
	Robust Inference for High and Ultra-high dimensional Data	Prof. Leandro Pardo (UCM, Madrid, Spain), Prof. Magne Thoresen (UiO, Oslo, Norway)
	Robust Inference for Stochastic Processes	
	Robust Methods in Bioinformatics	
	Robust Statistical Inference for various Applications	Prof. Claudio Agostinelli (UiT, Trento, Italy) Prof. Ayanendranath Basu (ISRU, ISI Kolkata) Prof. Leandro Pardo (UCM, Madrid, Spain),
Ayanendranath Basu	Minimum Distance Methods; Robust Methods; Multivariate Analysis.	Dr. Abhik Ghosh, ISI Prof. Leandro Pardo, Complutense University, Madrid, Spain Dr. Sancharee Basak, St. Xaviers College, Kolkata.
Jayant Jha	Directional data, Bayesian inference, Brain network models, Applied statistics	Neelesh S. Upadhye, IIT Madras Saheli Datta Upama Paul Chowdhury, University of Maryland
Kiranmoy Das	Bayesian modeling	Dr. Shubhajit Sen, NC State University, USA
	Bayesian modeling, Biostatistics	Dr. Damitri Kundu, Intuit, India
	Quantile Regression	Zhaofeng Guo, Chinese Academy of Sciences
	Spatio-temporal modeling	Tannistha Mondal, University of Chicago, USA

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Partha Sarathi Mukherjee	Applications of statistical tools in the research on neurotoxicity and air pollution	Dr. Lilian Calderon-Garciduenas, University of Montana, USA
	Image monitoring using statistical control charts	
	Image registration using jump regression analysis	
	Image restoration (denoising and deblurring) using jump regression analysis.	Dr. Yicheng Kang, Department of Information Systems & Analytics, Miami University, Oxford, Ohio, USA.
Sandip Barui	Cure Rate Models in Survival Analysis; Reliability Modeling	N. Balakrishanan, McMaster University Debanjan Mitra, IIM Udaipur Suvra Pal, University of Texas Arlington
Smarajit Bose	Statistical Pattern Recognition	Ananda Sen, Professor, University of Michigan
Subir Kumar Bhandari	Multiple Hypothesis Testing	Dr M Dey & Mr N Das

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Comparative Integrations of Robust Statistical and Machine Learning Methodologies	Apr 01, 2023	3 years	Abhik Ghosh

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Bayesian estimation of virtual brain parameters	E-194	Apr 01, 2023	2 years	Jayant Jha	SERB DST	14,94,669.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Unravelling the interdisciplinary facets of physics and data sciences in real life socio-economic challenges	E-135	Apr 01, 2020	Jun 30, 2023	Abhik Ghosh and Banasri Basu (PAMU)	SERB, Govt. of India	21,19,546.00

3.2 Biological Sciences Division (BSD)

Professor In-Charge: ABHISHEK MUKHERJEE, AERU, Giridih

Office: Rose Villa, New Barganda, ISI, Giridih, Jharkhand – 815301

1. Agricultural & Ecological Research Unit (AERU), Giridih & Kolkata

- Head of Unit: Suparna Mandal Biswas
- Number of Faculties: 8 (Male: 7, Female: 1)
- Number of Scientific Worker: 3 (Male: 2, Female: 1)
- Number of Non-Scientific Worker: 5 (Male: 5)
- Number of Research Scholar: 31 (Male: 16, Female: 15)
- Office: 203, B. T. Road, Indian Statistical Institute, Kolkata 700108 and AERU Giridih Branch, Indian Statistical Institute, Rose Villa, New Barganda, Giridih, Jharkhand – 815301

2. Human Genetics Unit (HGU), Kolkata

- Head of Unit: Raghunath Chatterjee
- Number of Faculties: 2 (Male: 2)
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 2 (Male: 2)
- Number of Research Scholar: 11 (Male: 7, Female: 4)
- Office: 2nd floor, A.N. Kolmogorov Bhavan, 203, B. T. Road, ISI, Kolkata 700108

1. Agricultural & Ecological Research Unit (AERU), Kolkata

Research

The Agricultural and Ecological Research Unit (AERU) belongs to the Biological Sciences division. AERU is based in Kolkata and has its branch at Giridih, Jharkhand State. The Unit is comprised of eight faculty members and three Associate Scientists. The primary focus of the Unit is to conduct research in agricultural and ecological sciences with special emphasis on enhancing agricultural productivity, promoting environmental sustainability, and addressing ecological challenges. Our unit is also involved in developing various ecological models using advanced mathematical and statistical tools. This is a powerful approach in better understanding of complex ecological interactions. It helps to build strategies for sustainable ecological management and conservation. Our faculty members take classes for B. Stat and M. Stat courses of ISI and also in other Universities. AERU is conducting Post Graduate Diploma in Agricultural and Rural Management with Statistical Methods and Analytics in the Giridih Branch.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Abhishek Mukherjee	Applications of nanotechnology in agriculture	Dr. Chandan Ghosh, Department of Material Science and Technology, School of Materials Science & Nanotechnology, Jadavpur University
	Biocontrol of pest and diseases	Prof. Birendra Nath Panja, Prof. and HoD, Dept. of Plant Pathology, Bidhan Chandra Krishi Viswavidyalaya
	Invasive weed ecology and management	Dr. Achyut Banerjee, School of Life Sciences, Sun Yat-sen University, China Dr. Raghu Sathyamurthy, Biosecurity Flagship, CSIRO, Brisbane, Australia
	Plant – Nematode interaction	Prof. Matiyar R. Khan, Principal Scientist, Division of Nematology, ICAR- IARI, New Delhi Dr. Dipankar Chakraborti, Department of Genetics, University of Calcutta Dr. Totan Adak, NRRI, Cuttack
Arunava Goswami	Nanoscience in Agriculture	Prof. Sabyasachi Bhattacharyaya, ISI
Joydev Chattopadhyay	Mathematical Biology, Epidemiology, Early warning, Evolutionary Dynamics.	Dr. Amar Sha, A B N Seal College Prof. A.K.Misra, BHU Dr. Pankaj Kumar Tiwari, IIIT-Bhagalpur.
Pradip Bhattacharyya	Lignin degrading microorganisms in Tea garden soil	Dr. Saibal Ghosh, Tocklai Tea Research Institute, Assam India
	Microbial remediation of Arsenic contaminated mica mine soils of Jharkhand	Dr. Jajati Mandal, University of Salford, UK
	Nano Biochar based remediation of calcareous Soils of Bihar	Dr. Jajati Mandal, University of Salford, UK and Dr. Chandan Ghosh, Jadavpur University, India
	Remediation of Fluoride contaminated water of Jharkhand, India	Dr. Jajati Mandal, University of Salford, UK and Dr. Sandip Mondal, Ohio State University, USA
	Restoration of Mangrove in coastal soils of Orissa, India	Mr. Sumit Roy, World Wide Fund for Nature India
	Vermiremediation of Steel waste slag and application for crop cultivation	Prof. Anjana Verma, Vinoba Bhave University, Jharkhand
Rabi Ranjan Chattopadhyay	Developments of natural preservatives	Prof. Sabyasachi Bhattacharya, AERU, ISI, Kolkata
Sabyasachi Bhattacharya	Theoretical Statistics; Statistical / Mathematical Ecology.	Dr. Debal Deb, Centre for Interdisciplinary Studies, Barrackpore, Kolkata Prof. Susmita Sarkar, University of Calcutta Prof. Shyamal Kumar Mondal, Vidyasagar University Dr. Uttam Ghosh, University of Calcutta

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Suparna Mandal Biswas	Characterization of fungal metabolites and bioactivity screening to assess its potentialities as raw material for development of dying agents and pharmaceutical products.	Dr. Lalit Kumar, ICAR - Indian Institute of Farming Systems Research, Modipuram Meerut.
	Evaluating the potential role of plant derived natural products in urease inhibition and nitrogen utilization for enhancing soil health - A rhizosphere manipulation strategy	Prof. Panchanan Pramanik, Former Professor of IIT, Kharagpur.
	Metabolomic profiling and bioefficacy evaluation of some endemic lichen species.	Dr. Pranab Kumar Mondal. Associate Professor Indian Institute of Technology Guwahati, Assam, India - 781039
	Potent senotherapeutics for sustainable natural sources for rejuvenation and healthy aging	Prof. Parimal Karmakar Department of Life Science and Biotechnology, Jadavpur University.

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Chitinolytic bacteria for Biological Control: A Sustainable and Eco-Friendly Approach to Integrated Pest Management in Agriculture	Mar 31, 2024	3 years	
2	Investigation Of Novel Antioxidants From Anthocyanins Of Syzygium Cumini Fruit Pulp For Extending The Shelf Life Of Omega 3 Fatty Acids Fortified Functional Foods	Apr 01, 2023	1 year	Prof. Rabi Ranjan Chattopadhyay (AERU)

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Mapping dynamic interaction of aqueous medicinal plant extracts and soil derived nanoparticles with simple and complex biological systems.	Mar 31, 2024	1 year	Prof. Arunava Goswami (AERU) & Prof. Sabyasachi Bhattacharyaya (AERU)

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Fungal endophytic communities associated with root galls of Meloidogyne graminicola: exploitation of their role in biological control	Apr 01, 2021	Mar 31, 2024	Abhishek Mukherjee, Pradip Bhattacharyya
2	Green synthesis of nanoparticle in plant ethanol extracts and application in various experimental and field model systems	Apr 01, 2021	Mar 31, 2024	Prof. Arunava Goswami (AERU)
3	Vetiver based phytoremediation of metal contaminated chromium asbestos mines of Jharkhand: A cradle to grave approach through vermitechnology	Apr 01, 2021	Mar 31, 2024	Pradip Bhattacharyya
4	Designing strategies for the enhanced production of cosmetic antiaging "squalene" from the shedded leaves of Moraceae and exploring its novel sources based on molecular cues	Apr 01, 2021	Mar 31, 2024	Suparna Mandal Biswas, Agricultural and Ecological Research Unit

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Machine learning for image-based identification of nematodes - anovel paradigm in biodiversity assessment and precision agriculture		Mar 31, 2024	3 years	Abhishek Mukherjee (AERU, Giridih), Utpal Garain (CVPRU)	DBT	75,00,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	A study on chemical constituents of rice root modulating herbivory by the rice root knot nematode Meloidogyne graminicola: a chemical ecology perspective	E-158	Mar 19, 2021	3 years	Abhishek Mukherjee	SERB	21,52,683.00
2	Delaying programmed cell death of beneficial gut bacteria in micro-gravity using oxide and complex nanoparticles	E-126	Apr 01, 2020	5 Years	Arunava Goswami (AERU) & Sabyasachi Bhattacharyaya (AERU)	ISRO, GoI	34,63,000.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	IGP Contract for conducting surveys in India to identify biocontrol agent for Nymphoides cristata	F-591	Apr 01, 2021	Mar 31, 2024	Abhishek Mukherjee	CSIRO, Australia	14,62,086.00
2	Winter School on Introduction to Basic GIS and Spatial Analysis of Species Diversity and Distribution	T-160	Apr 01, 2020	May 12, 2023	Abhishek Mukherjee (AERU, Giridih), Pradip Bhattacharyya (AERU, Giridih), Parthasarathi Ghosh (GSU), Sabyasachi Bhattacharya (AERU, ISI, Kolkata)	DST	5,55,922.00
3	Antidotes against dsDNA adenovirus induced kerato-conjunctivitis: ex-Vivo platform for nano-formulation development	E-130	Apr 01, 2020	Mar 31, 2024	Arunava Goswami (AERU)	DBT,GoI	34,28,000.00
4	Characterization and hazard prediction of tannery waste sludge in West Bengal and resource recovery through vermiremediation	E-115	Apr 01, 2020	Mar 31, 2024	Pradip Bhattacharyya	WBDSTBT	15,00,000.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
5	Agronomic evaluation of Nano Urea in Maize & Rice	E-197	Jan 01, 2023	Dec 31, 2023	Pradip Bhattacharyya	Rashtriya Chemicals and Fertilizers Limited	80,50,00.00

2. Human Genetics Unit (HGU), Kolkata

Research

1. Genetic and epigenetic association in Human Health and Diseases
2. To identify the role of genetic and epigenetic alterations in epidermal keratinocytes in the pathogenesis of Psoriasis
3. Genomic data integration
4. Development of single-cell data analysis methods
5. Genetic Association Mapping Of Comorbid Phenotypes
6. Combining Family-based Controls with Unrelated Cases In Genetic Mapping

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Indranil Mukhopadhyay	Applied Statistics, Statistical Modeling, Data Analysis, Statistical Inference and Multivariate Statistics	Dr. D. Das Ghosh SGCCRI, Kolkata
Raghunath Chatterjee	Genetics, genomics and epigenomics in Human Health and Diseases	Dr. S. Grewal, NCI, NIH, USA Dr. G. Chatterjee, IPGMER Kolkata Dr. JG Roy, Dr. R Ahmed Dental College & Hospital, Kolkata Dr. S. Banerjee, IPGMER Kolkata Dr. S. Manna, SINP Kolkata Dr. A Saha, Presidency universoity Kolkata Dr. B Das, THSTI Faridabad
Tilak Nayak	Genomics of human diseases, microbial ecology	Dr. P.K. Dhal, Jadavpur University

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	PIWI interacting RNAs (piRNAs) in the pathogenesis of Psoriasis and their underlying molecular mechanisms	Apr 01, 2023	3 Years	Raghunath Chatterjee

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	The synergistic effect of microRNAs on target genes in Oral Squamous Cell Carcinoma	Apr 01, 2020	Apr 01, 2023	Raghunath Chatterjee

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Response to 5-aza-2-deoxycytidine (decitabine) therapy in activating fetal haemoglobin (HbF) among HbE/β-thalassemia patients: development of a machine learning based predictive model.	E-222	Dec 15, 2023	3 Years	Raghunath Chatterjee (PI) & Sanghamitra Bandyopadhyay (Co-PI)	ICMR	1,54,00,000.00
2	MiRNAs In regulating the cardinal histopathological features of psoriasis and their role as molecular checkpoints in cell proliferation	E-214	May 29, 2023	3 Years	Raghunath Chatterjee	SERB	38,50,000.00
3	Biomarker Identification: Multi-omics approaches to differentiate between diabetic and non-diabetic kidney disease and identification of markers of progression in chronic kidney disease.	E-224	Jan 12, 2024	3 Years	Raghunath Chatterjee	ICMR	67,73,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	To identify the role of genetic and epigenetic alterations in epidermal keratinocytes in the pathogenesis of Psoriasis	E-157	Mar 18, 2021	3 Years	Raghunath Chatterjee	SERB	66,75,400.00

3.3 Computer and Communication Sciences Division (CCSD)

Professor In-Charge: RAJAT KUMAR DE, MIU, Kolkata

Office: 4th floor, Platinum Jubilee Building, ISI, Kolkata-700 108

1. Advanced Computing and Microelectronics Unit (ACMU), Kolkata

- Head of Unit: Sandip Das
- Number of Faculties: 10 (Male: 9, Female: 1)
- Number of Scientific Worker: 2 (Male: 2)
- Number of Non-Scientific Worker: 4 (Male: 3, Female: 1)
- Number of Research Scholar: 40 (Male: 24, Female: 16)
- Office: 5th floor, P.J.A. Building, 203, B. T. Road, ISI, Kolkata - 700 108.

2. Computer Science Unit (CSU), Chennai

- Head of Unit: T. Karthick
- Number of Faculties: 4 (Male: 3, Female: 1)
- Number of Scientific Worker: 1 (Female: 1)
- Number of Research Scholar: 3 (Male: 3)
- Office: 37, Nelson Manickam Road, Aminjikarai, ISI, Chennai-600029.

3. Computer Vision and Pattern Recognition Unit (CVPRU), Kolkata

- Head of Unit: Sarbani Palit
- Number of Faculties: 6 (Male: 5, Female: 1)
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 17 (Male: 14, Female: 3)
- Office: 8th floor, S.N. Bose Bhavan, 203 B T Road, ISI, Kolkata 700108

4. Cryptology and Security Research Unit (CSRU), Kolkata

- Head of Unit: Goutam Kumar Paul
- Number of Faculties: 5 (Male: 5)
- Number of Non-Scientific Worker: 3 (Male: 3)
- Office: 3rd floor, C.D. Deshmukh Bhavan, 203, B.T. Road, ISI, Kolkata 700108

5. Documentation Research and Training Centre (DRTC), Bangalore

- Head of Unit: Biswanath Dutta
- Number of Faculties: 3 (Male: 2, Female: 1)
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 5 (Male: 1, Female: 4)
- Office: 8th Mile, Mysore Road, ISI, Bengaluru- 560 059

6. Electronics and Communication Sciences Unit (ECSU) Kolkata

- Head of Unit: Pinakpani Pal
- Number of Faculties: 7 (Male: 6, Female: 1)
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 5 (Male: 5)
- Number of Research Scholar: 16 (Male: 15, Female: 1)
- Office: 9th floor, S.N. Bose Bhavan, 203, B.T. Road, ISI, Kolkata 700108

7. Machine Intelligence Unit (MIU), Kolkata

- Head of Unit: Bulusu Uma Shankar
- Number of Faculties: 10 (Male: 8, Female: 2)
- Number of Non-Scientific Worker: 4 (Male: 2, Female: 2)
- Number of Research Scholar: 12 (Male: 5, Female: 7)
- Office: 4th floor, Platinum Jubilee Building, 203, B.T. Road, ISI, Kolkata-700 108

8. Systems Science and Informatics Unit (SSIU), Bangalore

- Head of Unit: Prabuddha Chakraborty
- Number of Faculties: 4 (Male: 4)
- Number of Non-Scientific Worker: 1 (Female: 1)
- Number of Research Scholar: 2 (Male: 1, Female: 1)
- Office: 8th Mile, Mysore Road, RVCE Post ISI, Bengaluru - 560 059

1. Advanced Computing and Microelectronics Unit (ACMU), Kolkata

Research

The focus of the faculty/scientific members of the ACM Unit (ACMU) is in the core areas of Computer Science and Engineering, broadly spanning topics in Theoretical Computer Science and High Performance Computing Systems.

Teaching and Training

(a) Degree and Training Courses: During 2023 -2024, all the faculty members of the Unit taught a significant number of courses in the M.Tech (Computer Science) program, along with those in other degree programs such as B. Stat., M. Stat. and PGDBA of the Institute. Five research courses were also taught for Ph.D. scholars.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Ansuman Banerjee	Formal Verification	Dr. Sumana Ghosh, ECSU, ISI Kolkata
	Spiking Neural Networks	Dr. Swarup. K. Mohalik, Ericsson Research
Arijit Bishnu	Theoretical Computer Science	Manaswi Paraashar, ISI Sayantan Sen, ISI Gopinath Mishra, Warwick Arijit Ghosh, ISI Kunal Dutta, Univ. Warsaw Subhas C. Nandy, ISI
	Theoretical Computer Science	Manaswi Paraashar, ISI Sayantan Sen, ISI Gopinath Mishra, Warwick Sourav Chakraborty, ISI Arijit Bishnu, ISI Kunal Dutta, Univ. Warsaw Nabil Hasan Mustafa, EISEE Paris Jean-Daniel Boissonnat, INRIA Siddharth Pritam, Shiv Nader Univ
Biswajit Halder	Network Security, Software Defined Network, Cryptography	
Krishnendu Mukhopadhyaya	Algorithms for Robot Swarms	
Sandip Das	Discrete and Computational Geometry	Anil Maheshwari, Carleton University,Canada Swami Sarvattomananda, RKM University Yan Gerard, Université d' Auvergne, France
	Graph Theory and Graph Algorithms	Binay Bhattacharya, SFU, Canada Sergio Cabello, University of Ljubljana, Slovenia
	Optimization	Sagnik Sen, IITDh Aritra Banik, NISER
Sasanka Roy	Computational Geometry and Data Structures	Satyabrata Jana, IMSc Binayak Dutta, Tezpur University Sanjib Sadhu, NIT, Durgapur Jammigumpula Ajay, Google Subhas C. Nandy, ISI Anil Maheshwari, Carleton University, Canada Michiel Smid Carleton University, Canada JSB Mitchell, Stony Brook University, USA Minati De, IIT, Delhi Binay Bhattacharya, SFU, Canada Sayan Bandyapadhyay, Portland State University Haim Kaplan, Tel Aviv University Micha Sharir, Tel Aviv University Matya Katz, Ben-Gurion University of the Negev, Kasturi R. Varadarajan, The University of Iowa. USA

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Sasthi Charan Ghosh	Wireless Networks Mobile Computing Device to device communications 5G cellular networks Wireless local area networks Network Planning and Optimization Hand-off management in heterogeneous networks	Arpan Chhattopadhyay, IIT Delhi Shankar K. Ghosh, Shiv Nadar University, Delhi NCR Durgesh Singh, UPES University, Dehradun
Sourav Chakraborty	Theoretical Computer Science, Machine Learning, Algorithms. Complexity	Divesh Aggarwal, NUS, Singapore Rishiraj Bhattacharyya, University of Birmingham Diptarka Charkraborty, NUS, Singapore Eldar Fishcer, Technion, Israel Arijit Ghosh Avijeet Ghosh Sujata Ghosh Gunjan Kumar, IIT Kanpur Umang Mathur, NUS, Singapore Kuldeep Meel, University of Toronto Gopinath Mishra, CMI Rajat Mittal, IIT Kanpur Maciej Obremski, NUS, Singapore Manaswi Paraashar, Copenhagen University Aduri Pavan, Iowa State University Yash Pote, NUS, Singapore Swagato Sanyal, IIT Kharagpur Uddalok Sarkar Nitin Saurabh, IIT Hyderabad Francois Schwarzentruber, ENS Rennes, France Sayantan Sen Mate Soos, NUS Singapore N.V.Vinodchandran, Nebraska University
Subhas Chandra Nandy	Computational Geometry, Graph Algorithms, VLSI Design, Data Structure & Analysis of Algorithms	
Susmita Sur-Kolay	3D Image Processing	Prof. Aditi Majumder, UC Irvine
	Algorithm for Physical Design Automation	Dr. Pritha Banerjee, CSE, CU
	Hardware IP Security	Dr. Debasri Saha, AKCSIT, CU
	In-memory Computation	Prof. Bhargab B. Bhattacharya, Dr. Debajyoti Bhattacharjee, IMEC Belgium
	Quantum Computing	Dr. S. Raghunathan and Dr. D. Vinayagamurthy, IBM Prof. Amlan Chakrabarti, AKCSIT, CU

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	On the Interplay of Machine Models and Algorithms	Apr 01, 2022	3 years	Arijit Bishnu, ACMU
2	Beyond Local Queries on Graphs	Apr 30, 2023	3 years	Arijit Ghosh
3	Distributed Algorithms for Programmable Matter	Apr 01, 2023	3 years	Krishnendu Mukhopadhyaya, ACMU
4	Multipacking on Graphs	Apr 01, 2023	3 years	Prof. Sandip Das, ACMU
5	Optimization problems in Geometric Intersection Graphs	Apr 01, 2023	3 years	Sasanka Roy
6	Network selection in 5G and beyond: an AI Perspective	Apr 01, 2022	3 years	Sasthi Charan Ghosh
7	Verifying the Equivalence of Probabilistic Programs	Apr 01, 2022	3 years	Sourav Chakraborty
8	Minimum Discriminating Codes in Geometric Setup - Further Extensions	Apr 01, 2023	1 year 4 months	Subhas Chandra Nandy, ACMU
9	Machine Learning based Physical Design Automation for Next Generation ICs Phase – II	Apr 01, 2023	1 year 4 months	Prof. Susmita Sur-Kolay, ACMU

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Modeling, Verification and Synthesis for Multi-Access Edge Computing (MVSMEC)	Apr 01, 2021	Mar 31, 2024	Ansuman Banerjee

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Formal Verification Methods for Cache Coherence Protocols	E-195	Feb 01, 2023	1 Year (The Project has been extended further)	Ansuman Banerjee	Thales India Pvt. Ltd.,Bangalore	13,57,000.00
2	Towards Fourier Entropy Influence	E-182	Apr 30, 2022	3 Years	Sourav Chakraborty	SERB	6,60,000.00
3	Design for Manufacturability Aware Global Routing	251A	Jan 01, 1970	2010 To Till Date	Susmita Sur-Kolay, ACMU	IBM, USA	5,96,649.00

2. Computer Science Unit (CSU), Chennai

Research

The main research activities of the unit are in the following topics: (a) Reasoning in games on graphs (b) Complexity of logics of knowledge, games and protocols (c) Logics for distributed games (d) Reasoning in individuals with Autism Spectrum Disorder (e) Game-theoretic empirical studies (f) Learning how to negotiate. (g) Coloring of some special classes of graphs (h) Design of efficient MDS matrices of order 8 (i) Graph coloring and its variants (j) Algorithmic graph theory (k) Structure of some graph classes

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Ayineedi Venkateswarlu	Cryptology, Efficient MDS Diffusion Layers	Akshay Dhan

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Mathew C. Francis	Graph coloring, Graph reconfiguration problems	Manu Basavaraju, NIT Surathkal L. Sunil Chandran, IISc Bangalore Veena Prabhakaran, ISI Chennai Centre
Sujata Ghosh	Logics for games on graphs	Ansuman Banerjee Soham Banerjee Qian Chen (Tsinghua University) Dazhu Li (Chinese Academy of Sciences) Fenrong Liu (Tsinghua University) Yaxin Tu (Princeton University)
	Logics for knowledge and observations	Sourav Chakraborty Avijeet Ghosh Francois Scwarzentruber (ENS Rennes)
	Model-changing modal logics	Shreyas Gupta (IISc, Bengaluru) Li Lei (Shaanxi Normal University)
	Reasoning in individuals with Autism Spectrum Disorder	Torben Braüner (Roskilde University) Aishwarya Ghosh (University of Utah)
T. Karthick	Graph coloring problems	Dr. Shenwei Hunag and Y. Ju, College of Computer Science Nankai University Tianjin 300350, China Mr. Arnab Char, Ms. C. U. Angelia

Projects

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Chromatic bounds for some special classes of graphs	02011/55/2023/ NBHM(R.P)/ RDII/16733	Oct 11, 2023	2 years	T. Karthick, CSU Chennai	National Board for Higher Mathematics, Department of Atomic Energy, India	14,18,160.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Strategizing with partial information - From game theory, logic, automata theory to experiments and computational cognitive models	E-801	Feb 26, 2021	Feb 25, 2024	Sujata Ghosh (CSU)	Department of Science & Technology	35,75,460.00
2	Coloring of some special classes of graphs	MTR/2018/ 000288	Mar 01, 2023	Mar 31, 2024	T. Karthick, CSU Chennai	DST-SERB_ MATRICS	6,60,000.00

3. Computer Vision and Pattern Recognition Unit (CVPRU), Kolkata

Research

The faculty members of the Computer Vision and Pattern Recognition Unit (CVPRU) are actively engaged in research activities in various areas of Computer Science and Information Technology like Document Processing, Handwriting Analysis, Video Text Analysis, Information Retrieval, Sentiment Analysis, Natural Language Processing, Data Mining, Biometrics, Medical Image/Signal Processing, Machine Learning, Computer Vision, Image and signal processing applications etc. The faculty members of CVPRU are also engaged in teaching various courses of the Institute such as Operating Systems, Compiler Construction, Data Structures, Programming Languages, Image Processing, Pattern Recognition, Document Processing, Information Retrieval, Natural Language Processing, Digital Signal Processing etc.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Debapriyo Majumdar	Ensembles of Large Language Models	Sandeep Chatterjee Amit Awekar, IIT Guwahati
	Explainable Information Retrieval	Mandar Mitra
Mandar Mitra	Information Retrieval	A. Anand, TU Delft D. Ganguly, U. Glasgow D. Majumdar S. Saha, SRF
Sarbani Palit	Image based estimation of air quality, Image dehazing, Underwater image enhancement, Galaxy morphology, Medical Image Analysis, Glacier induced disaster modelling and prediction	Dr. Ujjwal Verma, Manipal Institute of Technoloy Prof. Debashis Nandi, NIT, Durgapur, Prof. Sudesh Yadav, Jawaharlal Nehru University
Ujjwal Bhattacharya	Autonomous Driving Systems	Subhrajyoti Dasgupta (Mila—Quebec AI Institute, Montreal, Canada) Arindam Das (Valeo India, Chennai, India) Sudip Das (Valeo India, Chennai, India) Andrei Bursuc (Valeo.ai, Paris, France) Senthil Yogamani (Valeo Visions Systems, Galway, Ireland) Ciarán Eising (University of Limerick, Limerick, Ireland) Sudarshan Paul (Valeo, India), Niko Scholz (Valeo, Germany) Akhilesh Kumar Malviya (Valeo, India) G. Sistu (Valeo, Ireland)
	Medical Image Analysis	Sarbani Palit
Umapada Pal	Biometrics	Dr. Abhijit Das, BITS Pilani, Hyderabad Campus, India
	Computer vision and Machine learning	Professor Michael Blumenstein, University of Technology Sydney, Australia
	Document Image Analysis.	Dr SHIVAKUMARA PALAIAHNAKOTE, University of Salford, Manchester, UK
	Video Document Analysis.	Dr. Hongjian Zhan, Dr. Yue Lu, East China Normal University, China
Utpal Garain	Analyzing Semantic Faithfulness of Language Models for Question Answering	Akshay Chaturvedi (ANITI Lab, Toulouse Institute, France), Swarnadeep Bhar (ANITI Lab, Toulouse Institute, France), Soumadeep Saha, Nicholas Asher (ANITI Lab, Toulouse Institute, France)
	Deep learning for cosmology	Purba Mukherjee, Rahul Shah, Soumadeep Saha, Supratik Pal
	Domain Obedient Self-supervised Training	Arijit Ukil (TCS research), Arpan Pal (TCS research), Soumadeep Saha, Sundeep Khandelwal (TCS research)
	Impact of Model Size on Fine-tuned LLM Performance in Data-to-Text Generation	Joy Mahapatra
	Long-tailed data analysis for ECG classification	Arijit Ukil (TCS Research), Arpan Pal (TCS Research), Ishan Sahu (TCS Research), Trisrota Deb (TCS Research), Sundeep Khandelwal (TCS Research)
	Region Mixup for classification	Saptarshi Saha
	User-centric explanation for deep models in medical diagnostics	Aditya Shankar Pal, Debasis Banerjee (Drs Tribedi & Roy Diagnostic Laboratory, Kolkata), Debojyoti Biswas, Joy Mahapatra, Prantar Chakrabarti (Zoho Corporation, India)

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Developing models for prediction of Glacial Lake Outburst Flood	Mar 31, 2024	3 years	S. Palit, CVPR
2	DSTS: Deep Scene Text Spottining	Apr 01, 2023	3 Years	Ujjwal Bhattacharya (PI) (CVPR Unit)
3	Automatic Personality Traits Identification using Social Media Images	Apr 01, 2023	3 years	PI- Umapada Pal, CVPRU, ISI, Co-PI-P. Shivakumara, University of Salford, UK

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Image based estimation of air quality	Apr 01, 2021	Mar 31, 2024	S. Palit, CVPR

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Mentoring/guiding MOL-IT team members on topics/ issues related to ML/AI	E-203	Jun 01, 2023	12 months + extension for 2 months	Ujjwal Bhattacharya (PI), CVPR Unit	MOL-IT, India	16,00,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Image based quality control of raw materials for steel production	E-201	Jan 18, 2023	2 years	S. Palit CVPR	MSP Steel and Power Limited	5,86,500.00
2	Remote Intelligent Baby Monitoring	F-013	Oct 06, 2020	4 years	PI- Umapada Pal, CVPRU, ISI, Co-PI- Mr. T. Pal, CVPRU, ISI	Baby sensor, Norway	16,05,000.00
3	SARER: Semantically-aware representations for efficient reasoning	E-208	Apr 01, 2023	3 years	Utpal Garain (CVPR) and Sujata Ghosh (CSU)	Indo-French Centre for Promotion of Advanced Research (IFCPAR/CEFIPRA)	82,37,118.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Neuro-symbolic AI mainly for healthcare and retail applications	I-097	Apr 01, 2023	Mar 31, 2024	Utpal Garain (CVPR)	Tata Consultancy Services (TCS)	33,21,936.00
2	Brainstorming session on Artificial Intelligence and Machine Learning (AIML) techniques	I-095	Jul 03, 2023	Jul 07, 2023	Utpal Garain (CVPR)	Alleima India Pvt. Ltd.	1,53,400.00

Projects done for Govt. of India/State Govt.

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Air Quality Assessment of Industrial Regions using camera captured images	E 223	Mar 06, 2024	2 years	S. Palit (PI), Debashis Nandi, NIT, Durgapur (Co-PI)	West Bengal Pollution Control Board	16,29,448.80

4. Cryptology and Security Research Unit (CSRU), Kolkata

Research

CSRU is a part of the Computer and Communication Sciences Division (CCSD) of Indian Statistical Institute, Kolkata. It is an integral component of R C Bose Centre for Cryptology and Security, a national hub for cryptographic requirements, cutting-edge research activities and indigenous capacity building in all relevant fields of study. The Unit aims at the promotion of interdisciplinary research in Mathematics, Computer Science and Statistics towards furtherance of teaching, research as well as training and development in Cryptology and Cyber Security.

Major activities of CSRU include teaching, training and research in Cryptology and Security. The Unit promotes sustained collaboration in focused research areas, and serves as a meeting point for eminent scholars. It also conducts internship and training programs targeted to produce a critical mass of experts to cater to the national and international requirements in this niche area.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Anisur Rahaman Molla	Security in Distributed Computing, Byzantine Computation, Distributed computation by mobile Agents or robotics, Distributed graph algorithms	Dr. Apurba Das, BITS, Pilani Dr. Debasish Pattanayak, Université du Québec en Outaouais, Canada Dr. Subhash Bhagat, IIT Jodhpur Dr. Shruti Gan Chaudhuri, Jadavpur University, Kolkata Dr. Gokarna Sharma, Kent State University, Kent, USA Dr. William K. Moses Jr., Durham University, UK Prof. Ajay D. Kshemkalyani, UI, Chicago, USA

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Fault-Tolerant Distributed Computation: Beyond Complete Networks	Apr 01, 2023	stopped after 1 year	Anisur Rahaman Molla

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Scalable and Secure Byzantine Algorithms in Distributed Networks	Apr 01, 2020	Apr 01, 2023	Anisur Rahaman Molla

5. Documentation Research and Training Centre (DRTC), Bangalore

Research

The Documentation Research and Training Centre (DRTC), established in 1962 by Prof. S. R. Ranganathan is an internationally recognized centre for advanced training and research in Library and Information Science. DRTC is a unit under the Computers and Communication Science Division of the Indian Statistical Institute. DRTC unit is located at the Bengaluru centre of the institute. Since its foundation, the Documentation Research and Training Centre (DRTC), Bangalore, has played a major role in almost all pedagogical and research advances in the Indian LIS milieu. Additionally, The DRTC researchers have worked with UNESCO, IFLA, Library of Congress, European Union, European Commission and other apex bodies. DRTC has taken the lead in adopting, integrating, and popularising the most recent technological developments that are altering library and information services in India.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Biswanath Dutta	Knowledge Graph, Ontology design and development, Semantic techniques and applications, AI and applications	
	Metadata, Semantic Artifact management, Data FAIRness	Dr. Clement Jonquet, Senior Researcher – INRAE (MISTEA) & Associate Researcher – Univ. of Montpellier (LIRMM), FRANCE
Devika P Madalli	Knowledge orgnaization, data management, ontology engineering	Anthonu Juenhne, NIH, USA, Ingvill Mochman, GESIS, Germany
Gopalji	Knowledge orgnaization, Data management, and Citation analysis	
M Krishnamurthy	Information Seeking Behaviour, Information Systems and Services, Digital Repository	DR Subhash Reddy, PES University, Bangalore

Projects

Internally Funded Projects

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Integrated and Unified Data Model for Publication and Sharing of prolonged pandemic data as FAIR Semantic Data: COVID-19 as a case study	Apr 01, 2021	Mar 31, 2024	PI: Biswanath Dutta, DRTC Unit, ISI Bangalore; Co-PI: Sushmita Mitra, Machine Intelligence Unit, ISI Kolkata & Michael DeBellis, Independent Consultant and Independent Scientific Researcher (https://www.michaeldebellis.com/)
2	Ontology Information Systems for Knowledge Management	Apr 01, 2021	Mar 31, 2024	M Krishnamurthy

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Facility for transforming library data to linked library data	02970110105078	Mar 10, 2023	24 months	Biswanath Dutta, DRTC Unit, ISI Bangalore	ICSSR	8,00,000.00

6. Electronics and Communication Sciences Unit (ECSU) Kolkata

Research

The Electronics and Communication Sciences Unit (ECSU) is the oldest unit within the Computer and Communication Sciences Division (CCSD) of the Indian Statistical Institute, Kolkata. This unit is deeply involved in cutting-edge research in diverse areas including deep generative models, large language models, medical informatics, statistical theory of deep learning, image and video analytics, computational intelligence, information theory, quantum information processing, Cyber-Physical Systems, Formal Verification of AI-assisted Systems, Cryptology and Software Engineering. Faculty members actively participate in various governmental and industrial projects and consultancies that address significant real-life challenges of national importance. ECSU regularly hosts international conferences and workshops featuring esteemed researchers from around the globe. Faculty members have received numerous national and international awards and honors in recognition of their research excellence. They are also dedicated to knowledge dissemination through teaching, training, and research guidance. The unit is supported by a dynamic team of junior and senior research fellows, project-linked personnel, and both scientific and non-scientific staff, all of whom contribute significantly to the unit's accomplishments.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Pinakpani Pal	Compositional Zero-shot Learning for Image Understanding, Petrographic Image Analysis	Aditya Panda, ISI, Dr. Rashmi Singh, Tata Steel
Naqueeb Ahmad Warsi	Classical and Quantum Information theory, Quantum Learning Theory	
Nikhil Ranjan Pal	Machine Learning, Artificial Intelligence, Brain Science, Computational Intelligence	Prof. C. T. Lin, UTS, Australia Prof. Jian Wang and Prof. Kai Zhang, China University of Petroleum, China Prof. Jun Wang, City University of Hong Kong, Hong Kong
Partha Pratim Mohanta	Image and Video Processing, Computer Vision	Sanjoy Kumar Saha, Jadavpur University, India
	Machine/Deep Learning, Neural Networks, Artificial Intelligence	Sayed Umer, Aliah University, India
Srimanta Pal	Air pollution, neural networks, econophysics. Book manuscripts ready for publication: (1) Engineering Probability & Statistics: (a) Part I: Probability Theory Including Solved Examples and Objective Questions for Kindle, 222 pages, (b) Part II: Statistics Including Solved Examples and Objective Questions for Kindle, 422 pages, (2) Python : (a) Illustrative Elementary Python for Beginners, for Kindle, 352 pages (b) Elementary Python for Beginners, for Kindle, 724 pages, (3) Econophysics, (a) Volume 2: Classical Econamachanics, for Kindle, 242 pages, (b) Volume 3: Econo-Fluidmachanics, for Kindle, 322 pages, (c) Volume 4: Econo-Thermodynamics, for Kindle, 208 pages, (d) Volume 5: Econo-Optics, for Kindle, 216 pages, (e) Volume 6: Econo-Acoustics, for Kindle, 94 pages, (f) Volume 7: Econo-Electromechanics, for Kindle, 106 pages, (g) Volume 8: Econo-ElectroStatistical Physics, for Kindle, 300 pages (h) Volume 10: Econo-NeuroPhysics, for Kindle, 254 pages Paper submitted for publication: (1) Martina Rani, Sakshi Ahlawat, N Vijayan, Lokesh Yadav, Tirthankar Banerjee, Abhijeet Chatterjee, Manpreet Singh Bhatti, Trupti Das, Amit Dhir, Sangita Goel, Altaf Hussain Khan, Ravindra Khaiwal, Jagdish Chandra Kuniyal, Anita Lakhani, Abhishek Gupta, Srimanta Pal, Prasenjit Saikia, B.M. Vyas, Suman Mor, Tuhin Kumar Mandal, Saptial heterogeneity in health risk assessment of heavy metals during North-east Monsoon and South-west Monsoon over India, Springer Nature	Dr. Tuhin Kumar Mandal, NPL, New Delhi

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Sumana Ghosh	Cyber-Physical Systems, Formal Verification	Dr. A. Banerjee, ACMU Dr. D. Lohar, MPI SWS, Germany Dr. R. Gajavelly, IBM India Dr. S. Dey, IIT Kharagpur Dr. S. Mohalik, Ericsson India Dr. S. Sudhakar, TI India
Swagatam Das	Generative Deep Models; Long-tailed Classification; Graph Machine Learning; Large Language Models	Diganta Mukherjee Salvador Garcia, University of Garcia, Spain Jason Xu, Duke University, USA Vaclav Snasel, VSB TU Ostrava, Czech Republic

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Image and Video Understanding in 5G Infrastructure	Apr 01, 2023	3 years	Dipti Prasad Mukherjee

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Quantum Multiparty Learning theory and Quantum Channel Capacities	May 01, 2022	3 years	Naqueeb Ahmad Warsi, ECSU
2	Neural Atkinson Model for Video Captioning	Apr 01, 2021	3 Years	PI: Partha Pratim Mohanta, Co-PI: (i) Bhabatosh Chanda, ECSU, ISI, Kolkata (ii) Sanjoy Kumar Saha, CSE Department, Jadavpur University, Kolkata
3	Cross-Layer Approach for Designing Secure Cyber-Physical Systems	May 01, 2023	3 years	PI: Sumana Ghosh (ECSU)

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Development of Automated Procedure for Coke/Carbon Petrography for its Industrial Application	I-091	Jul 06, 2023	Two years	Dipti Prsad Mukherjee	Tata Steel	20,40,000.00
2	Flat Product Surface Defect Detection System through Image Processing Algorithms	I-098	Feb 29, 2024	Two years	Dipti Prasad Mukherjee	Tata Steel	24,00,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Deployment of Services related to Image and Video Understanding in 5G Infrasructure	E-200	Jan 18, 2023	3 years	Dipti Prasad Mukherjee	SERB	27,48,196.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
2	Quantum Intersection	9558	Jan 18, 2023	3 years	Naqueeb Ahmad Warsi, ECSU	SERB	6,60,000.00
3	Machine Learning and Formal Verification Joining Hands	F-018	Dec 01, 2022	3 Years	PI: Sumana Ghosh (ECSU) and Co-PI: Ansuman Banerjee (ACMU)	Semiconductor Research Corporation (SRC) USA	33,42,000.00
4	On-demand Compute Management using Formal Methods		Feb 02, 2024	3 years	PI: Sumana Ghosh (ECSU) and Co-PI: Ansuman Banerjee (ACMU)	Ericsson Research India	43,90,000.00
5	Formal Methods for Modelling, Verification and Interpretability of Spiking Neural Networks		Feb 02, 2024	3 years	PI: Sumana Ghosh (ECSU) and Co-PI: Ansuman Banerjee (ACMU)	Ericsson Research India	64,30,000.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Development of Advanced Machine Learning Tools for Multi-modal Image-assisted Diagnostics of Infectious Respiratpry Diseases	E-148	Oct 20, 2020	Mar 31, 2024	Swagatam Das	SERB	10,00,000.00

Projects done for Govt. of India/State Govt.

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Digital Restoration and Reconstruction of Indian Heritage Artefacts with Focus on Murals, Manuscript, and Sculptures using Big Data Technology	E-118	Apr 01, 2023	1	Swagatam Das, ECSU and Bhabatosh Chanda	DST	48,40,000.00

7. Machine Intelligence Unit (MIU), Kolkata

Research

The objective of the unit is to carry out fundamental research concerning certain aspects of machine intelligence. Machine intelligence signifies the work associated with attempting to make a machine behave like a human being, and conveys the core concept of pattern recognition and machine learning with the advanced technologies like fuzzy logic, artificial neural networks, evolutionary computing, granular computing and rough sets. These tools provide efficient theories of flexible information processing, can tackle real-life ambiguous situations in an efficient manner like human beings, and therefore form the basis of future generation computing systems. The faculty members of the unit have also started working in the area of deep learning, both from the perspectives of theory and applications. Applications include bioinformatics, personalized medicine, computer vision, medical image processing and network analysis, while theoretical study deals with developing novel deep models with optimized architecture and appropriate learning algorithms for solving certain problems.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Ashish Ghosh	Deep Learning; Data Science and Machine Learning, Automated Pollution Prediction and Rainfall Prediction	Jonathan H. Chan, King Mongkut University of Technology Thonburi, Thailand T. Veerakumar, NIT Goa R. Roy, Mahindra University, Hyderabad B. N. Subudhi, IIT Jammu S. Dehuri, F. M. University, Balasore, Odisha S. Ghosh (nee De), Jadavpur University, Kolkata A. Datta, LNM Institute of Information Technology, Jaipur A. Mondal, IIT Hyderabad
Bulusu Uma Shankar	Machine learning approach to predict terrestrial gross primary productivity (GPP) using topographical and remote sensing data	Bikash Ranjan Parida, Department of Geoinformatics, School of Natural Resource Management, Central University of Jharkhand, Ranchi 835222, Jharkhand, India
	Medical Image Processing (COVID-19 and LUNG Cancer images analysis)	Sushmita Mitra, MIU, ISI
Deba Prasad Mandal	community question answering services	Dipankar Kundu, Lecturer, National Law University Meghalaya
	Image Generation Conditioned on Text using Diffusion Models	Dinabandhu Bhandari, Professor, Heritage Institute of Technology, Kolkata
Kuntal Ghosh	Complex & Brain Network	Swarup Chattopadhyay, XIM Bhubaneswar Dr. Gautam Das, Bangur Institute of Neuroscience
	Ecological Cybernetics	Anjana Dewanji Rajen Halder, University of Calcutta
	Remote Sensing and Disaster Management	Sanjit Maitra Oishila Bandyopadhyay, IIIT Kalyani
Malay Bhattacharyya	Computation for Social Good, Computational Healthcare	Bhramar Mukherjee, University of Michigan Dhruva Chaudhry, Post Graduate Institute of Medical Sciences, Rohtak Elizabeth J. Williamson, London School of Hygiene and Tropical Medicine Geert MOLENBERGHS, KU Leuven Jishnu Das, Georgetown University Liam Smeeth, London School of Hygiene and Tropical Medicine Natalie E. Dean, Emory University Nicholas P. Jewell, UC Berkeley

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
		Richard Grieve, London School of Hygiene and Tropical Medicine Sam Abbott, London School of Hygiene and Tropical Medicine Sinead Langan, London School of Hygiene and Tropical Medicine Stephen Evans, London School of Hygiene and Tropical Medicine
Pradipta Maji	Bioinformatics	Dr. Ekta Shah, Max Planck Institute for Molecular Genetics, Berlin
	Deep Learning	Dr. Debamita Kumar, HIT Kolkata
	Imaging Genomics	Sankar Mondal
	Machine learning	Dr. Aparajita Khan, IIT Roorkee Dr. Ankita Mandal, Harvard Medical School, USA
	Medical Imaging	Dr. Archya Dasgupta, ACTREC, Tata Memorial Centre, Mumbai Dr. Shaswati Roy, TIU Kolkata Suman Mahapatra
Rajat Kumar De	Computational Biology	Yevgeniy Vorobeychik, Washington University in St. Louis
	Computational Biology, Deep Learning	Dibyendu B. Seal, German Cancer Research Center (DKFZ) Vivek Das, Novo Nordisk A/S, Malov, Denmark
	Computational Systems Biology	Abhijit Dasgupta, St. Jude Children's Research Hospital, Memphis, USA
	Genomics	Rituparna Sinha, Heritage Institute of Technology
Sanghamitra Bandyopadhyay	Computational Biology, Machine Learning, Graph Neural Networks, Explainable AI, Multiobjective Optimization, Evolutionary Computing	Dr. Debarka Sengupta, IIIT Delhi Dr. Sumanta Ray, Ghani Khan Choudhury Institute of Engineering & Technology Prof. Ujjwal Maulik, Jadavpur University Monidipa Das, ISM Dhanbad, Sourav Mallik, Harvard T H Chan School of Public Health,USA.
Shubhra Sankar Ray	Cancer, MiRNA expression analysis, Ensemble Frameworks	Joginder Singh and Sukriti Roy
Sushmita Mitra	Data Science, Medical Imaging, Artificial Intelligence	Dr. Paromita Roy, TMC Kolkata Dr. Sugata Banerji, Lake Forest College, Chicago, USA Dr. Swalpa K. Roy, Alipurduar Govt. Engg. College

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Machine Learning based Global Terrestrial Gross Primary Productivity (GPP) Model Development using Satellite Driven Observation and Eddy Flux Covariance Data (Phase – II)	Apr 01, 2023	2 years	PI: B. Uma Shankar, CO-PI: Ashish Ghosh, Co-PI: Bikash Ranjan Parida

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Crowd Opinion Aggregation in a Streaming Setting	Apr 01, 2023	3 years	Malay Bhattacharyya (MIU)
2	Deep Multi-View Dependency Analysis for Cancer Diagnosis and Prognosis	Apr 01, 2023	3 Years	Pradipta Maji(MIU)
3	Development of Scalable Repository and Machine Learning Algorithms for Next Generation Sequence (NGS) Analysis under Big Data Framework: A Step towards Personalized Medicine	Apr 01, 2022	3 years	Rajat Kumar De (MIU)

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
4	Hierarchical Semantics-driven Graph Representation Learning based on Micro- Macro Analysis	Apr 01, 2022	3 years	Sanghamitra Bandyopadhyay, (MIU)
5	Interactive robust grading of prostate cancer using deep learning	Apr 01, 2023	3 years	Sushmita Mitra (MIU)

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Brain Network Analysis of Neurological Disorders	Apr 01, 2021	Mar 31, 2024	Kuntal Ghosh, Rajdeep Chatterjee(KIIT, Bhubaneswar), Gautam Das (BIN, Kolkata), Javier M. Buldú (KJCU, Spain)
2	A study in ecological cybernetics: information processing in Alternanthera philoxeroides, the Alligator Weed	Apr 01, 2022	Dec 31, 2023	Kuntal Ghosh, Anjana Dewanji, Bijay Bal

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Integration of Multiomics Data using Deep Neural Networks: Feature Extraction, Association Mining, Big Data Realization and Privacy Preservation	IDEAS-TIH	Aug 08, 2022	3 years	Rajat Kumar De (MIU)	IDEAS-TIH of ISI	40,00,000.00
2	Exploring Graph Neural Networks (GNNs) for Data-driven Modelling of Poly-pharmacy Adverse Drug Events from drug-drug interactions	E-191	Nov 15, 2022	3 years	Sanghamitra Bandyopadhyay, MIU	Indo- French Centre for the Promotion of Advanced Research (IFCPAR) / CEFIPRA, DST.	44,19,162.00
3	J. C. Bose Fellowship Phase 2	E 192	Feb 01, 2023	5 years	Sanghamitra Bandyopadhyay (MIU)	Anusandhan National Research Foundation (erstwhile SERB)	95,00,000.00
4	Exploring the heterogeneity of systemic lupus patients based on autoantibodies distribution and multi-omics approaches compared in two ethnic cohorts	E-213	Feb 06, 2022	3 years	Sanghamitra Bandyopadhyay (MIU, Co-PI)	Indo-Italy Project, DST	1,38,81,033.00
5	Design and Development of an AI based Portable Electrical Impedance Tomography (EIT) System for Respiratory Function Studies using Machine Learning Techniques	E-189	Feb 14, 2022	3 years	Sushmita Mitra (MIU)	DST	97,14,862.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
6	J C Bose Fellowship	E-156	Mar 26, 2021	5 years	Sushmita Mitra (MIU)	SERB, DST	95,00,000.00
7	Artificial Intelligence for Affordable Screening and Prediction of Diabetic Retinopathy in the Framework of Big Data	E-173	Dec 31, 2021	3 years	Sushmita Mitra (MIU) & B. Uma Shankar (MIU)	DBT	2,72,23,224.00

8. Systems Science and Informatics Unit (SSIU), Bangalore

Research

Research activities: Machine learning and data analysis, Mathematical morphology, Data analysis in neuroscience, theoretical condensed matter physics and quantum computing

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
B. S. Daya Sagar	Mathematical Morphology, Geospatial Data Sciences, Mathematical Earth Sciences, Satellite Remote Sensing	International Institute of Information Technology - Bangalore,
	Morphological Interpolations	Multimedia University, Malaysia, Dr. Lim Sin Liang
Prabuddha Chakraborty	Theoretical Condensed Matter Physics	Prof. Krishnendu Sengupta, Indian Association for the Cultivation of Science

Projects

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Granular Deep Learning Models For Remote Sensing Image Classification	E-523	Jan 04, 2023	3 years	Saroj Kumar Meher, SSIU, CCSD	SERB, DST	6,60,000.00

3.4 Physics and Earth Sciences Division (PESD)

Professor In-Charge: PARTHASARATHI GHOSH, GSU, Kolkata

Office: 2nd floor, Platinum Jubilee Building, ISI, Kolkata-700 108

1. Geological Studies Unit (GSU), Kolkata

- Head of Unit: Shiladri Shekhar Das
- Number of Faculties: 7 (Male: 5, Female: 2)
- Number of Scientific Worker: 2 (Male: 2)
- Number of Non-Scientific Worker: 4 (Male: 2, Female: 2)
- Number of Research Scholar: 12 (Male: 6, Female: 6)
- Office: 2nd floor, Platinum Jubilee Building, 203 B. T. Road, ISI, Kolkata 700108

2. Physics and Applied Mathematics Unit (PAMU), Kolkata

- Head of Unit: Santanu K. Maiti
- Number of Faculties: 10 (Male: 9, Female: 1)
- Number of Scientific Worker: 2 (Male: 2)
- Number of Non-Scientific Worker: 3 (Male: 3)
- Number of Research Scholar: 41 (Male: 29, Female: 12)
- Office: 7th floor, A.N. Kolmogorov Bhavan, 203, B.T. Road, ISI, Kolkata 700108

3. Theoretical and Applied Sciences Unit (TASU), North-East Centre, Tezpur

- Head of Unit: Darpa Saurav Jyethi
- Number of Faculties: 3 (Male: 3)
- Office: Punioni, Solmara, ISI, Tezpur, Assam - 784501

1. Geological Studies Unit (GSU), Kolkata

Research

Presently, research works in the GSU covers several different aspects of Earth Sciences:

1) Crustal Geodynamics:
   - Structural, stratigraphic and metamorphic evolution of the Proterozoic mobile belts of India, with geochemical and geochronological constraints.
   - Geodynamicand metamorphic evolution of the Precambrian cratonic basins of the Indian shield.

2) Evolution of Sedimentary Basins with their sedimentology, paleoclimate and depositional history:
   - Proterozoic Basins of India.
   - Gondwana Basins of Peninsular India
   - Mesozoic and Cenozoic Basins of Kutch, Sourastra, Dwarka, Jaisalmer etc.
   - Neogene Siwalik Basin of Northeast India.

3) Phanerozoic Faunal Record as widows to Evolutionary and Developmental Paleobiology as observed in the -
   - Mesozoic non-marine Gondwanatetrapods of India
   - Cenozoic marine gastropod fauna of India
   - Tertiary marine invertebrates, vertebrates of Kutch, Sourastra, Dwarka and Jaisalmer Basins of India
   - Tertiary foraminifera of Kutch Basin India

4) Numerical analysis and modelling of geological data and geological systems in domains like-
   - GIS based analysis of geospatial data
   - Morphometric and shape analyses of fossils and other geological objects
   - Evolutionary taxonomy

   Patterns of the Proterozoic carbonate cycles to understand the relations between climatic change and eustatic sea-level variation

GSU offers an elective course along with field study to the B.Stat students, which encompasses basic ideas of Earth System Science. The scientists also conduct Ph.D course work for research students of the Institute, train B.Sc./M.Sc./M.Tech and B.Tech students either from the Institute or from other Universities/Institutes during their postgraduate dissertations or summer internships.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Amlan Banerjee	Geochemistry and geochemical modelling; sedimentology	Dr. Arijit Debnath, Damayanti Choudhury, Ph.D student CSIR Fellow Pramita Majumder, Ph.D. student, ISI Fellow Sayani Khan Ph.D. Student, ISI Fellow, currently in GSI
Arijit Debnath	Sedimentology and geochemical study of the siliciclastic and carbonate rocks of the Kurnool Group, Cuddapah Basin	Dr. Amlan Banerjee Damayanti Choudhury, Ph.D student CSIR Fellow
	Tectono-sedimentary evolution of the Eastern Himalayan Siwalik Group, Arunachal Pradesh : implication for the sea-level changes and tectonics.	Dr. Sandip More (Assistant Professor), Department of Botany, Murshidabad University Dr. Suchana Taral, Assistant Professor, Department of Earth Sciences,Pondicherry University Dr. Tapan Chakraborty (Retired Professor), Honorary Visiting Scientist, ISI
Debarati Mukherjee	Cenozoic sirenians from the western India	Ms. Aatreyee Saha, PMRF, IIT Roorkee Prof. Sunil Bajpai, IIT Roorkee
	Evolution of the braincase within the Clade Archosauromorpha	Prof. Sanghamitra Ray, IIT Kharagpur Ms. Urmi Chakraborty, SRF IIT Kharagpur
	Evolution of the Jurassic crocodylomorphs from Pranhita-Godavari basin, India	Ms. Shaibi Dhar, ISI Kolkata
	Quantitative approach to understand the evolutionary trends of the Mesozoic archosauromorph claws	Dr. Nibedita Rakshit, Assistatnt Professor, IIT Bombay
	Revision of Jurassic Gondwana dinosaurs from India	Dr. Debajit Datta, NPDF, IIT Roorkee

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Dhurjati Prasad Sengupta	A. Taphonomy of Eocene larger benthic foraminifera and coeval macrofauna of Kutch Basin B. Evolution, diversity and taphonomy of Triassic Gondwana Vertebrates, their Morphometry and Gondwana stratigraphy (Triassic)	For topic A 1.Prof. Parthasarathi Ghosh, ISI KolkaTA 2. Ms. Sreemoyee Chakravorti, SRF, isi Kolkata For topic B 1. Dr. Sanjukta Chakravorti, Stalisches Museum for Nature Kunde, Sttutgart, Germany 2. Prof. Rainer Schoch Museum for Nature Kunde, Sttutgart, Germany 3. Prof. Saswati Bandyopadhyay (Retired Professor), Honorary Visiting Scientist, ISI Kolkata. 4. Ms. Pummy Roy and Ms. Eirin Kar Geologists, Geological Survey of India
Parthasarathi Ghosh	Ferruginous coated grains in the Lower Jurassic palustrine limestones of the Pranhita–Godavari Basin, India	1) Concepción Arenas Abad, Department of Earth Sciences, University of Zaragoza, Zaragoza, Spain 2) Shantanu Datta, SRF, ISI 3) Suparna Goswami, Geovale, Kolkata India. 4) Arnab Sain, Presidency University, Kolkata, India
	Ichnology of Kota Limestone Bed	Debarati Mukherjee
	Megafan drainage network	None
	Sedimentology of the Upper Gondwana successions	Shantanu Datta, SRF ISI Arpan Chaudhuri, SRF ISI
Shiladri Shekhar Das	Comment on: Fürsich et al., 2023, Miocene instead of Jurassic: the importance of sound fieldwork for paleontological data analysis.	R. Saha Department of Geology and Geophysics, Indian Institute of Technology, Kharagpur-721302, India. S. Bardhan 64A, Canal South Road, East Rajapur, Santospur, Kolkata 700075, India. S. Mallick Department of Geology, Trivenidevi Bhalotia College, Raniganj-713347, India. S. Mondal Department of Earth Sciences, Indian Institute of Science Education and Research (IISER) Kolkata, Mohanpur, West Bengal 741246, India. S. Paul Department of Geology and Geophysics, Indian Institute of Technology, Kharagpur-721302, India. S. Saha Geological Studies Unit, Indian Statistical Institute, 203, B. T. Road, Kolkata-700108, India. W.D. Allmon Paleontological Research Institution, and Department of Earth and Atmospheric Sciences, Cornell University, 1259 Trumansburg Road, Ithaca, New York, 14850 USA.
	Global paleobiogeographic distribution patterns of the Cenozoic pleurotomariid gastropods (Family: Pleurotomariidae Swainson, 1840).	K. Bose Department of Earth Sciences, Indian Institute of Technology (IIT) Bombay, Powai, Mumbai 400076, Maharashtra, India. S. Mondal Department of Earth Sciences, Indian Institute of Science Education and Research (IISER) Kolkata, Mohanpur, West Bengal 741246, India.
Shreya Karmakar	Tectonometamorphic evolution of the Chitradurga Greenstone Belt and enclave suite of rocks in the Peninsular Gneiss: Implications for the evolution of the Dharwar Craton and Nature of Archean Tectonics.	Dr. Tridib Kumar Mondal
Tridib Kumar Mondal	Structural Geology and Tectonics (Fabric analysis; Dyke emplacement mechanism; Paleostress analysis; Structural control on mineralization Vein emplacement and upper crustal fluid flow; Mechanical characterization of apparently massive and foliated rocks)	Dr. Shreya Karmakar Professor Sourav Chakraborty Dr. Amlan Banerjee Dr. Arnab Sain Professor Sakhawat Hossain, Jahangirnagar University, Bangladesh Dr. Sourav Mondal, IIT Kharagpur Professor Susanta Samanta, Jadavpur University Professor Subhadip Bhadra, Pondicherry University Dr. Thirukumaran V., Salem Govt. College

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Sedimentology and geochemical study of the siliciclastic and carbonate rocks of the Kurnool Group, Cuddapah Basin	Mar 31, 2024	3 years	Amlan Banerjee GSU

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	A multidimensional study on the Gondwana crocodylomorphs from the continental Jurassic of India	Apr 01, 2022	3 years	Debarati Mukherjee
2	Mineralogical and Geochemical changes across the Triassic-Jurassic Boundary	Apr 01, 2022	3 Years	Parthasarathi Ghosh (PI), GSU; Suparna Goswami, Shantanu Datta, Arpan Chaudhuri, Debarati Mukherjee, Arijit Debnath, GSU
3	Gastropods diversity and evolutionary trends in three adjacent Cenozoic basins of western India with special emphasis on interbasinal correlations.	Apr 01, 2022	3 Years	Shiladri Shekhar Das
4	Fracture network characterization in the rocks of Chitradurga Schist Belt (Dharwar craton, India): Implication in understanding the upper crustal fluid flow	Apr 01, 2022	3 years	Tridib Kumar Mondal

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	To understand oxygenation of Indian Mesoproterozoic basins using geochemical proxies of sedimentary records	Mar 31, 2021	Mar 31, 2024	Amlan Banerjee GSU
2	Taphonomic significance of two discrete biotic elements, a new remintonocetid whale and larger benthic foraminifera from the Eocene of Kutch basin, India.	Apr 01, 2021	Mar 31, 2024	Dhurjati PrasadSengupta; Geological Studies Unit
3	Understanding the mechanism of tensile fractures and estimation of paleostress in mechanically rigid layers	Jun 17, 2021	Apr 01, 2023	Tridib Kumar Mondal

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Depositional settings and tectonic evolution of the Sonakhan greenstone belt and the Dongargarh supracrustal belt: a stratigraphic perspective	MoES (MoES/ P.O. (Geo)/ 224/ 2020	Jan 01, 2023	3 years	Amlan Banerjee GSU; Sarbani Patranabis Deb (PI Deceased); Dilip Saha (PI Deceased)	MOES	63,00,000.00
2	Tectonometamorphic evolution of the Chitradurga Greenstone Belt and enclave suite of rocks in the Peninsular Gneiss: Implications for the evolution of the Dharwar Craton and Nature of Archean Tectonics.	E-230	Sep 29, 2023	3 years	Shreya Karmakar	DST SERB	28,16,000.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
3	Evolution of deformational fabrics in Singhbhum Shear Zone (India) and its implication for hydrothermal mineralization: insights from field investigation, AMS analysis, micro-structural study and experimental approach		Oct 12, 2022	3 years	Co-PI: Tridib Kumar Mondal; PI: Susanta Kumar Samanta (Jadavpur University);	MoES	56,08,000.00

2. Physics and Applied Mathematics Unit (PAMU), Kolkata

Research

The main areas of research in PAMU are Theoretical Physics and various areas related to Applied Mathematics. Additionally, some experimental works are also being done in the Fluvial Mechanics Laboratory of this Unit. In a nutshell, the areas of Physics in which Scientists of PAMU have been working, are Astrophysics & Astrophysics related Data Science, Cosmology & Astroparticle Physics, High Energy Physics & Particle Physics, Condensed Matter Physics, Mesoscopic Physics and Nano-electronics, Physics of Complex Phenomena, Quantum Field Theory, Quantum Information Theory, Foundation of Quantum Mechanics and Quantum Thermodynamics, and many more. The areas of Applied Mathematics in which Scientists of PAMU have been working, are Nonlinear Dynamical Systems, active matter physics, Temporal Networks, Quantum Coherence as Resource Theory, Study of Quantum Channel and Quantum Cryptography. Experimental works are performed in the Fluvial Mechanics Laboratory of this Unit.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Amit Dutta Banik	Particle physics, Astrophysics, Cosmology, Neutrino Physics, Gravitational wave	Prof. Supratik Pal, ISI Kolkata Dr. Pooja Bhattcharjee, LAPP, CNRS, USMB, France
Dibakar Ghosh	Eco-evolutionary game theory, time-varying networks, Extreme events	Prof. Andre Longtin, University of Ottawa, Ottawa, Canada Dr. Arnab Pal, The Institute of Mathematical Sciences, Chennai Prof. Alexandar Hramov, Immanuel Kant Baltic Federal University, Russia Prof. D. Taylor, State University of New York, Buffalo, USA. Prof. G. Restrepo, University of Colorado at Boulder, USA Prof. H. A. Harrington, University of Oxford, Oxford, United Kingdom Prof. Juergen Kurths, Postadm Institute of Climate Impact and Research, Germany Dr. Kevin O'Keeffe, Massachusetts Institute of Technology, Cambridge Prof. Matjaz Perc, University of Maribor, Slovenia Prof. Manish Dev Shrimali, Central University of Rajashtan, India Dr. Muhammet Uzuntarla, Gebze Technical University, Turkey Dr. Nikita Frolov, KU Leuven, Belgium Prof. Paulsamy Muruganandam, Bharathidasan University Prof. Peng Ji, Fudan University, China Dr. Sajad Jafari, Amirkabir University of Technology (Tehran Polytechnic), Iran Prof. Timoteo Carletti, University of Namur, Belgium Prof. Youming Lei, Northwestern Polytechnical University, China Prof. Z. Gao, Tianjin University, China.
Guruprasad Kar	Foundation of quantum mechanics and quantum information theory	Subhendu Ghosh, Tathagata Gupta, Snehasish Roy, Dr. Manik Banik, S.N.Bose National Centre for Basic Sciences
Preeti Parashar	Quantum Entanglement Theory	A. Das Bhoumik

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Ramij Rahaman	Anonymous local distinguishability of quantum states	Self
	Quantum nonlocality and Local Indistinguishability	Dr. A Mukherjee, IIT Jodhpur Dr. S. Saha, S. N. Bose National Center for Basic Sciences, Kolkata and Dr. T. Guha, University of Hong Kong, Hong Kong
	Self-testing of genuine multipartite entanglement	Dr. R. Adhikary, ECSU, ISI, Kolkata and A. Mishra, Université libre de Bruxelles, Belgium
Sankar Sarkar	Electrokinetic Theory Fluvial Mechanics	Partha P Gopmandal, NIT Durgapur Alessio Radice, Plotecnico di Milano
Santanu K. Maiti	Spectral properties of phononic quasicrystals	Ranjini Bhattacharya (ISI) Suvendu Chakraborty (ISI) Dr. Sudin Ganguly (University of Science and Technology, Meghalaya)
	Spintronics in magnetic helix structure	Suparna Sarkar (ISI) Debjani Das Gupta (ISI) Dr. Moumita Dey (Adamas University)
	Thermoelectric study for efficient energy conversion	Suvendu Chakraborty (ISI) Ranjini Bhattacharya (ISI) Dr. Moumita Dey (Adamas University) Dr. Sudin Ganguly (University of Science and Technology, Meghalaya) Dr. Kallol Mondal (NISER Bhubaneswar)
	Topological states and localization phenomena	Suparna Sarkar (ISI) Souvik Roy (ISI) Dr. Moumita Dey (Adamas University) Dr. Sudin Ganguly (University of Science and Technology, Meghalaya) Kallol Mondal (NISER Bhubaneswar)
	Transport phenomena in interacting quantum systems	Arpita Koley (ISI) Dr. Madhumita Saha (IISER, Pune)
	Transport properties in presence of irradiation	Arpita Koley (ISI) Dr. Moumita Dey (Adamas University) Prof. Shreekantha Sil (Visva-Bharati University) Dr. Sudin Ganguly (University of Science and Technology, Meghalaya)
Subir Ghosh	Dark Energy models in Cosmology, ; Coherent state appl. in General Relativity, Dr. S. Chakrabarty, I.A.C.S.	Dr. S. Pan, Presidency University Dr. S. Chakrabarty, I.A.C.S.
Supratik Pal	Cosmology and Astroparticle Physics	Antara Dey, Sourav pal, Rahul Shah, Debarun Paul, Arko Bhawmik, Dr. Purba Mukherjee, Dr. Amit Dutta Banik, Soumadeep Saha, Prof. Utpal Garain (all ISI), Dr. Anish Ghoshal(ITP, Warsaw), Prof. Zygmunt Lalak (ITP, Warsaw), Shiladitya Porey (NSU, Russia), Dr. Arnab Paul (IACS, Kolkata), Dr. Barun Pal (Netaji Nagar College, Kolkata), Dr. Ayan Mitra (University of Illinois Urbana-Champaign, USA)
Swapan	Quantum Resource Theory	Dr. A. Streltsov, CeNT, Warsaw, Poland

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Turbulent flow fields near rigid and flexible vegetations in rough-bed streams under wave-current interactions	Apr 01, 2022	3 Years	Sankar Sarkar (PI), PAMU; and Dibakar Ghosh (Co-PI), PAMU

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Footprints of Multicomponent Dark Matter and Beyond Standard Model Observables	E-178	Sep 20, 2021	5 years	PI- Amit Dutta Banik	DST	7,00,000.00
2	Dynamical origin of extreme events and data-based early warning detection	E-181	Feb 21, 2022	3 Years	Dibakar Ghosh, PAMU (PI) and Sankar Sarkar, PAMU (Co-PI)	SERB	21,74,546.00
3	Flow characteristics in a vegetated meandering channel: Experimental and Machine learning approaches	E-228	Feb 28, 2024	3 Years	Sankar Sarkar (PI), PAMU; and Amlan Banerjee (Co-PI), GSU	DST-SERB	22,45,640.00
4	Electrokinetic transport of charged particles and ionized liquids: a Mathematical study	E-227	Feb 17, 2024	3 Years	Sankar Sarkar (PI)	DST-SERB	6,60,000.00

3. Theoretical and Applied Sciences Unit (TASU), North-East Centre, Tezpur

Research

The Theoretical and Applied Sciences Unit (TASU) was established in August 2018 at the North East Centre of the Institute. The goal of the Unit is to pursue research in (a) basic theoretical sciences and (b) emerging interdisciplinary and multidisciplinary applied sciences.

The Unit is involved in research on:

Explicit evaluation of higher order convolution sums of the divisor functions; Properties of the Shimura map on some classes of modular forms of half-integral weight; Simultaneous non-vanishing of central L-values of modular forms with large level.

Bankline detection and monitoring technique near Kaziranga National Park, Crop Health Monitoring.

Air quality, Atmospheric sciences, and Climate change.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Darpa Saurav Jyethi	Climate change, Air pollution, Environmental Exposure	
Sanjit Maitra	Bankline detection and monitoring technique near Kaziranga National Park	Tapan Chakraborty (GSU), Kuntal Ghosh (MIU), Srutiparna Neogi (IIIT Kalyani)
	Crop Health Monitoring	Rituraj Gogoi
	Identification of erosion prone region in Kaziranga National Park	Koyel Mandal

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Atmospheric Particulate Matter (PM2.5) associated Elemental Carbon, Organic Carbon and Water-Soluble Organic Carbon at Tezpur, a site in the North Bank Plain Region of Brahmaputra Valley	Apr 01, 2020	3+1 years	None
2	Crop health monitoring during the growing season around Tezpur	Apr 01, 2023	3 year	Kushal Banik Chowdhury (SERU)

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Polycyclic aromatic hydrocarbons in Arctic soils and sediments: Contamination and association with black carbon and total organic carbon		Apr 01, 2023	1 year		NCPOR, MoES	

3.5 Social Sciences Division (SSD)

Professor In-Charge: NILADRI SEKHAR DASH, LRU, Kolkata

Office: Ground floor, R. A. Fisher Bhavan, ISI, Kolkata-700 108

1. Economic Analysis Unit (EAU), Bangalore

- Head of Unit: Madhura Swaminathan
- Number of Faculties: 1 (Female: 1)
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 2 (Male: 2)
- Office: 8th Mile, Mysore Road, RVCE Post, ISI, Bengaluru - 560 059

2. Economics and Planning Unit (EPU), Delhi

- Head of Unit: Abhiroop Mukhopadhyay
- Number of Faculties: 11 (Male: 10, Female: 1)
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 31 (Male: 21, Female: 10)
- Office: Room No. 201, Faculty Block, Economics & Planning Unit, ISI, Delhi Centre 7 SJS Sansanwal Marg Katwaria Sarai, New Delhi-110016

3. Economic Research Unit (ERU), Kolkata

- Head of Unit: Anuj Bhowmik
- Number of Faculties: 10 (Male: 9, Female: 1)
- Number of Scientific Worker: 3 (Female: 3)
- Number of Non-Scientific Worker: 4 (Male: 3, Female: 1)
- Number of Research Scholar: 13 (Male: 10, Female: 3)
- Office: 6th floor, S.N. Bose Bhavan, 203, B.T. Road, ISI, Kolkata-700 108

4. Linguistic Research Unit (LRU), Kolkata

- Head of Unit: Niladri Sekhar Dash
- Number of Faculties: 1 (Male: 1)
- Office: Ground floor, R. A. Fisher Bhavan, 203, B.T. Road, ISI, Kolkata-700 108

5. Population Studies Unit (PSU), Kolkata

- Head of Unit: Niladri S Dash
- Number of Scientific Worker: 1 (Male: 1)
- Number of Non-Scientific Worker: 2 (Male: 2)
- Office: 5th floor, R. A. Fisher Bhavan, 203, B.T. Road, ISI, Kolkata-700 108

6. Psychology Research Unit (PRU), Kolkata

- Head of Unit: Niladri S Dash
- Number of Faculties: 1 (Male: 1)
- Number of Non-Scientific Worker: 2 (Male: 2)
- Office: 7th floor, Platinum Jubilee Building, 203, B. T. Road, ISI, Kolkata-700 108

7. Sampling and Official Statistics Unit (SOSU), Kolkata

- Head of Unit: Nachiketa Chattopadhyay
- Number of Faculties: 4 (Male: 3, Female: 1)
- Number of Scientific Worker: 1 (Male: 1,)
- Number of Non-Scientific Worker: 4 (Male: 4)
- Office: 3rd floor, C.D. Deshmukh Bhavan, 202 B.T. Road, ISI, Kolkata-700 108

8. Socio-Economic Research Unit (SERU), North-East Centre, Tezpur

- Head of Unit: Souvik Roy
- Number of Faculties: 2 (Male: 2)
- Office: Punioni, Solmara, ISI, Tezpur, Assam- 784501

9. Sociological Research Unit (SRU), Kolkata

- Head of Unit: Niladri S. Dash
- Number of Faculties: 1 (Male: 1)
- Number of Scientific Worker: 2 (Male: 2)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 1 (Male: 1)
- Office: 5th floor, R. A. Fisher Bhavan, 203, B.T. Road, ISI, Kolkata-700 108

1. Economic Analysis Unit (EAU), Bangalore

Research

Research Students and faculty of EAU continue to work on contemporary problems of development, especially pertaining to the rural economy. Using secondary and primary data, we have examined issues of women's work in agriculture, impact of climate change on agricultural yields and input use, problems of incomes from rice cultivation in India and Vietnam, features of Scheduled Caste majority villages, access to rural energy and understanding tenancy. Our concerns are with understanding the overreaching problems of poverty, inequality and food insecurity in the context of the pandemic and identifying suitable policy approaches.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
M Swaminathan	Agriculture, gender, labour, livestock, household incomes, credit, poverty, inequality	R Vijayamba, Azim Premji University, Nageshwar Bansode, BASE, V Surjit, NIRD
Molly Chattopadhyay	Effect of mechanization on women's labour in the coffee sector of Karnataka	

2. Economics and Planning Unit (EPU), Delhi

Research

Economics and Planning Unit at Delhi comes under the Social Sciences Division of ISI. We carry out research in the areas of economic theory, applied economics and econometrics, macroeconomics, growth theory, econometric methods, time series analysis and economic statistics. Some specific areas are: welfare economics, industrial economics, game theory and applications, international economics, public economics, financial economics, agricultural economics, development economics, environmental economics, issues on living standards, gender studies and labour economics. While the quantitative and applied work involves extensive application of existing statistical and mathematical tools, substantial contribution is being made in econometric and time series methods in the areas of macro-econometrics, micro-econometrics and financial econometrics.

Economics and Planning Unit has a doctoral program in Economics and a Master's program called Masters in Science in Quantitative Economics (MSQE). We offer courses in Microeconomics, Macroeconomics, Statistics and Econometrics, Mathematics for Economists, Economic Development, Game Theory, Macro Dynamics, International Economics, Finance, Industrial Organization, Dynamic Programming, Applied Econometrics, Time Series Econometrics, Social Choice and Political Economy, Public Economics, Intertemporal Economics, and Environmental Economics, and many more. Details about courses and our Masters and doctoral program can be found under the Academics link.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Abhiroop Mukhopadhyay	Higher Education and Rural Prosperity	Ravinder, ISI Delhi Amparo Castello-Climent, Univ of Valencia
	Optimal Allocation of Healthcare workers: A study in Meghalaya	Vastav Ratra, Institute of Economic Growth, Delhi
	Persistent Effects of Short Term Electoral Legislation-Rajasthan project	Rolly Kukreja, NIPFP Subhasish Dey, Univ of Warwick
	Shaping Minds: The Transformative Effects of Theater-Based Learning	Nishith Prakash, Northeastern U Shantanu Khanna, Northeastern U Raisa Sharif, Max Plank Ritam Chaurey, John Hopkins
	Sowing the Seeds of Entrepreneurship: Evaluating the Effects of Entrepreneurial Mindset Development Program in Andhra Pradesh	Sofia Amarel, World Bank Aakash Bhanot, UCSD) Nishith Prakash, Northeastern Univ Ritam Chaurey, Johns Hopkins Gaurav Khanna, UCSD Isis Gaddis, World Bank Samreen Malik, NYU-AD
	The market structure of Private Schooling in India	Soham Sahoo, IIM B Subhasish Dey, Univ of Warwick

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Chetan Ghate	Macroeconomics, Monetary Economics, Macro-Finance, Open Economy Macroeconomics	Ken Kletzer, Piyali Das, Anuradha Saha, Pawan Gopalakrishnan, Rishabh Chowdury, Md. Arbaj Meman
Farzana Afridi	Women's labor market participation, Citizen activism, Clean energy transition	Abhishek Arora (Harvard) Prabhat Barnwal (Michigan State) Sourav Bhattacharya (IIM Kolkata), Diva Dhar (Oxford University) Amrita Dhillon (Kings College London), Sanchari Roy (University of Exeter) Daila Serra (Texas A&M University)
Kanishka Kacker	Air Pollution, Health, Transportation, Education	Martin Mattson, National University of Singapore Saif Ali, Jamia Millia Islamia Ridhima Gupta, Independent Ping Qin, Remnin University, China Jie-Sheng Tan Soo, National University of Singapore Shefali Khanna, Imperial University London Jorge Bonilla, University of the Andes, Bogota Marcela Jaime, University of Concepcion, Chile Cesar Salazar, University del Bio Bio, Chile Nikita Sangwan, Queens University Belfast E. Somanathan and Pankaj Kumar
	Education and Air Pollution	C. Ruiz Tagle, London School of Economics
Monisankar Bishnu	Intergenerational transfers, capital taxes, fertility, labor force participation, growth	S Chandrasekhar, IGIDR Shankha Chakraborty, University of Oregon Korok Dasgupta, Columbia University Chakshu Jain, ISI Delhi CS Kumru Australian National University Srinivasan Murali, IIM Bangalore Jiu Lian, Australian National University
Mudit Kapoor	Decomposition of neonatal mortality between the rich and poor	UNICEF
	Health economics (Prevalence of low birth weight in India, Seasonality in nutritional outcomes)	UNICEF
	Prediction of early neonatal sepsis	AIIMS
	The association between exposure to open biomass burning and hypertension prevalence in North India	AIIMS
Prabal Roy Chowdhury	Contract structure in agriculture	Debdulal Mallick (Deakin University)
	Development Economics: Micro-finance, and Land Reforms	Shyamal Chowdhury (University of Sydney), Debdatta Saha (South Asian University), Sarmistha Pal (University of Sussex)
	Information campaign on Arsenic poisoning and marriage markets in Bangladesh	Shyamal Chowdhury (University of Sydney), P:rachi Singh (University of Aberdeen)
	Information Economics	Parimal Bag (National University of Singapore)
Tridip Ray	Mixed Markets, Privatization, and Consumer Welfare; Congested Markets: Public vs Private Provision, Inequality and Competition; Land Market Frictions and Differential Manufacturing and Services Growth; Temperature and exam scores in India; Contract Hiring and Computer Investment: Evidence from Rainfall Shocks; Changing Structure of the Labour Market in India: Job Polarization and Informalization; Caste Peer Effects on Student Performance: Evidence from Indian Schools; Gendered Stream Choice in India	Arghya Ghosh (University of New South Wales) Arka Roy Chaudhuri (Shiv Nadar University)

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Intimate Partner Violence and Prevalence of Anemia among Women and Children and their Pre-school Participation, in India		1.5 years	Prabal Roy Chowdhury, Indrani Roy Chowdhury (Jawaharlal Nehru University), Anusree Paul (BMLM University)
2	Thickness of Information, Inequality and Growth Traps		2 years	Prabal Roy Chowdhury, Abhinandan Sinha (Ahmedabad University)

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Analyzing Bid Trends in Solar Auctions in India	Apr 01, 2020	5 years	Kanishka Kacker (EPU), Priyanka Dutta (EPU)
2	Caste Peer Effects on Student Performance: Evidence from Indian schools	Apr 01, 2021	3 years	Tridip Ray

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Examining the Potential of Air Purifiers and Behavioural Interventions in Mitigating the Impact of Air Pollution on Children in the Global South		Feb 02, 2024	2 years	Nikita Sangwant, Queens University Belfast; Pankaj Kumar (EPU); C. Salazar, University of Bio Bio Chile; M. Jaime, University of Concepcion, Chile; C. Ruiz-Tagle, London School of Economics	Environment for Development Initiative	39,07,500.00
2	How does traffic congestion affect air pollution? A comparative analysis across countries		Jan 01, 2024	1 year	Kanishka Kacker (EPU); Jorge Bonilla (University of the Andes); Jie-Sheng Tan-Soo (National University of Singapore); Ping Qin (Remnin University, China)	Environment for Development Initiative	15,50,790.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Health, Endogenous retirement and demand for annuity	6975106200	Feb 21, 2022	36 months	Monisankar Bishnu	SERB, GoI	6,60,000.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Does traffic congestion have health impacts		Jun 01, 2020	Jun 01, 2023	Kanishka Kacker (EPU), Ridhima Gupta South Asian University, Saif Ali IIIT Delhi	Environment for Development Initiative	34,68,735.00

3. Economic Research Unit (ERU), Kolkata

Research

Throughout the period, ERU has been actively involved in teaching, research and other academic activities. The scientists of the Unit participate in various teaching programs like B.Stat., M.Stat., MS(QE), ISEC and Post-Graduate Diploma programs over the year. They also teach PhD courses and supervise research of the PhD scholars. They publish their research works in various internationally acclaimed journals, conference proceedings and as book chapters. Some scientists also publish books. Their brought research areas are: Applied Econometrics, Financial Econometrics, Mechanism Design, Lexicographic Preferences, Inequality Measures, R & D and Technology Licensing, Economics of Terrorism, Political Economy, Economics of Conflict, Gender Studies, Women Empowerment, Child Labor, Healthcare, Econophysics, General Equilibrium Theory, Public Economics, Game theory & Decision Theory etc. The scientists also engage in internally and externally funded projects. Some lectures and seminars were organized during 2023-24.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Anuj Bhowmik	Set-Valued Analysis, Fixed Point an Selection Theorems, Mathematical Economics, General equilibrium Theory, Game Theory, Networks, Decision Theory, Social Choice Theory, Mechanism Design	Dr. Mihir Bhattacharyay, Ashoka University Prof. Arijit Sen, IIM Calcutta Dr. Soumi Tikader, Diamond Harbour Women's University Prof. Nicholas C. Yannelis, The University of Iowa
Brati Sankar Chakraborty	Tariff and trade	
Indraneel Dasgupta	Conflict	
Priyadarshi Banerjee	Bayesian and heuristic belief updating	Sanmitra Ghosh, Jadavpur University
	Deception detection	Sanmitra Ghosh, Jadavpur University Sanchaita Hazra, University of Utah
	Decision making under complexity	Tanmoy Das, University of Gottingen
Raju Maiti	Nutrition Gardening - a step towards climate change, tackling malnutrition and mental health	S Pramanick, Madras School of Economics Dr. B Chakraborty, Duke-NUS Medical School Singapore
	Time Series Analysis of Annual Rainfall Data of West Bengal	Anirban Ghosh, Kalyani University Dr. P Ghosh, IIT Guwahati
	Time Series Analysis of Climate data like Air Quality Index of West Bengal	Anirul Islam, IIT Kanpur
Samarjit Das	Time Series, Econometrics	Dr. S. Santra, CSSSC Prof. G. Basak
Soumyanetra Munshi	Applied Game Theory, Bureaucracy, Lobbying, Enforcement	
Tarun Kabiraj	(i) Cooperative vs. non-cooperative R&D under uncertain probability of success, (ii) One-sided incomplete information and R&D incentives for process innovation	Dr. Rittwik Chatterjee, Assistant Professor, Hiralal Mazumdar Memorial College for Women, Kolkata

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Livelihood risk, strategies and resilience of rural communities affected by COVID-19 in Jharkhand	May 01, 2022	Jun 30, 2024	PI – Hari Charan Behera. Co-PI- Tarun Kabiraj and others.

4. Linguistic Research Unit (LRU), Kolkata

Research

During this Academic Year (April 2023- March 2024), the Linguistic Research Unit (LRU) of the Institute has been working in the areas of Corpus Linguistics, Language processing, Computational Lexicography, Language Documentation & Digitization, Digital Ethnography, Cognitive Linguistics, Clinical Linguistics, and Descriptive Linguistics. During this academic year (2023-2024), the LRU has published one (1) research monograph, three (3) book chapters, six (6) journal papers, and seven (7) conference papers. The faculty member has also delivered several keynote speeches, invited plenary talks, taught as guest faculty, acted as an expert in several committees and meetings conducted by govt departments, academic institutions and research organizations as well as worked as a Visiting Scientist in two universities in India and abroad. Also, he has served the different ministries and departments of the Govt. of India on several occasions. The LRU has undertaken 1 (one) external project funded by the MeitY, Govt. of India, and has collaborated with two institutions across the world for joint collaborative research and publication. It has trained several research interns in various areas of corpus linguistics, language technology, language documentation, computational lexicography, and clinical neurolinguistics. Ten (10) scholars from India and abroad visited LRU this academic year.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Niladri Sekhar Dash	Characterizing phonological properties of nasality in Bengali words through the experimental study	Prof. Adti Lahiri, Centre for Linguistics and Philology. Walton Street, Oxford University, UK.
	"Cross-linguistic Investigation of Agrammatism in South-Asian Languages" (SRG22220345): British Academy 'Leverhulme Small Research Grants'.	Dr. Arpita Bose, School of Psychology and Clinical Language Sciences, University of Reading, UK.

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Digital Dictionary Development for the Kheria Sabar Speech Community	Apr 01, 2022	3 years	Niladri Sekhar Dash, LRU, ISI

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Bengali WordNet Augmentation and Upgradation	Apr 01, 2021	Mar 31, 2024	Niladri Sekhar Dash, LRU, ISI

Projects done for Govt. of India/State Govt.

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	VIDYAAPATI: Bidirectional Machine Translation Involving Bengali, Konkani, Maithili, Marathi, and Hindi	E-188	Apr 01, 2022	3 years	Niladri Sekhar Dash, LRU, ISI	MeitY, Govt. of India	63,92,000.00

5. Population Studies Unit (PSU), Kolkata

Research

The department is engaged in research on various issues of demography and public health. Scientific workers of this unit are involved in various teaching, training and research activities. Some of the research areas are: fertility, mortality, migration, maternal and child health and nutrition, ageing, population projection, survival analysis in health care perspective, economic efficiency in the provision of health care, and inequality in health.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Partha De	Impact of Amphan and Yaas Cyclones that Struck during the COVID-19 and its lockdown periods on life and livelihood in the Sundarban adjacent Gangetic West Bengal	with H. C. Behera (PI) and other Co-PIs inside ISI Prof. Sambit Mallick (Department of HSS, IIT, Guwahati), Dr.Rupak Goswami (IRDMFC, RKMVU, Narendrapur, W.B.), Dr. Abarna Mukherjee (Ranaghat College)
	Inequality in maternal and child health care utilization in the east and northeast states of India using National Family Health Survey data	
	Knowledge, Attitude and Practices of family members for the children developmental problems in a district of India	Prof. Nandita Chatterjee, Dept. of Paediatrics, MGM Medical College & LSK Hospital, Kishanganj,Bihar, India Professor. Ranabir Pal, Dept. of Community Medicine, MGM Medical College & LSK Hospital, Kishanganj, Bihar, India Dr. Amrita Ghosh,Department of Biochemistry, Midnapore Medical College, Paschim Medinipur, W.B., India
	Status of virulence of COVID-19 in urban population of Eastern India: An empirical study from Kolkata Municipal Corporation and its North suburb	with Kuntal Ghosh (PI) and other Co-PIs inside ISI Prof. Dr. I Saha (Scientist-E, ICMR-CNCD, Salt Lake), Prof. Dr. M. K. Gumta (CM & SDH), Dr. P K Das (DTM & H), Prof Dr. G Das (IPGME & R)
	Unearthing the heterogeneity in virulence using both ICMR COVID-19 testing data and other primary data: A Data Mining approach & An Exploratory study from West Bengal	with Kuntal Ghosh (PI) and other Co-PIs inside ISI Prof. Dr. I. Saha (ICMR-CNCD, Salt Lake), Prof. Dr. M. K. Gumta (College of Medicine & Sagore Dutta Hospital, Kamarhati), Prof. Dr. G. Das (IPGMER &R), Dr. Prabir Kr. Chatterjee (Aamader Haspatal, Sarenga, Bankura), Dr. Satabdi Ghosh (SAI), Dr. Chandra Das (Netaji Subhas Engineering College, Garia), Prof Partha P Majumdar (NIBMG)

6. Psychology Research Unit (PRU), Kolkata

Research

Unit has research, teaching and symposium activities.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Garga Chatterjee	Effect of Internet on Brain structure	Ryota Kanai, Araya Research
	Heroes, Heroines and perception of skin-tone based attractiveness	Devasmita Chakraverty, IIM Ahmedabad
	Human Face and Body skin tone and their relationship with various biological and social parameters.	Neloy Chakraborty, Thapar University
	South Asian Face Database	

7. Sampling and Official Statistics Unit (SOSU), Kolkata

Research

Government of India and other apex organisations of Government (like Reserve Bank of India) have been sending officers for general and specialised training in regular intervals to SOSU. The research on methodologies have prompted Government to revisit the existing method of data collection in some sectors. The policy research undertaken at this department have been acclaimed highly in international forums. The publications of the scientists in reputed academic journals has earned international reputation in a very short period of time. Along with this, SOSU has been engaged in disseminating the knowledge of Statistics and promote Official Statistics teaching/training and research in backward areas of North Eastern India in the form of training programmes and workshops with the help of local Institutions.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Bikram Mahapatra	Applied Statistics,Official Statistics	
Diganta Mukherjee	Market Microstructure	Sumanta Basu, Cornell and Sourojyoti Barick, PhD student
	Online Games	Swagatam Das, Ansuman Banerjee and Satyam Shubham, PhD student
	Poverty and Health	Zakir Husain, Presidency and Arpita Kundu
Kajal Dihidar	Randomized Response Surveys	
Nachiketa Chattopadhyay	Measurement Issues in Economics, Mobility, Health Statistics, Official Statistics	Satya Ranjan Chakravarty, Conchita D'Ambrosio (University of Luxemberg)
Sandip Mitra	Capacity Building for State Statistical System of Govt of Tripura	DES, Tripura
	Declining Clientelism of Welfare Benefits? Targeting and Political Competition based Evidence from an Indian state(NBER WORKING PAPER)	Prof.Pushkar Maitra, Monash University<>, Prof..Dilip Mookherjee,Boston University & Prof.Sujata Visaria, City University, London
	Development Economics, Political Economy	Prof Pranab Bardhan, University of California, Berkeley, Prof. Dilip Mookherjee, Boston university, Prof. Kunal Sen, Manchester University,Prof. Pushkar Maitra, Monash University, Dr Sujata Visaria, City University, London, Professor Vegard Iversen, University of Greenwich
	How Do Voters Respond to Welfare Vis-a-Vis Public Good Programs? Theory and Evidence of Political Clientelism (NBER WORKING PAPER	Prof Pranab Bardhan, University of California, Berkeley,<> Prof. Dilip Mookherjee, Boston university, Dr. Anusha Nath,Federal Reserve Bank of Minneapolis

Projects

Internally Funded Projects

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Workshop on Official Statistics in the North-East India (Five days Workshop on Official Statistics and Data Science Essentials: Sampling, Visualization, Reporting" held during Feb 19-23, 2024 at Depts. of ECE and IT, Sikkim Manipal Institute of Technology (SMIT), Sikkim)	Apr 01, 2023	Mar 31, 2024	PI- Kajal Dihidar(SOSU) & Co-PI - Nachiketa Chattopadhyay(SOSU)

Projects done for Govt. of India/State Govt.

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Statistical Data Audit	E-226	Sep 21, 2023	To be continued as per MoU	Nachiketa Chattopadhyay (SOSU), Debasis Sengupta (ASU)	RBI	15,00,000.00
2	Technical Guidance for Implementation of SSS Scheme by DES, Tripura	Finance handled by DES, Government of Tripura as Sitting Fees to Experts as per MoU	Dec 15, 2022	2 Years	Nachiketa Chattopadhyay (SOSU), Sandip Mitra (SOSU), Aloke Kar (SOSU), Debasis Sengupta (ASU)	Government of Tripura	0.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Delivery of Entrusted Services and Financial Health of Rural Local Bodies in West Bengal	E-209	Feb 01, 2023	Nov 30, 2023	Nachiketa Chattopadhyay (SOSU), Sandip Mitra (SOSU), Debasis Sengupta (ASU) Government of West Bengal	Government of West Bengal	20,00,000.00
2	Social Audit Applying Survey Sampling and Data Analytics	E-169	Nov 01, 2021	Sep 30, 2023	Nachiketa Chattopadhyay (SOSU), Sandip Mitra (SOSU), Debasis Sengupta (ASU), Mausumi Bose (ASU), Anup Dewanji (ASU)	NITI AAYOG, Government of India	24,94,000.00

8. Socio-Economic Research Unit (SERU), North-East Centre, Tezpur

Research

Faculty members of SERU teach PGDSMA students and do research in Social Choice Theory, Social Choice Theory, Auction Theory, Macroeconometrics, Time Series Modeling and Panel Data Analysis

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Kushal Banik Chowdhury	Macroeconometrics, Time Series Modeling, Panel Data Analysis	Susmita Kar (Central Glass and Ceramic Research Institute), Shoroshi Dey Central Glass and Ceramic Research Institute), Sudip Kumar Ghosh (Central Glass and Ceramic Research Institute), Jayanta Mukhopadhyay (Central Glass and Ceramic Research Institute), Sunil Kumar (Academy of Scientific and Innovative Research), Sourja Ghosh(Central Glass and Ceramic Research Institute), Swachchha Majumdar (Central Glass and Ceramic Research Institute)
	Quality stocks and business cycle, Land surface temperature and NDVI.	
Mridu Prabal Goswami	Social Choice Theory, Auction Theory	Manipushpak Mitra, Soumendu Sarkar(Delhi School of Economics)

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	A Geometric Understanding of Auction Mechanisms	7187000100085140	May 16, 2023	3 years	Mridu Prabal Goswami	SERB, DST	6,60,000.00

9. Sociological Research Unit (SRU), Kolkata

Research

Sociological Research Unit (Kolkata & Giridih) deals with multiple external and internal research projects and organized several symposia/seminars during 2023-24. Besides, the faculty member of SRU has been a resource person of the MMTTP, UGC and delivered lectures in multiple forums during the year 2023-24. Scientific Staff of SRU has been designated as a Member of the Ph.D. Advisory Committee of RKMVERI, Narendrapur, West Bengal, since 2022 till the date. The scientific staff also have been supervising the PG Students of ISI and other universities/institutes. Besides, there are scientific publications by the faculty and Non-faculty Scientific staff of SRU in 2023.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Hari Charan Behera	"The Sacred Hills and Groves" A Study of Culture and Biodiversity Conservation in Jharkhand, India' funded by IGNCA, New Delhi	Dr. H.C. Behera, ISI Giridih (PI) and Prof. K. Anil Kumar, IGNCA (CoPI)
	Impact of Amphan And Yaas Cyclones That Struck During The Covid-19 And Its Lockdown Periods On Life And Livelihood In The Sundarban Adjacent Gangetic West Bengal	Internal Members Dr. Hari Charan Behera (PI, Sociological Research Unit, Social Sciences Division) Prof. Tarun Kabiraj (CoPI, Head, Sociological Research Unit and Economic Research Unit, Social Sciences Division, Social Sciences Division) Dr. Kuntal Ghosh (CoPI, Machine Intelligence Unit, Computer and Communication Sciences Division & CSCR) Dr. Sanjit Maitra (CoPI, Theoretical and Applied Sciences Unit, Physics and Earth Sciences Division) Dr. Partha De (CoPI, Population Studies Unit, Social Sciences Division) Dr. Rabindranath Jana (Coordinator & CoPI, Sociological Research Unit, Social Sciences Division) Dr. Darpa Saurav Jyethi (CoPI, Theoretical and Applied Sciences Unit, Physics and Earth Sciences Division). Affiliation of Non-ISI Members Prof. Sambit Mallick (Department of Humanities and Social Sciences, IIT, Guwahati) Dr. Rupak Goswami (IRDMFC, RKMVU, Narendrapur, West Bengal) Dr. Abarna Mukherjee (Ranaghat College, Nadia, West Bengal)
	Measuring the Effectiveness of Social Security Programme in Eradicating Poverty and Inequality- A Study of Pradhan Mantri Awaas Yojana - Gramin (PMAY-G) in Rural Jharkhand, ICSSR Special Call for "Short-term Empirical Research 2023-24 (6 months).	Dr.Sanhita Sucharita (PD), Central University of Jharkhand Prof. N. Sethi, NIT Rourkela Prof. P.C. Pradhan, XLRI' Dr. H.C. Behera, ISI Giridih (Co-PD)
Rabindranath Jana	Livelihood risk, strategies and resilience of rural communities affected by COVID-19 in Jharkhand	ISI: Dr. Hari Charan Behera (SRU), PI Prof. Tarun Kabiraj (SRU) Dr. Rabindranath Jana (SRU) and Dr. Kuntal Ghosh (MIU & CSCR), Dr. Partha De (PSU). Non-ISI:Prof. Sambit Mallick (Department of HSS, IIT, Guwahati) Dr. Rupak Goswami (IRDMFC, RKMVU, Narendrapur, W.B.) Dr. Gautam Das(Bangur Institute of Neurosciences, Kolkata)
	Statistical Approach for Studying Social Awareness Among Young Individuals in South 24 Parganas and Purulia	ISI: Dr. Kuntal Ghosh (MIU & CSCR), Dr. Rabindranath Jana (SRU), Non-ISI: Uddalak Mukherjee (RKMVERI, Belur), Dr. Sanjoy Ganguly (Jana-Sanskriti, Madhyamgram)

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
	Unearthing the heterogeneity in virulence using both ICMR COVID-19 testing data and other primary data: A Data Mining approach & An Exploratory study from West Bengal	ISI: Dr. Kuntal Ghosh (MIU & CSCR)-PI, Prof. Ayanendranath Basu (ASU), Dr. Shubhra Sankar Ray (MIU & CSCR),Dr. Arup Ranjan Mukhopadhyay (SQC & OR), Prof. Biswabrata Pradhan (SQC & OR), Dr. Sandip Mitra (SOSU), Dr. Rabindranath Jana (SRU), Dr. Partha De (PSU). Non_ISI: Prof. Dr. I. Saha (ICMR-CNCD, Salt Lake), Prof. Dr. M. K. Gumta (College of Medicine & Sagore Dutta Hospital), Prof. Dr. G. Das (IPGMER &R, Kolkata), Dr. Prabir Kr. Chatterjee (Aamader Haspatal, Sarenga, Bankura), Dr. Satabdi Ghosh (SAI), Dr. Chandra Das (Netaji Subhas Engineering College, Garia, Kolkata), Prof Partha P Majumdar (NIBMG)

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Livelihood risk, strategies and resilience of rural communities affected by COVID-19 in Jharkhand (Continuing). DCSW-TAC funded project of Indian Statistical Institute	May 01, 2022	2 years	H.C. Behera, SRU (PI); T. Kabiraj, ERU; R. Jana, SRU; Dr. K. Ghosh, MIU; P. De, PSU; S. Mallick, IIT Kharagpur; R. Goswami, IRDMFC, RKMVU, Narendrapur, West Bengal;and G. Das, Kolkata (Co-PIs)-

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Land-leasing arrangements and functions in eastern India. DCSW-TAC funded project of Indian Statistical Institute.	May 01, 2020	May 31, 2023	H.C. Behera, SRU (PI)

Externally Funded Projects

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Impact of amphan and yaas cyclones that struck during the covid-19 and its lockdown periods on life and livelihood in the sundarban adjacent gangetic West Bengal	D001(9426)	May 01, 2022	Jun 30, 2023	Hari Charan Behera, SRU (PI); Tarun Kabiraj, ERU; R. Jana, SRU; Kuntal Ghosh, MIU; Partha De, PSU; S. Mallick, IIT Kharagpur; R. Goswami, IRDMFC, RKMVU, Narendrapur, West Bengal; Abarna Mukherjee (Ranaghat College, Nadia, West Bengal), Kolkata (Co-PIs)	CSR funded project	3,00,000.00

3.6 Statistical Quality Control & Operations Research Division (SQC&OR)

Head: BISWABRATA PRADHAN, SQC & OR Kolkata

Office: 7th floor, Platinum Jubilee Building, ISI, Kolkata-700 108

1. Statistical Quality Control & Operations Research Division, Bangalore

- Head of Unit: Somnath Ray
- Number of Faculties: 6 (Male: 5, Female: 1)
- Number of Non-Scientific Worker: 2 (Male: 1, Female: 1)
- Number of Research Scholar: 2 (Male: 2)
- Office: 8th Mile, Mysore Road, ISI, Bengaluru - 560 059

2. Statistical Quality Control & Operations Research Division, Chennai

- Head of Unit: G. Ravindran
- Number of Faculties: 4 (Male: 4)
- Number of Non-Scientific Worker: 2 (Male: 1, Female: 1)
- Number of Research Scholar: 2 (Male: 2)
- Office: 37, Nelson Manickam Road, ISI, Chennai-600029

3. Statistical Quality Control & Operations Research Division, Delhi

- Head of Unit: Samir K. Neogy (Till Feb 2024)
- Number of Faculties: 2 (Male: 1, Female: 1)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 2 (Male: 2)
- Office: 7, S.J.S. Sansanwal marg, ISI, New Delhi - 110016

4. Statistical Quality Control & Operations Research Division, Hyderabad

- Head of Unit: S M Subhani
- Number of Faculties: 5 (Male: 5)
- Number of Scientific Worker: 1 (Female: 1)
- Number of Non-Scientific Worker: 4 (Male: 3, Female: 1)
- Office: Street No.8, Habsiguda, ISI, Hyderabad -500007

5. Statistical Quality Control & Operations Research Division, Kolkata

- Head of Unit: Md. Zafar Anis
- Number of Faculties: 11 (Male: 10, Female: 1)
- Number of Non-Scientific Worker: 3 (Male: 2, Female: 1)
- Number of Research Scholar: 8 (Male: 8)
- Office: 6th Floor, ANK Bhavan, 203 B. T. Road, ISI, Kolkata - 700108

6. Statistical Quality Control & Operations Research Division, Mumbai

- Head of Unit: Sagar Sikdar
- Number of Faculties: 2 (Male: 2)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Office: 3rd Floor, Pratishtha Bhavan (Old CGO Building), 101, Maharshi Karve Road, ISI, Mumbai – 400020

7. Statistical Quality Control & Operations Research Division, Pune

- Head of Unit: Subrata Rath
- Number of Faculties: 1 (Male: 1)
- Number of Non-Scientific Worker: 2 (Male: 2)
- Office: B-Wing, 3rd Floor, B-9, Anandavan Co-op. Hsg. Soc. Near Gandhi Bhavan, S. No: 36, Kothrud, ISI, Pune- 411038

1. Statistical Quality Control & Operations Research Unit (SQC&OR), Bangalore

Research

This unit concentrates on

- Teaching
- Training, and
- Consultancy

in the areas of Statistics and Statistical Quality Control

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Gijo E V	Bivariate Extension of Dynamic Residual Inaccuracy Measure	Viswakala K V (Research Associate – SQCOR)
	Multiple Step-Stress Dependent Competing Risks Models	Sarat Sindhu Mukhopadhyay (SRF – SQCOR)
Jagadish	Optimization Techniques ; Six Sigma; Supply Chain Management; Statistical Modeling & Analysis ;Industrial Engineering;	Dr. N.V. Swamy Naidu, NIT Raipur Dr. G. Srinivasu NIT Raipur Prof. P.K. Patowri NIT Silchar, Dr. Biplab Das NIT Silchar
Moutushi Chatterjee	Process Capability Analysis, Tool Replacement policy using quality control techniques	

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Application of Support Vector Machine and other Machine Learning Algorithms in Statistical Quality Control	Jul 31, 2023	Jan 30, 2024	

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Development, and Experimental Investigation of New Class of Green Composites from Waste Natural Resources (bamboo & coconut skin) for Industrial Applications	Mar 31, 2024	1 year	Jagadish, (SQCOR Unit)

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Hybrid Decision Support System based Modeling and Optimization of Green Manufacturing Systems for Product Quality Improvement: A Case Study Approach	Jul 26, 2023	Mar 31, 2024	Jagadish, (SQCOR Unit)

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Training and Project	I-370	Mar 31, 2024	1 April 2024 - 31 March 2025	Sanjit Ray	Banas Dairy, Gujarat	30,00,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Enabling Tribals of Chhattisgarh towards Sustainable Livelihood Improvement through Sustainable Hybrid Bricks (SHB) for Low-cost Housing Structure	02/41/2022-23/ST/TS/RP	Sep 01, 2023	1 year	Jagadish, SQC & OR Unit Bangalore & Gouri Sharma, MGAHW Wardha, Maharashtra, India	Indian Council of Social Science Research (ICSSR) Jnu Institutional Area, Aruna Asaf Ali Marg, New Delhi – 110067 (INDIA)	5,00,000.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
2	Tribal Education Culture and Identity: A Study (Chhattisgarh) (with special reference to the Lapachadi Bega tribe)	02/46/2022-23/GEN/TS/RP	Sep 01, 2023	1 year	Jagadish, SQC & OR Unit Bangalore & Gouri Sharma, MGAHVV Wardha, Maharashtra, India	Indian Council of Social Science Research (ICSSR) Jnu Institutional Area, Aruna Asaf Ali Marg, New Delhi – 110067 (INDIA)	5,00,000.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Problem Solving using Design of Experiments (DoE-08)	S-159	Jul 03, 2023	Mar 31, 2024	Boby John & Jagadish	Participants	63,000.00
2	Online Course on Business Forecasting using Python (BF-07)	I-359	Apr 10, 2023	Mar 31, 2024	Boby John & Jagadish	Participants	1,10,500.00
3	Online Course on Machine Learning using python and R (ML-05)	I-369	Jan 02, 2024	Mar 31, 2024	Boby John	Participants	4,20,000.00
4	Six Sigma Black Belt, DFSS & Data Analytics Programs and Project Guidance	I-361	Jun 06, 2023	Mar 31, 2024	Boby John, U H Acharya & Jagadish	Bharat Electronics	12,17,530.00
5	Six Sigma Green Belt Certification Program	I-366	Dec 05, 2023	Mar 31, 2024	Boby John & Jagadish	BEML	2,00,000.00
6	Training Program on Statistical Process Control and Related Fields	I-355	Apr 10, 2023	Mar 31, 2024	Boby John	Reetam HR	80,000.00
7	Program on Statistical Process Control (SPC)	S-161	Aug 14, 2023	Mar 31, 2024	Boby John & Jagadish	Kirloskar Toyota Textile Machinery Pvt Ltd	80,000.00
8	Program on Design of Experiments	S-160	Aug 01, 2023	Mar 31, 2024	Boby John & Jagadish	Walvoil Fluid Power	70,000.00
9	Six Sigma Green Belt & Black Belt Certification	I-364	Sep 11, 2023	Feb 29, 2024	E V Gijo (PI), Somnath Ray (Co-PI), SQC & OR Unit	Hyundai Motor India Ltd	19,20,000.00
10	Lean Six Sigma Green Belt Certification program for M/s. Strides Pharma Science Limited, Bangalore.	I-352	Feb 20, 2023	Jun 30, 2023	E V Gijo (PI), Somnath Ray (Co-PI), SQC & OR Unit	M/s. Strides Pharma Science Limited, Bangalore	3,60,000.00
11	Six Sigma Green Belt Certification for GE Healthcare Ltd., Bangalore	I-362	Sep 25, 2023	Sep 29, 2023	E V Gijo (PI), Somnath Ray (Co-PI), SQC & OR Unit	GE Healthcare Ltd., Bangalore	4,00,000.00
12	Online Certification Program on Six Sigma Black Belt (BB 39)	I-358	Jul 17, 2023	Aug 12, 2023	Sanjit Ray, E V Gijo	External Participants	7,00,000.00
13	Online Certification Program on Six Sigma Black Belt (BB 40)	I-367	Jan 08, 2024	Feb 11, 2024	Sanjit Ray, E V Gijo	External Participants	2,70,000.00
14	Training and Project Handholding	I-368	Feb 06, 2024	Mar 31, 2024	Sanjit Ray	Banas Dairy, Gujarat	8,00,000.00
15	Six Sigma Green Belt Certification Program (GB-61 _Online)	I-353	May 22, 2023	May 26, 2023	Somnath Ray (PI), E V Gijo (Co-PI)	Extrnal Participants	3,20,000.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
16	Six Sigma Green Belt & Black Belt Certification Programmes	I-357	May 31, 2023	Dec 11, 2023	Somnath Ray (PI), E V Gijo (Co-PI)	HAL Management Academy	7,50,000.00
17	Six Sigma Green Belt Certification Program (GB-62 _Online)	I-360	Aug 21, 2023	Aug 26, 2023	Somnath Ray (PI), E V Gijo (Co-PI)	Extrnal Participants	4,00,000.00
18	Six Sigma Master Black Belt Certification Program (MBB-36 _Online)	I-363	Oct 30, 2023	Nov 20, 2023	Somnath Ray (PI), E V Gijo (PI)	Extrnal Participants	5,88,000.00
19	Six Sigma Green Belt Certification Program (GB-63 _Online)	I-365	Nov 27, 2023	Dec 02, 2023	Somnath Ray (PI), E V Gijo (Co-PI)	Extrnal Participants	2,52,000.00

Projects done for Govt. of India/State Govt.

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Six Sigma Green Belt, Statistical Process Control & Root Cause Analysis programs	I-356	Apr 30, 2023	2 years	Boby John, U H Acharya & Jagadish	Defence Institute of Quality Assurance (DIQA)	3,25,000.00

2. Statistical Quality Control & Operations Research Unit (SQC&OR), Chennai

Research

Research areas are in Stochastic games, Linear Complementarity and Completely Mixed games, Process Control and Evaluation for Univariate and Bivariate Zero-inflated Processes. The unit also carries out training and consultancy activities in MRF Limited and Training at Apollo tyres.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
D Sampangi Raman	Stock cutting problem, AI in Quality	S Aravindan, L & T Ship Building
G. Ravindran	Stochastic Games, Linear Complementarity Problems, Completely Mixed games	T. Parthasarathy (late), Sunil Kumar, A.R. Sricharan
Surajit Pal	Process Control and Evaluation for Univariate and Bivariate Zero-inflated Processes	Dr. Susanta Kumar Gauri

Projects

Internally Funded Projects

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	International Conference on Game theory and Optimization.	Mar 18, 2024	Mar 19, 2024	G. Ravindran, D. Sampangi Raman

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	SPC Implementation at MRF Limited, Trichy plan	I-503	Dec 14, 2023	One Year and 3 months	G. Ravindran, D. Sampangi Raman, Surajit Pal (SQC and OR Unit,Chennai)	MRF Limited	20,00,000.00

3. Statistical Quality Control & Operations Research Unit (SQC&OR), Delhi

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Samir Kumar Neogy	Mathematical Programming, Linear Complementarity Problem and its generalizations, Optimization problem in graph theory, Matrix Theory (Study of Matrix Classes useful in Complementarity, Optimization and Game Theory), Non-cooperative games, Algorithms for Stochastic Games	T.E.S. Raghavan (University of Illinois at Chicago, USA), Dipti Dubey (Shiv Nadar University), Gambheer Singh (Delhi University), Promila Kumar (Delhi University)

4. Statistical Quality Control & Operations Research Unit (SQC&OR), Hyderabad

Research

SQC & OR Unit, Hyderabad has conducted various training programs such as Six Sigma Green Belt, Six Sigma Black Belt, Business Analytics, Optimization Tools, etc. to the industrial executives as well as individual aspirants. Three research papers were published by Dr. Sujeet Kumar Singh in the reputed journals like Ánnals of Operations Research, Benchmarking, etc. Number of research papers were submitted for publication awaiting for acceptance. Some of our faculty members have delivered invited talks/lectures at various institutions like IITs, VIT, etc.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
A L N Murthy	Statistical Modelling, Machine Learning, Six Sigma Methodology, Decision Support Systems	
Sujeet Kumar Singh	Polynomial optimization, Multi-Objective optimization, Supply chain and logistics optimization, Fuzzy optimization	Vinay Yadav, IIT Kharagpur Alka Arya, IIM Kashipur BS Sahay, IIM Jammu Rizwan Manzoor, IIM Jammu

Projects

Internally Funded Projects

New Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	On the multi-objective optimizations and its applications	Mar 31, 2024	1 year	Sujeet Kumar Singh (ISI Hyderabad)

Completed Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Development of some tight relaxations for multi-objective polynomial optimization problem	Apr 01, 2023	Mar 31, 2024	Sujeet Kumar Singh (ISI Hyderabad)

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Certification Program on Six Sigma Black Belt with Business Analytics (Online)	ISP(T)_23012024_1	Mar 02, 2024	Approximately 70 hours (March - April 2024, On Saturdays & Sundays 4 hours each 9 weekends)	G Murali Rao	Individual Participants/ Organization	7,78,800.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Six Sigma Green Belt Training and Guidance (Wave I) towards achieving Business Excellence	I-691	Nov 01, 2022	Dec 29, 2023	A L N Murthy (PI) & G Murali Rao (Co-PI)	ITC Limited, Paper Boards and Specialty Papers Division, Unit: KOVAI, Mettupalayam, Tamilnadu	12,00,000.00
2	Review/Revision of Existing Sampling Norms and Development of Comprehensive Scientific Sampling Methodology for Risk Focused Internal Audit by State Bank of India (SBI)	I-693	Jan 03, 2022	Jul 31, 2023	G Murali Rao (PI) & A L N Murthy (Co-PI)	State Bank of India, I & MA Division, Hyderabad	10,00,000.00
3	Training Program on "Quality and Reliability Engineering" to DRDO Scientists	ISP(T)_ 111 220 23_3	Jan 01, 2024	Jan 13, 2024	G Murali Rao	Defence Institute of Advance Studies, Pune	16,52,000.00
4	Six Sigma Green Belt (Online)	I-692	Jun 05, 2023	Jun 09, 2023	S M Subhani & Pathik Mandal	Participants	4,60,000.00
5	Six Sigma Green Belt (Five-days Online Training Program)	I-696	Jan 06, 2024	Jan 28, 2024	S M Subhani & Boby John	Participants	4,62,500.00

5. Statistical Quality Control & Operations Research Unit (SQC&OR), Kolkata

Research

The faculty members of SQC&OR unit, Kolkata are engaged in teaching in M. Tech (QROR), B. Stat and MS(QE) programs, research in various topics of quality, reliability and operations research and providing consultancy in different industries in India and overseas. During April 2023 - March 2024 there are 32 journal publications (some of which were collaborative works with other SQC & OR units). Five book chapters were also published. The research topics include statistical process control of zero-inflated process data and ordinal data, process capability indices, reliability, extropy of coherent and mixed systems, lean supply chain management, PCI for auto correlated data, reverse logistic process/ operations, zero-sum stochastic games, complementary problems, among others.

During the period under review, two internally funded projects and eight externally funded projects have been completed or are in progress; eight Research Scholars were working under guidance of the faculties or undergoing course works; three Research Associates and one Visiting Scientist carried out research works with the faculties. During the period, Dr. M. Z. Anis was elected as a member of the International Statistical Institute; Prof. B. Pradhan continued to be Associate Editor of the Journal of the Indian Society for Probability and Statistics; Dr. P. Das worked as panel member in a conference; Dr. P. Das and Dr. B. Pradhan chaired two sessions in two conferences; Dr. A. K. Das and Dr. B. Pradhan delivered three invited talks.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Abhijit Gupta	Mathematical Programming, Linear Complimentarity Problem	Dr. S. K. Neogi
Arup Kumar Das	Optimization Theory, Complementarity Theory, Linear Algebra, Game Theory, Graph Theory	Dr. Deepmala, IIITDM, Jabalpur, Mr. Bharat Kumar, IIT, Kanpur, Mr. Rani Deb, Jadavpur University

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Arup Ranjan Mukhopadhyay	Sustainable Development & Supply Chain Management, and Statistical Process Control.	Dr. Sadhan Kumar Ghosh, Professor, JU, for Sustainable Development & Supply Chain Management
Ashis Kumar Chakraborty	Software Reliability, Hardware Reliability, Nonparametric Regression, Supply Chain Management	Dr. Abhijit Barman, IIM Raipur Dr. Mamta Kumari, NIT Silchar Pallabi Ghosh, Calcutta University Dr. Soumen Dey, Norwaigian University of Life Sciences Subrata Rath, Dr. Tanujit Chakraborty, Sorbonne University and Sorbonne Center for AI
Biswabrata Pradhan	Bayesian reliability acceptance sampling plan with optional warranty under hybrid censoring	Rathin Das
	Bayesian sampling plan for adaptive simple step stress model	
	Degradation modelling for residual lifetime prediction using Bayesian semi-parametric approach	Barin Karmakar
	Optimal planning of progressive Type-I interval censoring schemes under dependent competing risks	Rathin Das Dr. Soumya Roy, IIM Kozhikode
	Residual lifetime prediction under degradation modelling in heterogeneous environment using Bayesian semi-parametric approach.	Barin Karmakar
Kaustav Kundu	Digital Supply Chain Modelling	Dr. Prasun Das
M Z Anis	Reliability	Aritra Saha
	Distributions	Mohammad Ahsanullah, Rider University, USA I. Okorie, Khalifa University, UAE
	Process Capability Indices	Kuntal Bera
Nandini Das	Multivariate Control Chart	
Prasun Das	Supply Chain	Prof. B. C. Giri, JU, Kolkata
S. K. Gauri	Developing tools and techniques for statistical process monitoring of zero-inflated Poisson processes	Dr. Surajit Pal, SQC & OR Unit, Chennai
	Monitoring of processes with ordinal data, process capability analysis	Dr. Surajit Pal, SQC & OR Unit, Chennai

Projects

Externally Funded Projects

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Training Program on Statistical Quality Control	I-093	Jul 31, 2023	Aug 05, 2023	Arup Ranjan Mukhopadhyay (PI), Zafar Anis (Co-PI), Kaustav Kundu (Co-PI) (SQC&OR, Kolkata)	Birla Jute Mill	3,83,500.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
2	Preparation of common merit list for Engineering and Pharmacy admissions for year 2023-24	I-092	May 29, 2023	Feb 01, 2024	Ashis Kumar Chakraborty	Admission Committee for Professional Courses, Ahmedabad	11,50,000.00
3	Training on SPC, SQC, MSA, ST, DA & AS (CNAI, Vizag)	I-094	Jul 10, 2023	Jul 18, 2023	Prasun Das	CNAI, Vizag	4,00,000.00
4	Training on SPC, SQC, MSA, ST, DA & AS (NAI, Cossipore)-01	I-090	May 02, 2023	May 19, 2023	Prasun Das, Nandini Das	Naval Armamemt Inspectorate, Cossipore, Kolkata	7,50,000.00
5	Training on SPC, SQC, MSA, ST, DA & AS (NAI, Cossipore)-02	I-100	Nov 15, 2023	Dec 01, 2023	Prasun Das, Nandini Das	Naval Armamemt Inspectorate, Cossipore, Kolkata	7,50,000.00

6. Statistical Quality Control & Operations Research Unit (SQC&OR), Mumbai

Research

SQC & OR Unit, ISI, Mumbai commenced its operations from 1965. It has served a wide variety of organizations, both Manufacturing and Service, across the country through training and consultancy in the fields of Statistics and Operations Research.

The unit activities can be described in the following categories.

- Consultancy and project assignments
- Conducting in plant and general Training

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Sagar Sikder	Quality Management, Six Sigma, SPC	

Projects

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Comprehensive course on Business Analytics	I-942	May 06, 2023	3 month	Ashok Sarkar/ Boby John/ Amitava Bandophadhay	Participants	10,50,000.00
2	Six Sigma Green Belt Training and Certification	I-947	Sep 04, 2023	1 month	Ashok Sarkar	B N P Paribas Securities	3,25,000.00
3	Workshop on Design of Experiment with "R"	S-602	Jun 19, 2023	1 month	Ashok Sarkar	Participants	45,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Network Planning and Route Optimization	I-950	Oct 01, 2023	6 month	Ashok Sarkar	Greencell Express Private Limited	4,00,000.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
2	Study of sample size, sample coverage, analysis and reporting	J-851	Jan 03, 2024	4 month	Ashok Sarkar	Delhi International Airport Ltd.	2,50,000.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Six Sigma Green Belt Certification	I-928	Mar 31, 2023	Jun 06, 2023	Sagar Sikder (PI), Co-PI (Ashok Sarkar)	Naval Armament Inspectorate	2,00,000.00
2	Six Sigma Green Belt training & Certification	I-939	Apr 14, 2023	Apr 30, 2023	Sagar Sikder (PI), Co-PI (Ashok Sarkar)	External Participants	4,18,644.00
3	Six Sigma Black Belt Certification	I-941	Jul 10, 2023	Sep 16, 2023	Sagar Sikder (PI), Co-PI (Ashok Sarkar)	External Participants	8,50,000.00
4	SS Green Belt Certification	I-943	Nov 23, 2023	Feb 11, 2024	Sagar Sikder (PI), Co-PI (Ashok Sarkar)	UPL Ltd.	3,45,000.00
5	Six Sigma GB Certification	I-945	Sep 22, 2023	Oct 08, 2023	Sagar Sikder (PI), Co-PI(Ashok Sarkar)	External Participants	5,00,000.00
6	Six Sigma hand holding session	J-852	Aug 18, 2023	Mar 19, 2024	Sagar Sikder (PI)	Deepak Fertilizers	1,25,000.00

7. Statistical Quality Control & Operations Research Unit (SQC&OR), Pune

Research

The unit activities can be described in the following categories;

Consultancy and project assignments

Conducting in-plant and general Training

Teaching and training.

SQC & OR Unit, ISI, Pune has served a wide variety of organizations, both Manufacturing and Service, across the country through training and consultancy in the fields of Statistics and Operations Research like Six Sigma, Lean Six Sigma, Design of Experiment, Statistical Process Control etc.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Subrata Rath	Reliability analysis, improvement and change point, Six Sigma and Data Analytics	Deepjyoti Saha, of IIT (ISM), Dhanbad

Projects

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	In-House Programme for Quality and Reliability Leading to Six Sigma Green-Belt Programme	J-819	Mar 25, 2024	10 days	SUBRATA RATH	Defence Institute of Advanced Technology	4,00,000.00
2	Statistics for Sampling	J-818	Mar 18, 2024	3 days	SUBRATA RATH	VKU Certification Pvt. Ltd	1,26,000.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
3	SSGB 23-24 03 Public Programme	J-814	Mar 24, 2024	5 days	SUBRATA RATH	INDIVIDUAL	1,20,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Six Sigma Yellow Belt	J-817	Mar 12, 2024	5 DAYS	Subrata Rath	Schott Poonawalla Pvt. Ltd.	12,000.00
2	Six Sigma Black Belt	J-816	Mar 06, 2024	12 DAYS	Subrata Rath	Kirloskar Oil Engines Limited	4,80,000.00
3	Training & Consulting on Machine FMEA & Six Sigma Green-Belt	I-807	May 02, 2023	1YEAR	Subrata Rath	Gia India Laboratory Pvt. Ltd	4,80,000.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Advanced Data Analytics -Defence Officer	j-804	Aug 29, 2023	Feb 12, 2024	Subrata Rath & Biswabrata Pradhan	Directorate General Resettlement	24,23,725.00
2	Six Sigma Black Belt 23-24 01 Public Programme	I-810	Jun 11, 2023	Aug 07, 2023	Subrata Rath & Biswabrata Pradhan	Individual	8,18,000.00
3	Six Sigma Master Black Belt 23-24 01 Public Programme	J-802	Aug 13, 2023	Sep 18, 2023	Subrata Rath & Biswabrata Pradhan	Individual	4,20,000.00
4	Six Sigma Green Belt 23-24-01 Public Programe	J-801	Sep 17, 2023	Oct 01, 2023	Subrata Rath	Individual	80,000.00
5	Training & Consulting on Six Sigma Green-Belt	J-803	Jul 05, 2023	Jul 07, 2023	Subrata Rath	C-QUEST BRIGHTSPARK ENERGY PVT LTD	1,20,000.00
6	SSBB 23-24 02 Public Programme	J-805	Sep 23, 2023	Nov 26, 2023	Subrata Rath & Biswabrata Pradhan	Individuals	3,50,000.00
7	MBB 23-24 02 Public Programme	J-807	Jan 06, 2024	Feb 11, 2024	Subrata Rath & Biswabrata Pradhan	Individual	9,10,800.00
8	Training & Consulting on Six Sigma Black-Belt	J-808	Nov 16, 2023	Mar 08, 2024	Subrata Rath	Balasore Alloys Limited	2,00,000.00
9	SSBB 23-24 03 Public Programme	J-812	Feb 17, 2024	Mar 24, 2024	Subrata Rath & Biswabrata Pradhan	Individual	4,00,000.00

3.7 Theoretical Statistics and Mathematics Division (TSMD)

Professor In-Charge: PRADIPTA BANDYOPADHYAY, SMU, Kolkata

Office: 5th floor, A.N. Kolmogorov Bhavan, ISI, Kolkata-700 108

1. Stat-Math Unit (SMU), Bangalore

- Head of Unit: Suresh Nayak
- Number of Faculties: 20 (Male: 18, Female: 2)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 20 (Male: 17, Female: 3)
- Office: 8th Mile, Mysore Rd, RVCE Post, Bengaluru, Karnataka 560059

2. Stat-Math Unit (SMU), Delhi

- Head of Unit: Shanta Laishram
- Number of Faculties: 13 (Male: 10, Female: 3)
- Number of Scientific Worker: 1 (Female: 1)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 4 (Male: 3, Female: 1)
- Office: Stat-Math Unit, Indian Statistical Institute, Delhi, 7 S.J.S Sansanwal Marg, Delhi- 110016

3. Stat-Math Unit (SMU), Kolkata

- Head of Unit: Rudra Pada Sarkar
- Number of Faculties: 26 (Male: 23, Female: 3)
- Number of Scientific Worker: 1 (Female: 1)
- Number of Non-Scientific Worker: 6 (Male: 5, Female: 1)
- Number of Research Scholar: 47 (Male: 42, Female: 5)
- Office: 3rd floor, A.N. Kolmogorov Bhavan, 203, B.T. Road, ISI, Kolkata-700 108

1. Stat-Math Unit (SMU), Bangalore

Research

Stat-Math Unit Bangalore Center has been very active from 2023 to 2024 in conducting research in various fields of Mathematics such as Algebraic Geometry, Number Theory, Operator Theory, Operator Algebras, Quantum Probability, Probability and Statistics, Stochastic geometry, Random topology, Random graphs, Bayesian Statistical Inference, Statistical Ecology, Group actions, COVID related work, etc. During this period, the unit has been very productive in publishing papers in journals of international reputes.

The Unit was also involved in organizing conferences and conducting the Madhava mathematics competition and Simon Marais Mathematics Competition. We also hosted a good number of postdocs and visitors.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Anita Naolekar	Category theory	Abhishek Banerjee, Associate Professor, IISc Bangalore
B V Rajarama Bhat	Almost everywhere equivalence of completely positive maps	Chongdar, Arghya
	Iterative roots of functions	Gopalakrishna, Chaithanya
	Joint spectral radii and spectral properties of positive maps	Saha, Biswarup Sahasrabuddhe, Prajakta
	Quantum convexity of instruments	Chongdar, Arghya and Murali, Sruthy (Kannur University)
B. Sury	Sylvester's problem on cube sums and elliptic curves; Linear congruences with restrictions and Ramanujan sums; Davenport constant and variants for nonabelian groups; p-numerical semigroups; 4-rank of class groups	C.G. Karthick Babu Ranjan Bera Mainak Ghosh Somnath Jha (IIT Kanpur), Takao Komatsu (Nagasaki University) Dipramit Majumdar (IIT Madras) Jyothsnaa Sivaraman (IISER Thiruvananthapuram)
C. R. E. Raja	Mostow's Theorem and Mahler's Criterion	Nil
	Power maps	Dr. A. Mandal, IIT Roorkee
	space of closed subgroups of connected Lie groups	Dr. M. Choudhuri, IITRM, Ahemadabad
Jaydeb Sarkar	Analytic projections and sub and quotient modules	R. Debnath (IISc) and D. Pradhan (IIT Hyderabad)
	Automorphisms and Generalized projections on spaces of analytic functions	R. Maurya and A. Sensarma from ISI Banglaore
	Commutant lifting, interpolation, and perturbations on the polydisc	Deepak K.D from ISI Bangalore
	M-ideals in bounded analytic functions	Deepak K.D. from TIFR CAM and and S. Siju from ISI Bangalore
	Paired operators, and Toeplitz + Hankel operators	N. Das and S. Das, ISI Bangalore
	Representations of commuting pairs of isometries	S. De (IIT Goa), Shankar. P (CUSAT) and Sankar T. R (IIT Goa)
Manish Kumar	Embedding problems for etale fundamental group	Poulami Mandal
	Genuinely ramified maps and monodromy	Biswas, Indranil(6-SNU2-M) Parameswaran, A. J.(6-TIFR-SM)
	Quot schemes and Fourier-Mukai transformation	Biswas, Indranil(6-SNU2-M) Dubey, Umesh V.(6-HCRI) Parameswaran, A. J.(6-TIFR-SM)
Mathew Joseph	stochastic PDEs	Siva Athreya, Carl Mueller (University of Rochester)
Ramdin Mawia	Rankin-Selberg convolutions and Beyond Endoscopy	Satadal Ganguly, ISI Kolkata Didier Lesesvre, Université Lille 1
	sign changes of Kloosterman sums	Satadal Ganguly, ISI Kolkata Olivier Ramaré, Université Aix-Marseille

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Ramesh Sreekantan	Number Theory, Algebraic Geometry	Tanay Pathak, Indian Institute of Science
Yogeshwaran Dhandapani	Hyperuniformity and optimal matchings	Raphael Lachieze-Rey, Univ. Paris Cite and INRIA
	Noise sensitivity and spectral samples	Giovanni Peccati, Univ. Luxembourg Chinmoy Bhattacharjee, Univ. Hamburg
	Random topology	Takashi Owada, Purdue Univ Zifu Wei, Purdue Univ Shu Kanazawa, Ohio State Univ. Trinh Khanh Duy, Waseda Univ.

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	TARE	Oct 27, 2022	3 years	Jaydeb Sarkar (SMU)

COMPLETED PROJECTS

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Ashok Maitra Memorial Lectures	Feb 16, 2024	Feb 28, 2024	Mathew Joseph & Yogeshwaran Dhandapani SMU-B

Externally Funded Projects

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	JC Bose Fellowship project (Second term)	E-520	Mar 01, 2022	5 years	Bhat, B V Rajarama	SERB, India	95,00,000.00
2	Groups admitting recurrent random walks and representation of groups	MTR/2022/ 000429	Jan 10, 2023	3 years	C. R. E. Raja (SMU)	SERB - MATRICS	6,60,000.00

Completed Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	the stochastic heat equation	MTR/2020/ 000453	Feb 19, 2021	Feb 18, 2024	Mathew Joseph (SMU)	SERB	6,60,000.00
2	MATRICS	E-516	Feb 19, 2021	Feb 18, 2024	Yogeshwaran Dhandapani	SERB	6,60,000.00

2. Stat-Math Unit (SMU), Delhi

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Anish Sarkar	Probability Theory	Rahul Roy, Kumarjit Saha - Ashoka University, Moumanti Podder - IISER Pune, David Coupier - Institut Mines Télécom Nord Europe, Chi Tran - Univ. G. Eiffel, UFR de Maths
Antar Bandyopadhyay	De-Preferantial Random Graphs with Linear and Inverse Power Law Weights	Dr. Subhabrata Sen, MIT, USA
	Hard-Core Model on Random Graphs	--
	Height of a Random Recursive Tree	Dr. Debleena Thacker, Durham University, UK and Professor Andrew Wade, Durham University, UK.
	Interacting Urn Models	Mr. Deborah Das, SRF, ISI, Delhi

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Arindam Chatterjee	High dimensional statistics, Resampling	Dr. Debraj Das, IIT Bombay
Arup Kumar Pal	Network sampling	N.A.
	Quantum groups, Noncommutative geometry	Partha Sarathi Chakraborty, ISI Kolkata Manabendra Giri, ISI Delhi
Deepayan Sarkar	Reproducible research in epidemiology	Laha Ale, Southwest Jiaotong University, China Robert Gentleman, Harvard Medical School Teresa Filshtein Sonmez, 23 and Me, Inc. Christopher Endres
Isha Dewan	Nonparametric Inference, Relaibility and Survival Analysis	Dr Sudheesh Kattumanil, Dr Naresh Garg, Prof Sangita Kukathinal, University of Helsinki Dr Deepesh Bhatti, Central University of Rajasthan
Issan Patri	Mathematical biology- evolution of bacterial cell wall structure	Dr. Garima Rani, Friedrich Schiller Universitat, Jena
	Universal Quantum Homomorphisms	Prof. Pierre Fima, Universite Paris Cite, Dr. Malay Mandal, IMSc
	von Neumann algebras and descriptive set theory	Prof. Pierre Fima, Universite Paris Cite, Prof. Francois Le Maitre, Universite Paris Cite, Prof. Kunal Mukerjee, IIT Madras
Rahul Roy	Probability theory and stochastic process	Anish Sarkar ISI, Delhi, Hideki Tanemura, Keio University, Yokohama, Masoto Takei, yokohama National University
Shanta Laishram	Arithmetic Dynamics	Prof. Ritumoni Sarma, IIT Delhi Himanshu Sharma, IIT Delhi Prabhakar Yadav
	Diophantine Equations and Approximation	Dr Satyavrat Sahoo, IIT Kanpur Dr Gorekh Prasad Sena, HRI Prayagraj
	Irreducibility and Galois groups of polynomials	Dr Anuj Jakhar, IIT Madras Dr Ankita Jindal Prof. K. Srinivas, IMSc Chennai Prabhakar Yadav
Soham Sarkar	Functional Data Analysis, High Dimensional Data Analysis, Statistical Learning	Prof. Anil K. Ghosh Annesha Ghosh Prof. Rita SahaRay, UC Santa Barbara Dr. Sarbojit Roy, KAUST Saudi Arabia Dr. Subhajit Dutta, IIT Kanpur
Swagata Nandi	Modified Newton-Raphson Algorithm for elementary chirp signal	D. Kundu, IIT Kanpur
	Multichannel Sinusoidal Signal	Arijit Naskar
	Nonlinear least squares in a random amplitude chirp model	Rhythm Grover, IIT Guwahati
	Weighted least squares for autoregressive process	D. Kundu, IIT Kanpur
Tanvi Jain	Spectral properties of special matrices	Prof. Rajendra Bhatia, Ashoka University
	Symplectic and Hamiltonian matrix theory	Ms. Kirti Kajla, Panjab University

Projects

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Directed random networks and their scaling limits		Sep 12, 2023	36 Months	Kumarjit Saha - Ashoka University, David Coupier - Institut Mines Télécom Nord Europe, Chi Tran -	Centre Franco-Indien pour la Promotion de la Recherche Avancée (CEFIPRA)	4,27,303.00

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
2	CRG Project "Diophantine equations and polynomials"	N-747	Mar 11, 2024	3 years	Shanta Laishram, TSMU, Delhi	SERB, DST	29,23,888.00

ONGOING PROJECTS

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Topology of Quantum Super spaces and Operator Algebra invariants	69751062000	Jan 04, 2023	2 years	Issan Patri, TSMUD	SERB	13,88,640.00

3. Stat-Math Unit (SMU), Kolkata

Research

SMUK focuses on research in:

Statistics: Robust and Nonparametric Techniques, Statistical Methods in Pattern Recognition and Image Analysis,

Probability: Stochastic Processes, extreme value theory, random matrix theory, Heavy-tailed Distributions

Mathematics: Number theory, Automorphic Forms, Operator algebras, Subfactor theory, Algebraic Geometry, Algebraic and differential topology,

Harmonic Analysis on Lie groups, Geometry of Banach Spaces, Non-commutative geometry, Commutative algebra, Wavelet analysis.

The unit currently has 26 faculty members, 5 of them are Bhatnagar awardees. Faculty members are engaged in teaching, supervising Ph.D. students, and mentoring Post-Docs.

There were 47 research scholars and 37 post-docs, Inspire fellows working in the Stat-Math unit for the period 2023-24.

Current Areas of Research

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Amartya Kumar Dutta	Commutative Algebra, Affine Algebraic Geometry, History of Mathematics	
Arijit Chakrabarty	Large deviations	Gennady Samorodnitsky, Cornell University
	Random Matrix Theory	Rajat Subhra Hazra, University of Leiden Moumanti Podder, IISER Pune
Arup Bose	Association measures for spatial-temporal time series	Divya Kappara, IIT Bombay Madhuchhanda Bhattacharjee, University of Manchester
	Estimating Bergsma's covariance	Divya Kappara, IIT Bombay Madhuchhanda Bhattacharjee, University of Manchester
	Joint convergence of high dimensional sample autocovariance matrices	Monika Bhattacharjee, IIT Bombay Apratim Dey, Stanford University
	Random matrices with independent entries	Priyanka Sen, IIT Bombay
	Sample autocovariance matrices in high dimensions	Walid Hachem, University of Paris East
Biswaranjan Behera	Maximal operators associated with general sets in a topological space	Md. Nurul Molla
Kingshook Biswas	Holomorphic dynamics, Riemann surfaces, Negatively curved manifolds, Harmonic analysis	Utsav Dewan, JRF, ISI Kolkata. Prof. Ricardo Perez-Marco, Universite Paris VI, France.
Mahuya Datta	Differential Geometry and Topology	

Name of the DCSW Member	Research Topic(s)	Collaborator(s)
Neena Gupta	On embedding of linear hypersurfaces	Dr.Parnashree Ghosh, TIFR Mumbai Ananya Pal
	On the family of affine threefolds $a(x)y=F(x,z,t)$	Dr.Parnashree Ghosh, TIFR Mumbai Ananya Pal
	On the rigidity of Pham-Brieskorn Surfaces	Ananya Pal
	On the triviality of an A^2-fibration over a DVR	Parnashree Ghosh, TIFR Mumbai
Pradipta Bandyopadhyay	Geometry of Banach spaces	Deepak Gothwal
Ritabrata Munshi	Number Theory	Roman Holowinsky (Ohio-State), Jakob Streipel (U. Maine), Prahlad Sharma (MPIM), Aritra Ghosh (Renyi Institute), Saurabh Singh (IITK), Sampurna Pal (ISI), Mayukh Dasaratharaman (ISI), Pratim Mitra (ISI)
Samik Basu	Algebraic Topology	Prof. D. Blanc, University of Haifa Dr. P. Dey, NIT Calicut Dr. S. Ghosh, IIT Roorkee Dr. S. Gondhali, BITS, Goa Dr. R. Kasilingam, IIT Madras Dr. R. Santhanam, IIT Bombay Dr. S. Sarkar, CEBS, Mumbai Dr. D. Sen, IIT Kanpur
Satadal Ganguly	Analytic Number Theory, L-functions, zero-free regions etc.	E.M. Sandeep, Manipal Inst. of Tech., Karnataka
	Counting integral points on determinant surfaces, spectral theory of automorphic forms	Rachita Guria, Max Planck Inst. (Bonn)
Soumendu Sundar Mukherjee	Adaptive Estimation	Dr. Sabyasachi Chatterjee, University of Illinois Urbana-Champaign Dr. Subhajit Goswami, TIFR Mumbai
	Changepoint Analysis for Network Data	Dr. Sharmodeep Bhattacharyya, Oregon State University Dr. Shirshendu Chatterjee, CUNY
	Percolation Theory	Dr. Subhajit Goswami, TIFR Mumbai
	Random Matrices, Free probability	Prof. Arup Bose, ISIK Dr. Debapratim Banerjee, Ashoka University Mr. Dipranjan Pal, ISIK Mr. Himasish Talukdar, ISIK
	Random Matrices, Topological Data Analysis, High-Dimensional Statistics, Neural Networks, Learning under Group Invariance	Dr. Subhrosekhar Ghosh, National University of Singapore
	Random Matrix Theory for Imputed Matrices	Dr. Rajarshi Mukherjee, Harvard University Mr. Himasish Talukdar, ISIK
	Transfer Learning for Networks	Dr. Arya Mazumdar, University of California, San Diego Dr. Purnamrita Sarkar, University of Texas, Austin Mr. Akhil Jalan, University of Texas, Austin
Utsav Choudhury	Algebraic Geometry, Motivic Homotopy theory, Moduli stacks,	Neeraj Deshmukh, IMPAN Poland Amit Hogadi, IISER Pune, Biman Roy, ISI Kolkata

Projects

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	J C Bose Fellowship Renewal	E-236	Jan 01, 2024	Till March 31, 2027	Arup Bose, SMU Kolkata	ANRF	62,00,000.00

Ongoing Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	JC Bose Fellowship	E-043	Jul 25, 2021	5 years	Debashish Goswami (PI)	SERB, Govt. of India	95,00,000.00
2	Studies on affine spaces and related objects through algebraic group actions and locally nilpotent derivations	E-212	Feb 21, 2023	3 years	Neena Gupta (SMUK) and Amartya Kumar Dutta (SMUK)	Department of Science and Technology	68,21,775.00
3	J.C. Bose Fellowship	E-171	Oct 14, 2021	5 years	Ritabrata Munshi (SMUK)	SERB	95,00,000.00
4	On Some Inference Problems for Networks (DST/INSPIRE/04/2018/002193)	E-137	Apr 01, 2020	5 Years (The start date is 06/03/2019 but your system does not allow me to enter that value)	Soumendu Sundar Mukherjee (SMUK)	DST	35,00,000.00

3.8 Library Documentation and Information Sciences Division (LDISD)

Divisional Head: DR. KISHOR CHANDRA SATPATHY

1. Library, Bangalore Centre

- Name of the Primary Contact: M Krishnamurthy
- Address for Postal Communication: Indian Statistical Institute, 8th Mile, Mysore Road, RVCE Post, Bangalore 560059
- [Year of Establishment: 1960]

2. Library, Chennai Centre

- Name of the Primary Contact: Kalpana T.M.,
- Address for Postal Communication: 110, Chateau D Ampa, Nelson Manickam Road, Aminjikarai, Chennai 600049
- [Year of Establishment: 2010]

3. Library, Delhi Centre

- Name of the Primary Contact: Udaya Bhanu Kandha
- Address for Postal Communication: Library Unit, Indian Statistical Institute - Delhi Centre, 7, S. J. S. Sansanwal Marg, New Delhi 110 016
- [Year of Establishment: 1974]

4. Library, North-East Centre, Tezpur

- Name of the Primary Contact: Kakoli Gogoi
- Address for Postal Communication: Punioni, Solmara, Tezpur-784501
- [Year of Establishment: 2011]

5. Central Library, Kolkata

- Name of the Primary Contact: Kishor Chandra Satpathy
- Address for Postal Communication: 1st floor, S.N. Bose Bhawan, ISI, Kolkata 700108
- [Year of Establishment: 1933]

1. Library, Bangalore Centre

A Brief Overview of the Library

Indian Statistical Institute Bangalore Centre Library aims to be identified as a model library in the Indian academic scenario. ISI Bangalore Centre Library has also initiated interactive applications for its users. The library has developed a distinguished collection in different knowledge domains such as Mathematics, Statistics, Systems Science, Information Science, Economics, Quality Management & Operations Research, Library & Information Science, Computation & Artificial Intelligence, and so on. Various services are designed to meet the information needs of the faculty members, students, research scholars, and visiting scientists. Walk-in users from the other institutions are also permitted to use the library. Major activities of the Library are given below.

Details about Current Status of the Library

Total Members as on November 22, 2024:
325
(around 4438 walk-in users)

Total Collection as on March 31, 2024:
32,374
Physical (Print) Books

Total Collection as on March 31, 2024:
39
Digital (Electronic) E-Books

Journals
21,234
bound volumes

Annual Budget Spent by the Library :
Rs. 6,98,416.01

Description of the Facilities or Services Provided

Number of Circulations held in the Year	8988 (and 935 Bound Volumes)
Usage Statistics of Plagiarism Software	The library is also providing a plagiarism-checking facility through URKUND to teachers and research scholars of the Institute
Promotional Activities Performed in Library	Regular display of Newly arrived books (monthly)

Collection Development in 2023-24	
Head	Details
Books	32,374
Journals	e-resources remotely
E-books	39 E-Books
CDs	600

Services added in 2023-24	
Serial no.	Short Description
1	The Bangalore Center of the Indian Statistical Institute was conceived by Prof. P. C. Mahalanobis during the 1960s, even when the city was emerging as a center of science. It is a tribute to his foresight that the Institute is now well-established in one of the most vibrant scientific communities in India.

Programme Organised by the Library, if any

Conference, Seminar, Workshop, Training Organized by the Library :	▪ ISIBC Library provided on job internship training to five students of the sixth semester students of the Diploma in Library and Information Science from the Government Polytechnic for Women College. They completed three months of training in ISIBC Library from 1st January 2024 to 12th April 2024.
Outreach Activities, User Orientation, or Exhibitions Initiated by the Library :	▪ For new users of the library, User Orientation was carried out for the first-year B-Math, M-Math, MSLIS, MSQMS students, and JRF students. They were briefed about the rules and regulations of the ISI BC Library, and guided on how to use the library resources and materials. ▪ A group of II PU students visited the ISIBC Library from Sri Bhagwan Mahaveer Jain College on 24th May 2024.

2. Library, Chennai Centre

A Brief Overview of the Library & Services Offered

The library of Indian Statistical Institute Chennai Center (ISICC) fully automated with RFID Technology is located in Aminjikarai Campus, Chennai with SQC and OR unit (SQC & OR) started in 1956 and Chennai Centre library was started in 2011. Both libraries have an excellent collection of books in subjects like Mathematics, Statistics, Management, Operations Research, Finance, Quality Control Computers and Cryptography. Conference Proceedings, Bound Volumes, Online and Print journals complement this collection. Library books from SQC and OR unit from Coimbatore were shifted to Chennai library increasing its collection to around 7400.

ISICC Library website focuses on providing access to relevant information services, bibliographic and full-text digital and printed resources to support the Scholarly Community of the Institute. It also shares a platform with ISI group institutions in Resource sharing to broaden the resource availability. However, it is also open for reference to academic users of other educational and scientific institutions and its neighboring regions.

Details about the Current Status of the Library (In Numbers)

Total Members as on March 31, 2024 :	Total Collection as on March 31, 2024 :	Budget Spent by the Library :
41	7435 Physical (Print) Books	Rs. 73518

Collection Development in 2023-24

Head	Details
Books	35

3. Library, Delhi Centre

A Brief Overview of the Library & Services Offered

The Library Unit of ISI Delhi Centre cater to the information needs of the faculty, visiting scientists, staff members, scholars and students of the institute engaged in studies, research and training in the field of Mathematics, Statistics, Economics, Statistical Quality Control and Operation Research. However, it is also open for reference to academic and research users of other educational and scientific institutions of the city and its neighboring regions.

Delhi Centre Library is one of the designated NBHM Regional Library since 1994 to serve the academic users of the northern region. Additional funds are being provided by NBHM for maintaining and developing resources in the fields of mathematics and statistics.

Library Working Hours (Mon-Fri): 9:00 AM to 5:30 PM.

Extended Library Hours: 5.30 PM to 9.00 PM on working days as per the need of students.

The Library is fully automated with Koha Library Management Software. It also maintained Library website for the purpose of providing information to users.

Major Activities:

Collection development, Organization and maintenance of Library resources. The Library procures and maintains an excellent collection of books, journals, reports, government publications, theses and other documents in print and electronic format. The total collection of the library (both books and bound journals) is about 52,600 volumes.

E-Resources Access facility:

The library subscribes and gets access to all major reputed e-journals, databases, and e-books in electronic format. Special arrangements have been made for Delhi centre users to access the e-resources of Central Library, Kolkata via RemoteXs.

Other Library Services:

1. Circulation Service
2. Reading Room Service
3. Inter-Library Loan Service
4. Reference Service
5. Photocopy services
6. Electronic document delivery service
7. Current awareness service
8. Web-OPAC Facility
9. Web Enable Library Services
10. Remote access (Off-Campus access) to e-resources via RemoteXs
11. Wi-Fi/Internet Browsing Facility
12. Plagiarism detection services

Details about the Current Status of the Library (In Numbers)

Details about the Current Status of the Library (In Numbers)		
Total Members as on March 31, 2024 :	163	
Total Library Personnel as on March 31, 2024 :	4 (1 Associate Scientist 'C', 1 Scientific Worker Non-Faculty, 2 Non-Scientific Workers)	
Total Collection as on March 31, 2024 :	Physical (Print)	Digital (Electronic)
Books :	34440	Provision of 68043 e-books Off-Campus access available to users via RemoteXs
Journals :	18888 Bound Volumes 28 Current Journals	Provision of 21219 e-journals Off-Campus access available to users via RemoteXs
Reports /Standards/AV materials:		700 CDs/DVDs
Online Databases :		Provision of 78 e-databases Off-Campus access available to users via RemoteXs
Special Materials (if any) :		E-resource access of via RemoteXs
Budget Spent by the Library :	9,55,269.00	
Description of the Facilities or Services Provided		
Items Delivered in Electronic Format / ILL	50+	
Usage Stat / Data Downloads/ Hits via RemoteXs	Total Data (MBs): 3907.31 Browsing Data (MBs): 3063.44 Download Data (MBs): 843.87 Total Download: 842 Logins: 1085 Users: 76	
Number of Circulations held in the Year	3551	
Usage Statistics of Plagiarism Software	10	
Number of Hits counted in the Lib Website	2500+	
Promotional Activities Performed in Library	Book Display Event Organised Collection awareness about the common e-resources available via RemoteXs. How to access e-resources via RemoteXs WebOPAC access etc.	
New Services Undertaken by the Library	Literature search e-alerts facility	

Collection Development in 2023-24	
Head	Details
Books	117
e-books	Nil
Journals	14
e-Journals/ databases/ e-reports	14
Others	3

Programme Organised by the Library, if any	
Outreach Activities, User Orientation & Exhibitions etc.:	1 Book display
	2 User Orientation

4. Library, North-East Centre, Tezpur

A Brief Overview of the Library & Services Offered

Although the ISI NE Library appears to be small, its collection is high quality. Helping the user community to the greatest extent possible is the library's primary goal. The library tries to respond quickly to the user community in order to support their academic endeavours.

The library provides RemoteXs facility to its users for accessing e-resources remotely.

The library also provides a plagiarism-checking facility through iThenticate to teachers of the institute.

Library Service/Facility:

- Circulation Service
- Reference Service
- Current awareness service
- Reprographic facility
- Plagiarism checking facility
- Web-enabled Library Service
- Electronic Document Delivery Service

Details about the Current Status of the Library (In Numbers)	
Total Library Personnel as on March 31, 2024 :	1
Total Collection as on March 31, 2024 :	Physical (Print)
Books :	3272
Journals :	207 (Bound Volume)
Reports /Standards/AV materials:	Student Project Report-74, Summer Internship Report-5, Technical Report - 4, Discussion Paper-2, Workshop Report-2
Special Materials (if any) :	Gift Item: (Book, journal, magazine-41 CD: 64 (Book), 29 (NRSC Data)
Budget Spent by the Library :	225841 (Total)

Description of the Facilities or Services Provided	
Items Delivered in Electronic Format / ILL	15
Usage Stat / Data Downloads/ Hits via RemoteXs	2064MB/775.98MB/240
Number of Circulations held in the Year	350
Usage Statistics of Plagiarism Software	10
Number of Hits counted in the Lib Website	2696
Requests Received for Repro-photo Services	55
Details about Web-based Services Provided	Assist users in finding necessary documents as well guide them to use the e-resources
Promotional Activities Performed in the Library	Prepared and shared library-related PPT to students

Collection Development in 2023-24	
Head	Details
Books	43
e-Journals/ databases/ e-reports	11 (Student Project Report)
Others	12 (Gifted Books and journal)

5. Central Library, Kolkata

A Brief Overview of the Library & Services Offered

The mission of the Indian Statistical Institute Library, Circulation unit is to meet with valuable resources that provides efficient, effective and quality services to support the Institute as a Centre of excellence in teaching, learning, research and consultancy that contribute towards the advancement of knowledge and progress of the country, provide the highest quality service and to organize and display the collection for easy, open access by all. Circulation work refers to all activities performed and procedures adopted for registration of users, issue and return of documents, maintenance of statistics, gate register, property counter, etc. The Circulation Unit provides lending services and facilities for the return of loaned items and renewal of materials. Fines are also paid at the circulation desk. Circulation staff may provide basic search and reference services, though more in-depth questions are usually referred to reference librarians.

Reprography and Photography Unit:

The Reprography and Photography Unit of the Library, Documentation, and Information Science Division at the Indian Statistical Institute has been providing reprographic and photographic services since the 1940s.

The Unit offers unique services in graphic design, image processing, developing digital photo archives, scanning and restoring old photographs, art photography, and scientific photographic work. Additionally, it provides services such as image file modification, poster printing, color printing, spiral binding, lamination, and more.

This Unit also specializes in photographic coverage of various events, including ISI Council meetings, ISI convocations, seminars, conferences, visits of dignitaries, and cultural and sports activities at the institute. It performs indoor photography such as portraits and scientific photography for different scientific units.

A Digital Photo Archive has been developed to store photographs along with their metadata. The large collection of photo negatives and photographs of different scientific activities and academic visits over the decades, preserved by the Unit, holds significant archival and historical value. Efforts in restoration and development of the photo archive are ongoing to preserve the memories of ISI.

The Unit has also developed a database on microfilm and microfiche, which contains many documents of historical value.

Work Statement of Reprography and Photography Unit (April,2023 to March,2024):

1. Total colour photo print – 1455 copies.
2. A4 size B/W print – 80650 copies.
3. A3 size B/W print – 462 copies.
4. A4 size colour print – 6385 copies.
5. A3 size colour print – 1379 copies.
6. Total Photographs taken – 12859 nos.
7. Scanning – 272 nos.
8. Soft copy given – 1793 nos.
9. Designing – 265 nos.

Periodicals Unit :

The Periodicals Unit has full-text access to several online journals, databases, e-books, and reports and keeps a good collection of electronic materials which support the research on varied disciplines. The Wall Street Journal, Duke Mathematical Society Journal, Euclid Prime, ACM Digital

Library, Project Muse, AMS & IMS journals, IEL online of IEEE, Econlit, Science Direct, Springer, Taylor & Francis journals, Wiley, Oxford University Press and Cambridge University Press journals, EPWRF Indian Time Series, Proceedings of the Royal Society A & B, J-Gate, Computer Science and Mathematics collection from World Scientific Publishing, Geological Society of America & Geology, SAGE journals along with SCOPUS and ProQuest databases, and others have all been renewed.

The library provides access to Census data along with other subscribed online report databases (IP &/login based) for providing data services to the faculty, researchers and other potential users. Subscribed online databases are namely – Economic Outlook (CMIE), States of India (CMIE), Indiastat.com (Datanet India) with 5000 data table download facility, Indiastatdistricts.com with 250 data table download facility, CEIC Databases (Global DB + Daily DB + Indian Premium DB).

The Unit renders electronic document delivery services in India and abroad. Library is also providing data download services as well as photo-copying, data-copying, and printing services.

The Unit accessioned more than 6 bound volumes of journals (the total number of bound volumes of journal is 84196) and subscribed to around 100 scholarly journal titles in print. Apart from this several journal titles were received as complimentary and in exchange. The Unit received and processed more than 510 loose issues of journals.

Publication Exchange Programme: The library maintains the publication exchange programme of 'Sankhya'-The Indian Journal of Statistics' with 37 National and International Institutions/ Organizations. The 26 international agencies are from various countries of the world such as Bangladesh, Belgium, Canada, China, Taiwan, Croatia, Czech Republic, Denmark, France, Hungary, Italy, Japan, Poland, Romania, Slovakia, Spain, UK and USA.

Acquisition & Technical Processing Unit:

The jobs of the Acquisition & Technical Processing Unit is the combination of two separate parts i.e. Acquisition & Processing of books and other non-print materials. Acquisition & Technical Processing Unit is the back-end working platform but it is the heart of the library division. The acquisition Unit is responsible for financial work regarding book purchase and collection development. The main functional work of the Acquisition Unit is the budget creation, selection and purchase of documents. The Technical Processing work is responsible for metadata entry of the total procured both subscribed and complimentary books and other non-print (CD) materials and updated in Web OPAC.

Reports and Records Unit:

The primary objective of the unit is to provide data services for academic and research purposes. Keeping in view of current research endeavours, the unit acquires various statistical and economic reports (both from Government and Statutory Bodies) in a complementary and subscription basis. However, it also acquires various data-books, numerical tables, and many other relevant resources published by national and international bodies. At present the unit holds 37759 published reports (hard copies) and 259 CD-ROMs.

Besides Sample Micro Data, all published Census Tables published from 1991 to 2011 Census available in soft copy are also stored at the Workstation which is a part of this unit.

Details about the Current Status of the Library (In Numbers)		
Total Members as on March 31, 2024 :	2504 (Staff 468, Students & Res Sch. 798, Ins. Member 1115, Project & others 123)	
Total Collection as on March 31, 2024:	Physical (Print)	Digital (Electronic)
Books :	40322 (Workers Circulating Library) Purchased books 138657 and Complimentary books C27414 (Acquisition & Technical Processing Unit)	10757 (Periodicals Unit)
Journals :	84196(Periodicals Unit)	21649+(Periodicals Unit)
Reports /Standards/AV materials:	37759 Hard Volumes (Reports & Records Unit)	259 CD's(Reports & Records Unit)
Online Databases :		9 (Periodicals Unit) Reports & Records Unit: Economic outlook, States of India, IndiaStat, DistrictofIndia, CEIC databases and EPWRF

Special Materials (if any) :	E-Thesis- 591(Acquisition & Technical Processing Unit)	
Total Storage(in MBs) used for In-house Digital Content of the Library:		Data Stored in Dspace 30 GB
Bibliographic Records Added to the ILM & DAM Systems of the Library :		In IR total 6732 full-text records are found in Dspace and 83 records(36 dissertations, 35 theses, 1 question Paper, 10 ISI Scientist Pub., 1 Annual Report) were updated in the last year consisting about 3000 Pages
Description of the Facilities or Services Provided		
Items Delivered in Electronic Format/ILL	**Periodicals Unit :** The library renders electronic document delivery services based on online /offline databases in India and abroad. It also provides data download services with high-end computing facilities and photo-copying, data-copying, printing, etc. (During the period reported, 68 online requests for full-text articles/bibliographical data were received and about 1100 pages of full-text documents were supplied by the Periodicals unit.)	
Number of Circulations held in the Year	Local Use-577, CD-Rom-11, References-2380, Dean's Library Circulation 685)	
Usage Statistics of Plagiarism Software	Collection from Plagiarism software Total Rs 22,075/- has been collected (Total Member used (Internal-4, External- 96), Library fine collection- Rs 33,210/, Annual Membership Subscription Rs.27,180.00	
Activities on Current Awareness Services	As Stock verification progressed during this year 2845 barcodes were pasted, Nearly 3000 security tags were pasted in the Book and nearly 4575 untraceable books were found in the library	
Number of Requests for Inter Library Loan	4 Inter-Library Loan books have been issued	
Number of Hits counted in the Lib Website	About 12000	
	Reports & Records Unit : Apart from classification and meta-data entry of documents in Web- OPAC and institutional repository, the Reports & Records Unit also provided personal (nearly about 100 individuals) assistance to users (both short-term and long-term) seeking textual and socio-economic data from our online databases and other open source databases from various Ministries. Also Provided Digital Document Delivery Service The usage of data during 2023-24 is 141829 Megabytes.	
New Services Undertaken by the Library	Newly, ISI Scientist collection was created consisting of 1200 Books in 3 Almirahs	
Other Relevant Information (please specify)	**Information Storage and Retrieval Unit:** - Routine maintenance and update of the faculty profiles - Rectification of journal catalogue records in Koha - Metadata development services for DC (n=2311) **Workers Circulating Library:** Several important tasks were completed by this unit. First, the books were shelved in a proper manner, a necessary step for accurate stock verification. Additionally, books without barcodes were listed, and approximately ten thousand barcodes were generated. Lastly, a reminder list for users was created. **Reprography and Photography Unit:** The Reprography & Photography Unit supported all Units and Divisions with photography, graphic design, multimedia content generation, and digital restoration. The Unit's responsibilities included archival work, laboratory upkeep, equipment maintenance, and budget management. This Unit organized exhibitions and taught workshops and lecture series on photography, graphic design, and multimedia, including day to day official work.	
Other Relevant Information (please specify)	**Reprography and Photography Unit:** This Unit organized exhibitions and taught workshops and lecture series on photography, graphic design, and multimedia, including day to day official work.	

Collection Development in 2023-24	
Head	**Details**
Books	306 Hindi Books by Workers Circulating Library. Acquisition & Technical Processing Unit : During 2023-24, the Acquisition & Technical Processing Unit purchased 92 books, did metadata entry of 713 documents (92 purchased, 572 complimentary including 149 retrospective reports and 49 E-thesis) along with their abstract and table of contents and uploaded in library WEBOPAC.
e-books	Periodicals Unit : During the year under report, the Periodical Unit added Springer- eBooks Collection of Math & Statistics- 428 titles, Cambridge eBooks Collection of Math-11 titles, Computer Science-6 titles, Statistics & Probability-45 titles and Sociology-7 titles, Elsevier eBooks collection of Mathematics-105 titles which are accessible across the centers through IP ranges.
Journals	Periodicals Unit : Print Journals Collection: During the year, Periodicals Unit subscribed to many scholarly journal titles in print, such as Productivity, Journal of the Indian Anthropological Society, Journal of the Geological Society of India, Man in India, Current Science, Ganita Bharati and IAPQR Transactions, Indian Journal of Information, Library & Society, Bhavana, Granthagar, Down to Earth, Dalal street journal, Economic and Political weekly, DESIDOC Journals of LIS, IASLIC Bulletin, Informs Pub Suit (14 titles), Geological Society of American & Geology.
e-Journals/ databases/ e-reports	Periodicals Unit: The Periodicals Unit has a good collection of electronic resources on different media and has access to several online journals/ databases. It has provided online access to about 21649+ full-text journals and renewed all major online databases like MathSciNet, AMS journals (6 Jls.), IMS Journals (9 titles), ACM digital library (50+ Scholarly journals & 7+ Magazines), IEL Online /IEEE, Econlit with full text online journals, OUP (51 titles.) + Comp. access to other Jls., CUP Journals with Read & Publish Offer (150 titles), Project Muse - Social Science collections, PNAS, AAAS-Science online, Duke Mathematical Journal, SAGE Sociology Subject collection (94 titles) & urban studies & planning (33 titles), SAGE Indian journal package (85 + titles), IOP collection (73+ 12 OA access titles), Informs Pub Suit (16 titles), Emerald journal (309 Titles), Taylor & Francis (49 titles) with complimentary access to Mathematics Statistics and Economic Collection, Wiley (138+ titles) and 300 full-text articles (complementary), Euclid Prime (30 + Open access Jls), UoCP (85 Journals), APS All (14+ titles), SIAM (18 e-Jls), Wall Street Journal, EPWRF India Time Series (30 titles), Science Direct collections (140 unique titles along with access to 45 Math, 78 CS and 106 Eco sub. Coll.), Proceedings of the Royal Society A and B, Review of Economics & Statistics (5 issue), J-Gate and J-Gate Datatype, Springer Journals (82 titles) along with free access to 1700 + journals, Springer Nature (5 titles), WSP-Computer Science (31 titles) and Math Collections (32 Titles), Geological Society of American & Geology, SCOPUS, LISA, AIP Complete Package (17+ titles), Journal of the Indian Chemical Society. The Periodicals Unit has also subscribed to Census data and acquired online report databases (IP &/or Password based) for providing data services to potential users. Subscribed online databases are namely – Economic Outlook (CMIE), States of India (CMIE), IndiaStat.com (Socio-economic Statistical Information & facts on India with 5000 data table download facility), Indiastatdistricts.com (only West Bengal Districts, with 250 data table download facility), CEIC Databases (Global DB + Daily DB + Indian Premium DB). The Periodicals Unit has Institutional tie-ups with several professional bodies like ILA, IASLIC, BLA, DELNET,British Council,Shastri Indo-Canadian Institute-Membership and AIMS
Access to Online Databases	Reports and Records Unit : 6 (Economic Outlook, States of India, IndiaStat, DistrictofIndia, CEIC database and RPWRF)
CD's	Reports and Records Unit: Newly Accessioned - 9

Collection Development in 2023-24	
Head	**Details**
Others	Information Storage and Retrieval Unit: Curation and creation of metadata records (n=2311) in the ISI-Digital Commons platform; which comprises Journal-articles (1145), Conf-papers (190), Book-chapters (48), PhD-thesis (468), Master's dissertations (399), Patents (10), Dataset (1), others (50). Thus a total of 5000 records have been created successfully in the ISI-DC platform during the last two years. (https://digitalcommons.isical.ac.in/) Periodicals Unit : Stock Verification & Catalogue rectification in KOHA: During the period, the Periodicals Unit has completed the 'Stock verification of physical resources by some external agency. During the process, about 630+ shelves of BV of periodicals were scanned physically and number of BV found to be unprocessed (not catalogued/classified and barcoded). About 1200 new barcodes were generated and pasted on the respective documents. Necessary processing (cataloguing & classification) and Shelve rectification/ extension' has been performed accordingly, and the rectification work of the catalogue entry of bound volume periodicals in KOHA is going on. Reports and Records Unit : About 364 new documents and 1500 old documents along with their selected abstract and table of contents were uploaded in Koha Library Management software. Around 2500 unprocessed documents were classified and catalogued along with respective label works.

Projects

Internally Funded Projects

Ongoing Projects

Sl.	Name of the Project	Starting Date	Duration	Principal Investigator(s)
1	Arrangement, Description & Digitization of Archival Documents	Apr 01, 2022	2 Years	Kishor Chandra Satpathy & Monali Mitra Paladhi, PCMMM&A

3.9 Computer and Statistical Service Centre (CSSC), Kolkata

CSSC: General Information

Name of Head	Ujjwal Bhattacharya
Physical Location	4th Floor, Library Building, ISI Kolkata

Research

The Computer and Statistical Service Centre (CSSC) of the Institute, located at its main campus in northern part of the city of Kolkata, serves as the central hub for managing the comprehensive IT infrastructure of ISI. This includes supervising the operations of the data center, campus wide network (LAN and Wi-Fi), VoIP telephony services, virtual meetings, VPN services connecting other branches etc. Also, CSSC manages a wide array of end-user computing devices across the length and breadth of the Kolkata campus of ISI.

In addition to infrastructure management, CSSC is responsible for maintaining of critical enterprise IT applications such as the Institute's website, email services, and other bespoke applications essential for academic and administrative operations. It provides robust computational facilities, including specialized GPU servers and symmetrical multiprocessing environments, crucial for research and scientific computing needs across various departments.

CSSC supports the broader academic mission of Institute by managing two dedicated computing labs for computer programming classes of all major courses offered by ISI. Also, these labs are used for various research activities of the Institute throughout the academic year. These labs are equipped with a large number of computers tailored to meet the specific needs of various programs like B. Stat., M. Stat., M. Tech. (CS), M. Tech. (CrS), M. Tech. (QR & OR), M. S. (QE) as well as various research programs.

Furthermore, CSSC plays a pivotal role in smooth organization of online teaching and remote learning capabilities, ensuring seamless connectivity and video conferencing services for both local and distant participants. It also coordinates the technical aspects of conducting computer-based tests in its specialized examination hall.

In adiition to providing infrastructure and academic support, CSSC manages bulk purchases of computers, distribution, and maintenance of various hardware and software needs of all the users of the Institute, and provides technical training and support to staff across scientific and administrative divisions of the Institute. This comprehensive role underscores CSSC's integral position in enhancing operational efficiency and technological advancement within the institution.

Major Activities & Associated Resources

Resource	Brief Overview
Datacentre	The primary data centre of CSSC houses 6 servers, primarily catering to enterprise needs and a portion of computational requirements. In contrast, the newly established SYMEC data centre boasts 19 servers designed to meet specialized computational needs of specific user groups of the Institute. Both data centres are interconnected via high-speed networking fabric, and storage virtualization is implemented atop a network file storage system. Server virtualization is facilitated through VMware and Linux containers, ensuring efficient resource allocation and management.
Campus wide LAN	The campus LAN follows a three-tier design, comprising 12 switches at the distribution layer and approximately 150 switches at the access layer. To accommodate users' BYOD needs, there are around 140 WiFi4 access points deployed across the campus. A single aggregation switch at CSSC facilitates seamless aggregation of distribution traffic. Network access control is enforced to enhance security over the WiFi network.
Software for use by students, faculty and CSSC technical team	CSSC provides access to a variety of software tools and programming environment, including Mathematica, R, FORTRAN, Matlab and its Toolboxes, SPSS, MySQL, PostgreSQL, IDRISI (Geographical Information System), Magma, Sage, Python, C, and Java.
IP Telephony	IP telephony services support approximately 150 users and utilize BSNL lines for external connectivity.
Video-conferencing	CSSC offers comprehensive video conferencing capabilities across multiple platforms including VC endpoints, personal computers, and smartphones. Its large VC room features advanced amenities such as a smart display and a cutting-edge 360-degree audio system. This setup caters to a variety of gatherings including academic council meetings, administrative meetings, faculty candidate presentations, classes for outlying center students, and expert lectures. Additionally, a smaller VC room with basic facilities accommodates overlapping meetings. Dedicated technical support staff ensures seamless management and assistance for all video conferencing needs across different groups and individuals.

Resource	Brief Overview
VPN Connectivity	The Institute maintains Site-to-Site Virtual Private Network (VPN) connections with its centers in Delhi, Chennai, Tezpur, Bangalore, and Giridih. Outlying branches of the Institute utilize this VPN connectivity to access the IT infrastructure hosted at CSSC in Kolkata.
Computing Laboratories	Lab facilities for all the students of Kolkata Headquarter of the Institute are provided by the CSSC. Practical classes of regular courses like B. Stat., M. Stat., M. Tech. (CS), M.Tech. (Q.R. & O.R.), M.S. (Q.E.), and M. Stat. take place regularly at the computer laboratories of CSSC round the year. Certain courses of various streams like B. Stat. (Delhi centre), M.Tech. (CS), PGDSMA etc. are often organized online through video conferencing facility managed by CSSC. It has also facility for conducting Computer Based Tests (CBT) of a limited number of students.
Disbursal of Desktops/Laptops	CSSC periodically undertakes bulk purchases, distribution, and maintenance of laptop and desktop computers to fulfill the needs of its faculties and administrative staff. This includes procurement services for acquiring new equipment, annual maintenance contracts (AMC) to ensure ongoing support and upkeep, and decommissioning services for retiring outdated hardware. The institute also maintains comprehensive records throughout these processes to efficiently manage its IT resources.

Resources acquired/used/maintained

Resource	Brief Overview
Networking	a) 1 Gbps NKN Backbone for Internet Connectivity (continuation). b) One Core switch (Cisco Nexus 7009) for L3 networking and DMZ. c) One L3 switch each in all the buildings in the campus connected to the Core switch via Fiber channel. d) Hostels are Connected to the Core Switch via Fiber channel. e) The entire Kolkata campus is covered with Wi-Fi connectivity. f) Servers and storage at CSSC are connected internally with 10Gbps Backbone.
Software for use by students, faculty and CSSC	Matlab, Mathematica, SPSS, SPSS AMOS, Magma, R, Sage including programming facilities in Python, C and Java Zoom Cloud Meeting Education Host Licenses for 20 Users, Zoom Cloud Recording 1 TB Monthly Usage for 1 Year, Zoom Conference Room Connector
IP Telephony	a) IP Telephone Router through which all telephones in Kolkata Campus are routed to BSNL. b) VoIP Telephone System for communication within Kolkata Campus and with Outlying Centres/ unit/Branches through VPN for zero cost Internal Telephone System.
Video-conferencing	a) Five (5) Video Conferencing Systems. b) One Cisco Meeting Server. c) One Zoom Admin licenses with 30 users
Internet Security	a) Firewall/ Proxy Server with packet filtering. b) MAC based Wifi Authentication. c) SSL Certificate for encryption. d) Email Security Appliance for email security
VPN Connectivity	a) Centres/Unit/Branches are Connected with VPN which enable them to utilize the computational facility, FACT server, Library resources and all software resources available in the Kolkata Campus. b) A Linux based Gateway server for users to avail the computational facility from outside the ISI network.
Computing Laboratories (No. and capacity)	a) Two Computing Laboratories in CSSC having total capacity of 54 users and projector connectivity. These rooms are also being used for Computer Laboratory Classes. b) The VC Room is also equipped with Desktop computers for 44 users with networking facility and suitable for online classes and computer based tests.
Disbursal of Desktops/Laptops	Purchased and distributed 40 desktop PCs among the Scientific workers and another set of 20 desktops among the administrative workers to meet their regular computational needs.

3.10 Academic Centres

1. The Centre For Artificial Intelligence and Machine Learning (CAIML), Kolkata

- Centre Head: Prasun Das
- Number of Faculties: 12 (Male: 10, Female: 2)
- Number of Scientific Worker: 1 (Female: 1)
- Number of Non-Scientific Worker: 1 (Male: 1)
- Number of Research Scholar: 4 (Male: 1, Female: 3)
- Office: 4th Floor, SN Bose Bhawan, 203 B. T. Road,ISI, Kolkata - 700108

2. The Centre for Research on the Economics of Climate, Food, Energy and Environment (CECFEE), Delhi

- Centre Head: Mudit Kapoor (April 01 - May 30, 2023)
  E. Somanathan (June 01, 2023 – March 31, 2024
- Number of Faculty: CECFEE has a total of 34 members. More than half are faculty at other institutions such as IISc, IIT-Mumbai, Delhi School of Economics, Institute of Economic Growth, Ashoka University, JNU, South Asian University etc. 7 tenured faculties in ISI's EPU, Delhi, 6 Male and 1 Female. 3 Visiting Assistant Professors, 2 Female and 1 Male.
- Number of Scientific Workers: 6 Research Assistants (Male: 3, Female 3)
- Number of Non-Scientific Worker: 1 (Female: 1)
- Number of Research Scholars: 4 PhD students at ISI (Male: 4)
- Office: 7 S.J.S. Sansanwal Marg, Delhi, New Delhi - 110016

3. The Centergor Soft Computing Research (CSCR), Kolkata

- Centre Head: Kuntal Ghosh
- Number of Faculty/ Faculty-equivalent: Four (Male: 4)
- Number of Non-scientific Workers: 4 (Male: 2; Female: 2)
- Number of Research Scholars: 13 (Male: 4, Female: 9)
- PhD. Students: 8 (Male: 2; Female: 6)
- Post Doc: 2 (Female: 2)
- Project Assistant: 2 (Female: 2)
- Junior Project Assistant: 1 (Male: 1)
- Office: 1st Fioor, R. A. Fisher Bhawan, 203 B. T. Road, ISI, Kolkata - 700108

4. R.C. Bose Centre For Cryptology & Security (RCBCCS), Kolkata

- Centre Head: Subhamoy Maitra
- Number of Faculties: 5 (Male: 5)
- Number of Non-Scientific Worker: 4 (Male: 4)
- Number of Research Scholar: 8 (Male: 8)
- Office: 203, Barrackpore Trunk Road, ISI, Kolkata – 700108

5. Technology Innovation Hub (TIH), Kolkata

- Centre Head: Ashish Ghosh / Dipti Prasad Mukherjee
- Number of Faculty/ Faculty-equivalent: 20 (Twenty) (Male: 17, Female: 3)
- Number of Scientific Workers: 01 (One) (Male: 1)
- Number of Non-scientific Workers: 08 (Six) (Male 7, Female: 1)
- Number of Research Scholars: 30 (Thirty) (Male: 24, Female: 6)
- Office: 203 B. T. Road, ISI, Kolkata - 700108

1. The Centre for Artificial Intelligence and Machine Learning (CAIML), Kolkata

Research

Prof. Nikhil R. Pal, Prof. Sanghamitra Bandyopadhyay, Prof. Utpal Garain, and Dr. Malay

Bhattacharyya have developed Machine Learning Models for performing various kinds of cryptanalysis, namely Distinguishing Attack and Differential Cryptanalysis on a number of ciphers.

CAIML faculties have offered an Online Weekend-mode 6 month course on "Business Analytics" in association with Jamshedpur Management Association.

Prof. Utpal Garain has provided Research Advisory Services to Tata Consultancy Services.

Dr. Ujjwal Bhattacharya have completed a consultancy project on "Mentoring / guiding the MOLIT on ML/AI issues towards achievement of improved results in their AIML".

Dr. Malay Bhattacharyya has developed a machine learning model for the prediction of stages in

Duchenne Muscular Dystrophy as a part of the project funded by Google.

Dr. Rituparna Sen fine tuned the various existing statistical methodologies employed by Canara Bank and further adopt novel and best risk management practices across the financial/banking industry.

Projects

Externally Funded Projects

New Projects

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Risk Management	I-354	Apr 01, 2023	2 years	Rituparna Sen	Canara Bank	7,08,000.00

ONGOING PROJECTS

Sl.	Name of the Project	A/C No	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Sanctioned Amount
1	Advanced Machine Learning Techniques for Cryptanalysis	E-172	Dec 01, 2021	3 years	Utpal Garain	DRDO	1,92,13,700.00

2. Centre for Research on the Economics of Climate, Food, Energy and Environment (CECFEE), Delhi

Research

Dr. Mudit Kapoor led CECFEE until Prof. E. Somanathan took over in June 2023 after his fellowship at Stanford University's Center for Advanced Study in the Behavioral Sciences. Dr. K. VijayRaghavan chaired CECFEE's third Board of Management meeting in June 2023, commending the centre's work.

Dr. Soubhagya Sahoo was appointed Visiting Assistant Professor (VAP) with IFMR funding but resigned in December. Mr. Nilanjan Bhattacharya succeeded him in March 2024. Raavi Aggarwal joined as a VAP in July 2023, focusing on EfD-EPfD collaboration.

In 2023, CECFEE secured funding from four external sources for projects.

CECFEE researchers collaborated with the Climate Change Finance Unit of the Department of Economic Affairs during India's G20 presidency, contributing to carbon pricing and climate finance reports. A roundtable on carbon pricing policy in India was held at ISI, Delhi, in October 2023. Researchers presented at the EfD Annual Meeting in Accra, Ghana, in October 2023, receiving positive feedback.

Ongoing research involves CGE modelling of the Indian economy to assess the impact of alternative GHG mitigation strategies on growth and income distribution.

Partnerships with Kerala's Energy Management Centre (EMC), Dept of Power, Govt of Kerala focus on solar PV, clean cooking, and electric cooking projects. Current initiatives promote e-cooking in Anganwadis and study its impacts on cooking time, fuel cost, convenience, safety, carbon emissions, and indoor air pollution.

The 7th CECFEE policy and research workshop, in collaboration with EMC in Trivandrum, Kerala, underscored the center's commitment to research and policy dialogue. The Digital Platforms and Women's Economic Empowerment initiative, led by Farzana Afridi, was launched in New Delhi.

Four in-person, two virtual seminar and a public lecture were conducted, featuring presentations by international and domestic researchers on topics aligned with the research themes. CECFEE researchers published 27 peer-reviewed papers in national and international journals, including a book chapter. While prioritizing air pollution, CECFEE researchers explore diverse themes like health, gender, food, agriculture, waste, and policy design.

Current Areas of Research

Name of Faculty	Research Topic(s)	Collaborators
E. Somanathan*	CGE modelling of the Indian economy to understand the impacts of alternative GHG	Abhay Gupta – Research Assistant, CECFEE Shoibal Chakravarty – CECFEE member
	EMC has initiated a project to promote e-cooking through solar-generated electricity in 33,000 Anganwadis across Kerala. CECFEE researchers are studying the causal impact of electric cooking through induction on cooking time, cost of fuel, convenience, safety, carbon emissions and indoor air pollution in the Anganwadis	The Energy Management Centre, Dept of Power, Govt of Kerala. Eshita Gupta – CECFEE Member Fizza Suhel – Research Assistant, CECFEE

*Members who are tenured faculty in EPU, ISI

Externally-funded Projects

New Projects

Sl. No.	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
1	EfD India Work Plan & Agreement of EfD 2023 - under the ISI-EfD Umbrella Agreement 2021-2024	Jan 2023	2021- 24 (Subcon-tracted each year)	E. Somanathan	EfD, University of Gothenburg, Sweden	F-701	1,26,90,001
2	Digital Labor and Women's Economic Empowerment project (DP-WEE)	Jan 2023	3 years	Farzana Afridi	Lead at Financial Management & Research (IFMR) – Supported by Bill and Melinda Gates Foundation	E-706	48,519,54
3	Electric cooking, household air pollution, women's time use, and health (Pilot study)	May 2023 – December 2024	20 months	E. Somanathan	King Climate Action Initiative (K-CAI) J-PAL at MIT		43,81,500
4	Utilization of data for enhanced service uptake and provision	Oct 2023	18 Months	Mudit Kapoor	Bill & Melinda Gates Foundation (BMGF)	F- 710	3,88,36,880

Ongoing Projects

Sl. No	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
1	Electricity reliability and electric cooking: What can we learn from cross-national comparisons?	Jan 1 2022	3 years	E. Somanathan	EfD	F-701	59,00,431

Sl. No	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
2	Optimal emissions pricing in LMICs accounting for household emissions from traditional cooking	Jan 1 2022	3 Years	E. Somanathan	EfD	F-701	67,73,500
3	Distributional effects of the COVID-19 lockdowns in India	Jan 1 2021	Extended till Dec 2024	R. Somanathan (Co-PI: Siva Athreya)	EfD	F-701	48,82,680
4	Impact of externally funded projects on women empowerment, poverty & climate change adaptability of vulnerable coastal communities: A comparative study on India & Tanzania	Jan 1 2023	2 years	Saudamini Das (Co-PI: E. Somanathan)	EfD	F-701	19,26,250
5	Impact of landfills on health	Jan 1 2023	2 years	Shivani Wadehra (Co- PI: Gaurav Dhamija)	EfD	F-701	52,59,538
6	How does traffic congestion affect air pollution? A comparative analysis across countries	Jan 1 2023	2 years	Kanishka Kacker	EfD	F-701	14,83,834

Completed Projects

Sl. No	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
1	Effects of heat on the incomes of workers in the informal sector	Jun 07 2019	4 years	Saudamini Das E. Somanathan (Co-PI)	EfD	F-701	35,49,494.00

3. The Center for Soft Computing Research (CSCR), Kolkata

Research

The Center for Soft Computing Research: A National Facility was established at the Indian Statistical Institute (ISI), Kolkata, in 2004 by the Department of Science & Technology (DST), New Delhi under its prestigious IRHPA program. The Center has been declared in 2010 an Associate Institution of ISI. Research activities are conducted in enriching as well as developing new soft computing technologies in the framework of modern AI and data science. These include granular computing, computational theory of perception, deep learning and explainable AI, human-centered robotics, theory of cognition, cybernetics, information processing in plants and small animals, and machine-mind development, with fore-front application areas like granular data mining, granulated deep learning, cognitive vision, soft deep architecture, video analytics, social network analysis, bioinformatics, pollution analytics, remote sensing image analysis, assistive technology, and computing with words

Current Areas of Research

Name of Faculty	Research Topic(s)	Collaborators
Prof. Ashish Ghosh	Deep Learning; Data Science and Machine Learning, Automated Pollution Prediction and Rainfall Prediction	Himanshu Dutta (KIIT Deemed to be University, Bhubaneswar, Odisha), Saurabh Bilgaiyan (KIIT Deemed to be University, Bhubaneswar, Odisha), Bhabani Shankar Prasad Mishra Mishra (KIIT Deemed to be University, Bhubaneswar, Odisha), Satchidananda. Dehuri, (F. M. University, Balasore, Odisha), Susmita. Ghosh (nee De) (Jadavpur University, Kolkata), Ch. Sanjeev Kumar Dash (Silicon Institute of Technology, Bhubaneswar), Ajit Kumar Behera (Silicon Institute of Technology, Bhubaneswar), Archita Mullick (Techno India, Kolkata), Anuva Chowdhury (BIT Mesra, Ranchi, Jharkhand),Jayesh Mukherjee (Aberystwyth University, United Kingdom), Surajit Ghosh (International Water Management Institute, Colombo, Sri Lanka), Avinandan Taron (International Water Management Institute, Colombo, Sri Lanka), Bunyod Holmatov (International Water Management Institute, Colombo, Sri Lanka), Rahul. Roy, (Mahindra University, Hyderabad), Badri Narayan. Subudhi, (IIT Jammu), Himanshu Singh (IIT Jammu), Saurabh Suman (IIT Jammu), Vineet Jakhetiya (IIT Jammu), Subhadip Boral (ISI, Kolkata), Sayan Poddar (Pondicherry University, Pondicherry)
Dr. Kuntal Ghosh	Cognitive Science, Cybernetics, Information processing in plants and small animals, Computational Biology, Psychophysics, Graph Manipulation Algorithms, Information Technology for Accessibility and Health Care Applications	Sindha Agarwal (Heritage Institute of Technology), Adarsh Raj (Heritage Institute of Technology), Geetanjali Aich, Rajdeep Chatterjee (KIIT, Bhubaneswar),Anjan Chowdhury, Keerthi S. Chandran, Amrita Mukherjee, Sandipa Roy, Barnini Bhattacharyya, Shibsankar Roy, Durjoy Lahiri (Institue of Neuroscience, Kolkata), Sriram Srinivasan (Bowie State University, USA), Animesh Mukherjee (IIT Kharagpur), Sanjukta Bhowmick (University of North Texas, USA), Avijit Paul, Bijay Bal (Retd. Saha Institute of Nuclear Physics), Swarup Chattopadhyay (XIM University) Gautam Das (IPGME&R), Rajen Halder (University of Calcutta)
Prof. Sankar Kumar Pal	Granular Mining, Granular Deep Learning, Uncertainty Modelling, Explainable AI, Computational Theory of Perception, Rough Sets, Z-numbers, Safety Analytics, Pollution and Climate Analytics, Video Analytics, Human Detection and Tracking in Human-Robot Coexisting Environments, Remote Sensing, and Soft Computing Technology.	Anima Pramanik. J. Maiti (IIT KGP), P. Mitra (IIT KGP, A. Garg (IIT KGP), S. Das (IIT KGP), S. Sarkar (IIM, Ranchi), Pritam Paral (IIEST), A. Chatterjee (JU), A. Rakshi (JU), Romi Banerjee (IIT Jodhpur), Debasis Das (IIT Jodhpur), Jayanta. K. Pal (Jio Platforms, Reliance Industries Ltd.), Pritam Paral, Dasari Arun Kumar, Debashree Dutta, R. Bhaduri, S. Roy, Saroj Meher (ISI Bangalore), Chandrani Chatterjee
Prof. Shubhra Sankar Ray	Bioinformatics, Computational Biology, Neural Networks, Soft Computing	Joginder Singh, Jayanta K. Pal (Jio Platforms, Reliance Industries Ltd.), Sukriti Roy

Externally-funded Projects

Ongoing Projects

Sl. No.	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
1	SERB National Science Chair	Aug 1 2020	Project was of 3 years but extended till 31st July 2025	Prof. Sankar Kumar Pal	SERB	E144	2,20,00000/- (Initial Sanction: Rs. 1,32,00,000/- + Additional Fund of Rs. 88,00,000/-)

Sl. No.	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
2.	Understanding the Impact of 'Invasive' and 'Non-Invasive' Stimuli on Cognitive Intelligence of Adult Zebrafish	Mar 27 2023	3 Years	Kuntal Ghosh	DST, GoI (WISE KIRAN)	E210	13,60,410/-
3.	(DST-WOS-B funding) Towards development of assistive technology for Indian sign language: cognitive analysis and application development	Oct 4 2021 (As per ISI Order)	3 years	Sandipa Roy (Mentor: Kuntal Ghosh)	DST (WOS-B)	E167	29,31,768/-
4.	Unearthing the heterogeneity in virulence using both ICMR COVID-19 testing data and other primary data: A Data Mining Approach & Exploratory study from West Benga	Apr 13 2022 (As per ISI Order)	2 years	Kuntal Ghosh	ICMR	E184	15,35,020/-
5.	Status of virulence of COVID-19 in urban population of Eastern India: An empirical study from Kolkata Municipal Corporation and its North suburb	Sep 30 2021 (As per ISI Order)	2 Year	Kuntal Ghosh	CSR Fund	D001 (9309)	Initially 3 Lakhs Additional 1 lakh has been approved
6.	Networking on Data Science and Machine Learning	Jan 23 2019 (As per ISI Order)	Project is of 3 years but extended till September 2023	Ashish Ghosh	DST (ICPS Programme)	E112	83,47,400/-
7.	Coordination of Cluster Projects under Data Science Research	Jan 23 2019 (As per ISI Order)	Project is of 3 years but extended till September 2023	Ashish Ghosh	DST (ICPS Programme)	E113	58,90,000/-
8.	Center for Distributed Deep Learning Framework for Classification	Dec 22 2021 (As per ISI Order)	Project is of 2 years but extended till September 2022	Ashish Ghosh	Indo-US Science & Technology Forum (IUSSTF)	E170	32,87,100/-

Completed Projects

Sl. No	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency (mandatory)	Account Number	Sanctioned Amount (₹)
1.	Understanding vision from filling in and visual illusion perspectives with the help of computational modeling	Nov 30 2017 (As per ISI Order)	Initially, project was of 3 years but extended till November 2021.	Kuntal Ghosh	DST (CSRI)	E080	24,58,800/-

4. R.C. Bose Centre for Cryptology & Security (RCBCCS), Kolkata

Research

The Centre aims at the promotion of interdisciplinary research in Mathematics, Computer Science and Statistics towards furtherance of teaching, research as well as training and development in Cryptology and Cyber Security. It acts as a national hub for cryptographic requirements, cutting-edge research activities and indigenous capacity building in all relevant fields of study.

Major activities of the Centre include teaching, training and research in Cryptology and Security. The Centre promotes sustained collaboration in focused research areas, and serves as a meeting point for eminent scholars. It also conducts training programs targeted to produce a critical mass of experts to cater to the national and international requirements in this niche area.

5. Technology Innovation Hub (TIH), Kolkata

Research

The Technology Innovation Hub, IDEAS (Institute of Data Engineering, Analytics, and Science Foundation), is a Section-8 not-for-profit organization established at the Indian Statistical Institute Kolkata under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS), a Government of India initiative. As a hub specializing in the verticals of "Data Science, Big Data Analytics, and Data Curation," our team of experts brings extensive experience in Statistics, Data Science, Artificial Intelligence, and Machine Learning. We focus on creating innovative solutions to tackle complex challenges in Data Science and Analytics across a range of industries, utilizing cutting-edge computational tools to foster innovation and excellence.

Key activities and contributions of the Hub in 2023-24:

Collaborative Research Projects: IDEAS TIH assessed 195 project proposals and approved 10 new Collaborative Translational Research projects for 2023-24. These projects span multiple domains, including Agriculture, Healthcare, and Cybersecurity. All are translational, aimed at developing commercially viable technologies within 2 to 3 years. Previously supported NSF-DST projects have already led to numerous high-quality publications in leading journals and international conferences. An ongoing project on Smart NLD (Non-Lethal Deterrent), led by Prof. Joydev Chattopadhyay, successfully developed its first deployable prototype. The device is set for field trials in collaboration with the Forest Department of the Government of West Bengal and has garnered positive media attention.

Startup Ecosystem Development: IDEAS TIH played a pivotal role in fostering the startup ecosystem. Over 30 startups signed general term sheets for mentoring and virtual incubation. Eight promising early-stage startups received PRAYAS grants of ₹10 lakh each for product development, while two revenue-generating startups were awarded ₹50 lakh each in seed funding. TIH hosted its first "IGNITE Startup Conclave," which attracted over 150 participants. Additionally, several mentorship sessions were conducted with both internal and external mentors.

Data Platform Development: TIH launched two internal initiatives: XInsight, an explainable visual insights platform, and Upatto, a platform for data curation and model building.

Skill Development: TIH organized more than 15 skill development events, including workshops, seminars, and conclaves. Additionally, it launched its first online certification course on Business Analytics and Machine Learning.

These efforts underscore IDEAS TIH's commitment to driving innovation, supporting startups, and advancing skill development in the field of Data Science.

Externally-funded Projects

New Projects

Sl. No	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
1	Design and development of an Augmented Reality-based Real-time IP Core for an Advanced driver-assistance visualization system under hazy and rainy weather conditions	Jun 23 2023	3 years	Dr. Hatiram Nenavath (IIT Bhilai)	DST	090001004669	27,04,000.00

Sl. No	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
2	Prediction of Walking Imbalance and Performance Improvement of Designed Prosthetic Lower Limb	Jun 22 2023	2 years	Dr. Dalia Nandi (IIIT Kalyani)	DST	090001004669	30,56,000.00
3	Smart Wearable Device for Early Prediction and Alerting of Epilepsy	Jul 12 2023	3 years	Dr. E. Grace Mary Kanaga (Karunya Institute of Technology and Sciences)	DST	090001004669	29,72,520.00
4	Physics Aware AI/ML Tool for Spatiotemporal Root Zone Soil Moisture Estimation	Oct 09 2023	2 years	Dr. Sarmistha Singh (Indian Institute of Technology Palakkad)	DST	090001004669	Rs 49,50,000.00 revised to Rs 41,00,000.00
5	Generalized Tampering Detection in Media (GTDM)	Oct 09 2023	2 years	Dr Abhijit Das and Dr Aitra Mukherjee (BITS Pilani Hyderabad Campus)	DST	090001004669	39,52,240.00
6	Synthetic Data Generation: Protecting Individual Privacy and Statistical Properties	Oct 09 2023	2 years	Dr. Palash Ghosh (IIT Guwahati)	DST	090001004669	36,32,000.00
7	Precision Spraying Tool for Orchards Using LiDAR and Deep Learning	Dec 15 2023	1 year	Prof. Bharat Lohani (IIT Kanpur)	DST	090001004669	40,60,000.00
8	Design and development of a communication system for the speech and hearing disorder persons	Dec 15 2023	3 years	Dr. Himangshu Sarma (IIIT Sri City)	DST	090001004669	43,03,760.00
9	Estimating Wide-Area Inertia of the Indian Power Systems using Synchrophasor Measurements	Dec 15 2023	16 months	Dr. Trapti Jain (IIT Indore)	DST	090001004669	19,45,040.00
	Clinical translation of real-time intra-operative prediction of cancer resection margin using SPiDr	Jan 04 2024	2 years	Dr.Subhasish Sarkar (College of Medicine Sagor Dutta Hospital)	DST	090001004669	49,00,000.00
10	Upatto – Data Engineering platform for data analytics and model building	Jan 01 2024	2 years	Diptendu Dutta (IDEAS TIH)	DST	090001004669	1,00,00,000.00
11	XInsight – Get explainable visual insights from your data and models	Jan 01 2024	2 years	Diptendu Dutta (IDEAS TIH)	DST	090001004669	60,00,000.00

Ongoing Projects

Sl. No	Name of the Project	Starting Date	Duration	Principal Investigator(s)	Funding Agency	Account Number	Sanctioned Amount (₹)
1	Detecting behavioural health disorders of older adults using self supervised learning and casual reasoning	Sep 15 2022	3 years	Prof. Sandip Chakraborty (PI) IIT Kharagpur; Prof. Suchetana Chakraborty (Co-PI) IIT Jodhpur	DST	090001004669	69,90,400.00
2	Learning Time-Varying Network Structure from Sparse Epidemiological Data	Sep 13 2022	2 years	Prof. Ashish Ranjan Hota (PI) IIT Kharagpur	DST	090001004669	38,00,000.00
3	Integration of Multiomics Data using Deep Neural Networks: Feature Extraction, Association Mining, Big Data Realization and Privacy Preservation	Sep 16 2022	3 years	Prof. Rajat K. De (Indian Statistical institute, Kolkata)	DST	090001004669	40,00,000.00
4	Data Driven Learning to Cache in Large Network	Sep 13 2022	3 years	Prof. Abhishek Sinha (Tata Institute of Fundamental Research Mumbai)	DST	090001004669	30,00,000.00
5	Networked Adaptive Traffic Signal Control in IoT-Enabled Smart Cities	Sep 14 2022	2 years	Prof. Dhish Kumar Saxena and Prof. Amit Agarwal (IIT Roorkee)	DST	090001004669	52,92,000.00
6	Software Reliability and Security Risk Assessment: Modelling and Algorithms	Sep 13 2022	3 years	Prof. Susmita Ghosh and Prof. Jamuna Kanta Singh (Jadavpur University)	DST	090001004669	66,00,000.00
7	Traffic Surveillance: Overspeed Detection and License Plate Recognition	Included in TIH since Jan 2022	3 years	Prof Umapada Pal (ISI Kolkata)	DST	090001004669	27,00,000.00
8	Multi-Modal Smart NLD for Human-Wildlife Conflict Mitigation	Included in TIH since 2nd week of Feb 2023	2 years	Prof. Joydev Chattopadhyay (ISI Kolkata)	DST	090001004669	51,28,000.00
9	Data Curation for video surveillance and precision agriculture datasets	Jul 19 2022	3 years	Prof. Vahida Attar (COEP, Pune)	DST	090001004669	80,00,000.00
10	Development of data science methods for cyber-physical system (14 ongoing projects under the Spoke)	Jul 26 2022	3 years	Prof. Swapan Kumar Ghorai (BITS MESRA)	DST	090001004669	1,00,00,000.00

Chapter

4

Awards & Recognitions

16

Science Academy Fellowships

National	: 11
International	: 5

14

Awards

IEEE Geoscience and Remote Sensing Society (Grss) Distinguished Lecturer - IEEE GRSS DL	: 1
Mahalanobis International Award From International Statistical Institute	: 1
TWAS-CAS Young Scientist Award in Mathematics And Artificial Intelligence	: 1
SERB Science & Technology Award for Research (Star)	: 1
Social Choice And Welfare Prize	: 1
Peter Berck Best Discussion Paper	: 1
Others	: 8

Awards & Recognitions

Members of the Faculty of this Institute have been recognized, both nationally and internationally, for their contributions to research and other academic activities. Like every other year, some faculty members have received prestigious awards and honours, in recognition of their excellence in their areas of expertise. Many of them have been elected members of learned societies while many others have taken up the academic responsibility of serving the editorial board of prestigious national and international peer reviewed journals. Their achievements are highlighted below-

4.1 Science Academy Fellowships

CNRS POSTES ROUGES VISITING FELLOWSHIP, CNRS, France	
Yogeshwaran Dhandapani, SMU, Bangalore	2023
FELLOW, WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY (WAST)	
Utpal Garain, CVPRU, Kolkata	2023
FELLOW, INDIAN NATIONAL SCIENCE ACADEMY (FNA), INDIAN NATIONAL SCIENCE ACADEMY (INSA)	
B. S. Daya Sagar, SSIU, Bangalore	2024
FELLOW, INTERNATIONAL ARTIFICIAL INTELLIGENCE INDUSTRY ALLIANCE (FAIIA)	
B. S. Daya Sagar, SSIU, Bangalore	2024
FELLOW, THE INDIAN ACADEMY OF SCIENCES, IASC	
Jaydeb Sarkar, SMU, Bangalore	2024
FELLOW, THE INDIAN ACADEMY OF SCIENCES	
Sushmita Mitra, MIU, Kolkata	2024
FELLOW, THE NATIONAL ACADEMY OF SCIENCES, NASI ALLAHABAD	
Jaydeb Sarkar, SMU, Bangalore	2023
FELLOW, THE WEST BENGAL ACADEMY OF SCIENCE AND TECHNOLOGY (FASC&T)	
Raghunath Chatterjee, HGU, Kolkata	2023
FELLOW, INDIAN NATIONAL ACADEMY OF ENGINEERING	
Utpal Garain, CVPRU, Kolkata	2023
FELLOW, INDIAN NATIONAL SCIENCE ACADEMY	
Neena Gupta, SMU, Kolkata	2023
INSPIRE FACULTY FELLOWSHIP	
Soham Sarkar, SMU, Delhi, DST	5 years starting from 26.09.2023
INSTITUTE OF ADVANCED STUDY VISITING FELLOW, INSTITUTE OF ADVANCED STUDY, UNIVERSITY OF WARWICK	
Abhiroop Mukhopadhyay, EPU, Delhi	2023/2 months
LIFE FELLOW, IETE, INDIA	
Saroj Kumar Meher, SSIU, Bangalore	2023
VISITING FELLOW THE ABDUS SALAM INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS (ICTP) IN TRIESTE, ITALY	
Jiban K. Pal, Library, Kolkata, 2023	July 31 to August 18
FELLOW, WEB INTELLIGENCE ACADEMY	
Sankar Kumar Pal, Emeritus Professor; National Science Chair; Ex-Director, President, ISI, CSCR, Kolkata	Since 2023

4.2 Awards

BEST RESOURCE PERSON, VIGNAN'S INSTITUTE OF INFORMATION TECHNOLOGY, UNIVERSITY IN VISAKHAPATNAM, ANDHRA PRADESH	
Jagadish, SQCORU, Bangalore	2023
DISTINGUISHED ALUMNI AWARD, PANJAB UNIVERSITY ALUMNI ASSOCIATION	
Kishor Chandra Satpathy, Library, Kolkata	2023
IEEE GEOSCIENCE AND REMOTE SENSING SOCIETY (GRSS) DISTINGUISHED LECTURER - IEEE GRSS DL	
B. S. Daya Sagar, SSIU, Bangalore	2020/2024
IISA EARLY CAREER AWARD IN STATISTICS AND DATA SCIENCE (APPLICATION TRACK)	
Kiranmoy Das, ISRU, Kolkata	2023
JC BOSE FELLOWSHIP, ANRF/SERB	
Arup Bose, SMU, Kolkata	January 01, 2024-March 31, 2027
MAHALANOBIS INTERNATIONAL AWARD FROM INTERNATIONAL STATISTICAL INSTITUTE	
Arup Bose, SMU, Kolkata	2023
PETER BERCK BEST DISCUSSION PAPER	
Kanishka Kacker, EPU, Delhi	2023
SERB SCIENCE & TECHNOLOGY AWARD FOR RESEARCH (STAR)	
Raghunath Chatterjee, HGU, Kolkata	2023
SOCIAL CHOICE AND WELFARE PRIZE	
Souvik Roy, ASU, Kolkata	2024
TWAS-CAS YOUNG SCIENTIST AWARD IN MATHEMATICS AND ARTIFICIAL INTELLIGENCE:	
Neena Gupta, SMU, Kolkata	2023
EFD - PETER BERCK'S BEST DISCUSSION PAPER AWARD FOR THEIR RESEARCH ON THE HEALTH IMPACTS OF TRAFFIC CONGESTION IN A POLLUTED CITY:	
Kanishka Kacker & Ridhima Gupta, CECFEE, Delhi	2023
BRICS ECONOMIC RESEARCH ANNUAL CITATION 2023 ON "RISK, INSURANCE, AND WELFARE":	
Digvijay Singh Negi, CECFEE, Delhi	2023
DISTINGUISHED ALUMNI AWARD, RAMKRISHNA MISSION VIVEKANANDA CENTENARY COLLEGE, RAHARA, CALCUTTA 700118 (AWARD IS GIVEN FIRST TIME IN THE HISTORY OF 60 YEARS OF THE COLLEGE SINCE ITS INCEPTION IN 1963):	
Sankar K. Pal, Emeritus Professor; National Science Chair; Ex-Director, President, ISI, CSCR, Kolkata	2023
30TH PRASANTA CHANDA MAHALANOBIS MEMORIAL LECTURE AWARD OF THE DEPT. OF SCIENCE AND TECHNOLOGY AND BIOTECHNOLOGY, GOVT. OF WEST BENGAL, DURING THE 30TH WEST BENGAL STATE SCIENCE & TECHNOLOGY CONGRESS, 2023:	
Sankar K. Pal, Emeritus Professor; National Science Chair; Ex-Director, President, ISI, CSCR, Kolkata	2023
PROF P.C. MAHALANOBIS MEMORIAL LECTURE 2023, WORLD METEOROLOGICAL DAY, INDIA METEOROLOGICAL DEPARTMENT (IMD), GOVT. OF INDIA, DELIVERED AT THE REGIONAL METEOROLOGICAL CENTER, CALCUTTA:	
Sankar K. Pal, Emeritus Professor; National Science Chair; Ex-Director, President, ISI, CSCR, Kolkata	2023

4.3 Honours & Recognitions

ABHIROOP MUKHOPADHYAY, EPU, DELHI

Affiliated Researcher, Global Action for Policy Initiative, Northeastern Univerisity; 2023/2024

ANISUR RAHAMAN MOLLA, CSRU, KOLKATA

Conference Steering Committee, International Conference on Distributed Computing and Intelligent Technology (ICDCIT) ; Jan 2024-onwards

General Chair, International Conference on Distributed Computing and Intelligent Technology (ICDCIT) ; 2024, 20th edition of ICDCIT.

ASHISH GHOSH, CSCR, KOLKATA

Director, IIIT Bhubaneswar; 2023-27

ARUP BOSE, SMU, KOLKATA

Council Member, International Statistical Institute; July 2023–June 2027

Council Member, INSA; January 2023--December 2025

National Committee Member, International Mathematical Union; January 2020–December 2023

ASHIS KUMAR CHAKRABORTY, SQCORU, KOLKATA

Organized a special session on my recent works, Gujrat Technological University, Ahmedabad; 23 March 2024

B. S. DAYA SAGAR, SSIU, BANGALORE

Member of the AGU's Honors and Recognition Committee (HRC), American Geophysical Union (AGU); 2024/2025

BISWANATH DUTTA, DRTC, BANGALORE

International Editorial Board Member, BARTOC.org; 2023

Editorial Advisory Board Member, Journal of Information and Knowledge (Formerly SRELS Journal of Information Management); 2023

Secretary, International Society for Knowledge Organization (ISKO); 2023

Editorial Board Member, International Journal of Metadata, Semantics and Ontologies ; 2023

DARPA SAURAV JYETHI, TASU, TEZPUR

Annual Conference Award, International Society of Exposure Science; 2023

DHURJATI PRASAD SENGUPTA, GSU, KOLKATA

Acting member of the Board of Studies, Department of Geology, Presidency University, Kolktata; 2018-2023

Acting member of the Ph.D. Committee, Department of Geology, Presidency University, Kolktata; 2018-2023

Acting member of the undergraduate Board of Studies, Geology, University of Calcutta; 2019-2023

JIBAN K. PAL, LIBRARY, KOLKATA

Expert Committee Member of the Re3data~CoREF Project, German Research Foundation (DFG); July 2022-2024

Elected Member, FORCE11 Board of Directors, FORCE11 - The Future of Research Communications and e-Scholarship; 2024-2027

Moderator, CIRCLE Graduate South Asia Conference, University of Guelph, Canada India Research Centre for Learning and Engagement (CIRCLE); October 3-4, 2023

KISHOR CHANDRA SATPATHY, LIBRARY, KOLKATA

Conference Director, EBLT-2024, IIPE Visakhapatnam Telegana; 24-25 January, 2024

Member, Executive Committee, Indian library Assotiation, New Delhi; 2022

M SWAMINATHAN, EAU, BANGALORE

Member, Board of Trustees, International Rice Research Institute; 2022-2024

Chair, Research Advisory Committee, ICAR Central Institute for Women in Agriculture; 2024

M Z ANIS, SQCORU, KOLKATA

Elected Member, International Statistical Institute; 2023

MALAY BHATTACHARYYA, MIU, KOLKATA

Member, Assessment & Search Committee, ACM Publications Board, ACM; 2023
Member, Research Advisory Board, MDCRC; 2024

MONALI MITRA PALADHI, LIBRARY, KOLKATA

Member of the Executive Committee, Indian Association of Special Library & Information Centre (IASLIC); 2023 – 2025

MONISANKAR BISHNU, EPU, DELHI

Research Associate, The Centre for Applied Macroeconomic Analysis (CAMA), the Australian National University (ANU), Australia; 2020-2024
Affiliate, The Australian Research Council (ARC) Centre of Excellence in Population Ageing Research (CEPAR); 2020-2024

MUDIT KAPOOR, EPU, DELHI

Grant of USD 485,461 or INR 3,98,07,802/-, The Bill and the Melinda Gates Foundation; 2024

PABITRA BANIK, AERU, KOLKATA

Member Advisory Committee, Application of Artificial intelligence in Agriculture, Dept. of Digital Agriculture, Ministry of Agriculture and Farmers' Welfare, GOI. ; 2024 to till date
Member, Technical Advisory Committee on State Income Accounts For West Bengal. Govt. of West Bengal; 2023 - till date
External Expert, Board of Studies, The Division of Agronomy, School of Agriculture and Rural Development, Ramakrishna Mission Vivekananda Educational and Research Institute, Narendrapur Campus.; 2024-26

PRADIPTA MAJI, MIU, KOLKATA

Fellowship, International Artificial Intelligence Industry Alliance, Hong Kong; 2024

ROHINI SOMANATHAN, CECFEE, DELHI

Elected, The Council of the Econometric Society; 2024-27

SANKAR KUMAR PAL, CSCR, KOLKATA

(Emeritus Professor; National Science Chair; Ex-Director, President, ISI)
Vice-President, International Artificial Intelligence Industry Alliance (AIIA), Hong Kong; 2023
Fellow, International Artificial Intelligence Industry Alliance (AIIA), Hong Kong; 2023
Founding Fellow, Web Intelligence Academy (WIA),; 2023
Convocation Address, Ramkrishna Mission Vivekananda Centenary College, Rahara, Kolkata; Sept 29, 2023

SANGHAMITRA BANDYOPADHYAY, MIU, KOLKATA

DLitt (Honoris Causa), Sister Nivedita University, Kolkata; May 9, 2023

SHANTA LAISHRAM, SMU, DELHI

Member, Olympiad Committee, National Board of Higher Mathematics; 2023-2024

SUJATA GHOSH, CSU, CHENNAI

Research Fellow, Tsinghua-Amsterdam Joint Research Center in Logic, Tsinghua University; 2023-2024

UMAPADA PAL, CVPRU, KOLKATA

Fellow, International Artificial Intelligence Industry Alliance (AIIA); 2023/2024
Fellow Committee Chair, International Association for Pattern Recognition; 2023/2024

4.4 Memberships

ABHAY GOPAL BHATT, SMU, DELHI	
Member :	National Committee for International Mathematical Union, INSA; 1 January 2024 - 31 December 2026

ABHIROOP MUKHOPADHYAY, EPU, DELHI	
Invited Researcher :	J PAL; 2024
Life time :	The Indian Econometric Society; 2023

ANISUR RAHAMAN MOLLA, CSRU, KOLKATA	
Professional Member :	ACM; 2017-2024

ASHISH GHOSH, CSCR, KOLKATA	
Assessor :	National Assessment and Accreditation Council (NAAC); 2021 to date
Member :	The Governing Body, Asia Pacific Neural Network Society (APNNS); Jan 2021 to date
Coordinator :	IEEE Geoscience and Remote Sensing Society Chapters; Jan 2021 to date
Member :	The Academic Council, as an Eminent Educationist, Banasthali Vidyapith, Jaipur, India; April 2019 to date
Research Advisor :	Nan Yang Academy of Sciences, Singapore; October 2018 to date

ARUP KUMAR DAS, SQCORU, KOLKATA	
Mathematical Reviews :	American Mathematical Society; 2024

AVIK KUMAR DAS, LIBRARY, KOLKATA	
Individual Membership :	International Council of Museums, Paris; April 2023 onwards

B V RAJARAMA BHAT, SMU, BANGALORE	
Fellow :	Indian Academy of Sciences, Bangalore ; 2006-2024 Indian National Science Academy, New Delhi; 2016-2024 National Science Academy of India, Pryagraj ; 2022-2024

BISWANATH DUTTA, DRTC, BANGALORE	
External Member :	Doctoral Committee, IIIT Dharwad; April 2023 onwards
Organizing Committee member cum Programme Committee member :	IEEE International Conference on Semantic Computing; April 2023 onwards
Program Committee member :	International Conference on Metadata and Semantics Research ; April 2023 onwards

DARPA SAURAV JYETHI, TASU, TEZPUR	
Member :	Diversity Committee, International Society of Exposure Science; 2023

DEBARATI MUKHERJEE, GSU, KOLKATA	
Life Fellow :	Geological Society of India, Bangalore; 2014 - 202 Palaeontological Society of India, Lucknow; 2014 to 2024
Member :	The Palaeontological Association, UK; 2023 The Society of Vertebrate Paleontology, USA; 2023.

DEVIKA P MADALLI, DRTC, BANGALORE	
Governance Board Member :	Dryad; 2023
Technical Advisory Board :	Research Data Alliance; 2023

DHURJATI PRASAD SENGUPTA, GSU, KOLKATA	
Member :	Paleontological Association, UK ; 2018-2023 Society of Vertebrate Paleontology, USA; 2000-2023
DIGANTA MUKHERJEE, SOSU, KOLKATA	
Co-Chairperson :	Sub-Group I on Recommending the Sampling Design & Methodology, Technical Advisory Committee (TAC) for Sixth round of National Family Health Survey (NFHS-6); 2021-2024
Head :	Cell for Co-Operation with Academia, Industry and Research Labs (C-CAIR); June 2022- 2024
Member :	Start-up Grants Committee; 2022-2024 Ethics Committee; May 2022- 2024 National Court Management System for Updation of Baseline Report on National Framework for Court Excellence; 2023-2024 Technical Advisory and Monitoring Committee for the Global Adult Tobacco Survey-3, (GATS-3), India; 2021-2024
JAGADISH, SQCORU, BANGALORE	
Life membership :	Indian Society for Quality; 2024
JIBAN K. PAL, LIBRARY, KOLKATA	
Member :	CCLIP Cataloging/Metadata Working Group, National Information Standards Organization (NISO); 2023-2024
Member :	DataCite APAC Expert Group (Asia Pacific Region), DataCite; 2023-2024
KISHOR CHANDRA SATPATHY, LIBRARY, KOLKATA	
Board Member :	The Centre for Excellence on Empathy, Equity & Diversity (CEEED), Canada ; 2022-2024
External Member :	DAB of LDD, NCERT New Delhi PhD-RAC, NSOU Kolkata; 2024
Life Member :	Indian Traditional Knowledge and Science Society (LM-039); 2024
Member :	Committee for the PNC, Maharaja Bir Bikram University Tripura; 4 August, 2023 Committee on Library Automation of Central University of Jharkhand; 14 June, 2023 Committee on Library Modernization, Maharaja Bir Bikram University Library; 22 June, 2023 Conference Advisory Committee of MANLIBNET 2023 IMT Ghaziabad; 5-7 October, 2023
Trustee & Life Member :	RLB Foundation; 2024
KUNTAL GHOSH, CSCR, KOLKATA	
Member :	Board of Studies (Computer Application), North-eastern Hill University; 2022-25
M SWAMINATHAN, EAU, BANGALORE	
Member :	Council of Advisors, World Food Prize Foundation; 2022-2024
M Z ANIS, SQCORU, KOLKATA	
Member :	Basic Standard Sectional Committee PGD 01, Bureau of Indian Standards; 2023
MALAY BHATTACHARYYA, MIU, KOLKATA	
Metagenomics Research :	The MetaSUB Consortium; 2023

MONALI MITRA PALADHI, LIBRARY, KOLKATA	
Life Member :	Bengal Library Association; 2015-2024 Indian Association of Special Library & Information Centre (IASLIC); 2023 – 2025
Member :	Society for the Advancement of Library and Information Science(SALIS); 2020-2024 The Research Data Alliance (RDA), US; 2019-2024

RAGHUNATH CHATTERJEE, HGU, KOLKATA	
Member :	Society for Investigative Dermatology; 2023-2024 The American Society of Human Genetics; Continued in 2023-2024

RITUPARNA SEN, ASU, BANGALORE	
Elected Member :	International Statistical Institute; 2023/2024
Life member :	Society of Statistics, Computer and Applications ; 2023/2024
Member :	Institute of Mathematical Statistics; 2023/2024

SANKAR KUMAR PAL, CSCR, KOLKATA	
(Emeritus Professor; National Science Chair; Ex-Director, President, ISI)	
Member :	Governing Council, Indian Science Congress Association (ISCA), 2023-24
AICTE nominated AICTE Distinguished Chair Professor :	AICTE; 2021 to date
Scholar-in-Residence, (to mentor AI and Data Science research) :	IIT Jodhpur; 2019 to date
Member :	Advisory Committee, Bennett University (Times of India Group), Greater Noida, Uttar Pradesh, 2023 to date
Member :	Technical Advisory Group (TAG), Biotechnology Industry Research Assistance Council (BIRAC), DBT, Govt. of India, 2018 to date
Member :	Expert Committee to evaluate the activities as a part of The International Research Agenda Program PLUS, Poland, Centre for New Methods in Computational Diagnostics and Personalized Therapy (SANO), Poland, 2022 to date

SANJIT RAY, SQCORU, BANGALORE	
Member :	Board of Studies, Christ University, Bangalore; Feb 2023 - March 2024

SHREYA KARMAKAR, GSU, KOLKATA	
Associate (Young Scientist) :	Indian Academy of Science; 2023/2024
Member :	Geological Society of India; 2023 onwards Selection Committee for Summer Research Fellowship (SRFP), IASc-INSA-NASc; 2023/2024

TRIDIB KUMAR MONDAL, GSU, KOLKATA	
Member :	American Geophysical Union (AGU); 2023 European Geosciences Union (EGU); 2023 onwards International Association for Structural Geology and Tectonics; 2024 onwards

UMAPADA PAL, CVPRU, KOLKATA	
Senior Member :	IEEE; 2023/2024

4.5 Editorial Assignments

ANISUR RAHAMAN MOLLA, CSRU, KOLKATA	
Editor :	Proceedings of the 19th International Conference on Distributed Computing and Intelligent Technology (ICDCIT), Lecture Notes in Computer Science, Springer; 20th edition of ICDCIT 2024

ANTAR BANDYOPADHYAY, SMU, DELHI	
Associate Editor :	Journal of Statistical Planing and Inference (JSPI), Elsevier ; 2012/2024
Member Editorial Board :	Little Mathematical Treasures, published jointly by Ramanujan Mathematical Society and Universities Press; 2012/2024
Member of the Scientific Committee & the Editorial Board :	Colombian Journal of Statistics (Revista Colombiana de Estad ıstica, RCE), published by Universidad Nacional de Colombia; 2015/2024
Associate Editor :	Calcutta Statistical Association Bulletin, published by Calcutta Statistical Association; 2022/2024

ANUP DEWANJI, ASU, KOLKATA	
Associate Editor :	Journal of Statistical Planning and Inference ; 2012-2024 Calcutta Statistical Association Bulletin; 2021-2024

ARUP BOSE, SMU, KOLKATA	
Chief Editor :	Random matrix thepry and Applications, World Scientific Press; September 2021–March 31, 2023

ASHIS KUMAR CHAKRABORTY, SQCORU, KOLKATA	
Senior Associate editor:	OPSEARCH; Since 2020, continued in 2023-24

ASHISH GHOSH, CSCR, KOLKATA	
Associate Editor :	Research Reports in Computer Science, Wiser Publishing, Singapore; 2021 to date Springer Nature Computer Science; 2021 to date IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing; 2020 to date Neural Networks, Elsevier; 2020 to date Journal on Banking and Financial Technology (JBFT), Springer Nature; 2017 to date Sadhana (Computer and Data Sciences), Springer Nature; 2018 to date Indian Statistical Institute Series, Springer Nature; 2019 to date CAAI Transactions on Intelligence Technology (published from IET); 2117 to date
Series Editor :	Communications in Computer and Information Science (CCIS), Springer-Nature; 2019 to date

ATANU BISWAS, ASU, KOLKATA	
Associate Editor :	Communications in Statistics-Theory and Methods,Simulation and Computation, Case Studies, Data Analysis and Applications; continued in 2023-2024
Editorial Board Member:	Calcutta Statistical Association Bulletin.; continued in 2023-2024

AYANENDRANATH BASU, ISRU, KOLKATA	
Editor :	International Statistical Review (John Wiley and Sons); Since 2022, continued in 2023-24

B V RAJARAMA BHAT, SMU, BANGALORE	
Member, Editorial Board:	Annals of Functional Analysis; 2010-2024 Journal of the Ramanujan Mathematical Society; 2013-2024 Indian Journal of Pure and Applied Mathematics; 2017-2024 Ramanujan Mathematical Society, News letter; 2019-2024
Managing Editor :	Infinite Dimensional Analysis, Quantum Probability and Related Topics; 2021-2024

Member, Advisory Board:	Proceedings of the Indian Academy of Sciences-Mathematics; 2022-2024
B. S. DAYA SAGAR, SSIU, BANGALORE	
Guest Editor of Special Isue of IEEE JSTARS :	IEEE Geoscience and Remote Sensing Society (GRSS); 2024/2026
BISWABRATA PRADHAN, SQCORU, KOLKATA	
Associate Editor :	Journal of the Indian Society for Probability and Statistics, Springer, since 2021; 2024
DEBASHIS PAUL, ASU, KOLKATA	
Associate Editor :	Electronic Journal of Statistics; 2016-2024 Journal of the American Statistical Association; since 2023
E. SOMANATHAN, CECFEE, DELHI	
Co-Editor :	Environment and Development Economics, Cambridge University Press, 2023
INDRANIL MUKHOPADHYAY, HGU, KOLKATA	
Editorial Board Member:	Scientific Reports; Continued in 2023-2024
Associate Editor :	Statistics and Applications; Continued in 2023-2024
ISHA DEWAN, SMU, DELHI	
Associate Editor :	Journal Indian Statistical Association; April 2020-2024
JAYDEB SARKAR, SMU, BANGALORE	
Editor :	Quaestiones Mathematicae; 2023/2024
JIBAN K. PAL, LIBRARY, KOLKATA	
Editorial Board Member :	The Registry of Research Data Repositories (Re3data.org); 2023-2024
Review Editor :	Frontiers in Research Metrics and Analytics (Scholarly Communication section); 2023-2024
KALPANA T M, LIBRARY, CHENNAI	
Associate Editor :	Journal of Information and Communication Technology Education (IJICTE); 2023
Editorial Board Member	International Journal of Project Management and Administration; 2023-2024
Reviewer :	Asian Journal of Information Science and Technology; 2024
Editorial Board Reviewer:	Encyclopedia on Information and Science and Technology 3rd and 6th Edition; May 2023
KISHOR CHANDRA SATPATHY, LIBRARY, KOLKATA	
Assistant Editor :	International Journal of Humanities and Education Research (P-ISSN: 2664-9799, E-ISSN: 2664-9802 ; 2023-
Reviewer :	T&F-F1000Research ; 2023-
Editor :	CEEED Newsletter, Canada ; 2023-2024
M KRISHNAMURTHY, DRTC, BANGALORE	
Reviewer :	Journal of Information Science theory and practice; 2023 Sept-Oct
M SWAMINATHAN, EAU, BANGALORE	
Editorial Board :	Review of Agrarian Studies; 2011 to 2024
MALAY BHATTACHARYYA, MIU, KOLKATA	
Senior Associate Editor :	ACM Transactions on Probabilistic Machine Learning, ACM; 2024

MATHEW JOSEPH, SMU, BANGALORE	
Associate Editor :	Sankhya A; 2023/24
MONALI MITRA PALADHI, LIBRARY, KOLKATA	
Associate Editor, IASLIC Newsletter :	Indian Association of Special Libraries and Information Centres, Kolkata; 2023-
MONISANKAR BISHNU, EPU, DELHI	
Associate Editor :	Journal of Asian Economics (Elsevier); 2020-2024 Economic Modelling (Elsevier); 2023-2024
Review Editor :	Frontiers in Political Science; 2023-2024
NILADRI SEKHAR DASH, LRU, KOLKATA	
Member Editorial Board :	International Journal of Innovative Studies in Sociology and Humanities; 2015/2024 SN Social Sciences (ISSN: 2662-9283); 2020/2024 Interdisciplinary Journal of Linguistics; 2022/2024
Member Review Board :	Register Journal: Journal of Language and Language Teaching; 2019/2024
PRABAL ROY CHOWDHURY, EPU, DELHI	
Editor :	Indian Growth and Development Review; Since 2016, continued in 2023-2024
PRADIPTA BANDYOPADHYAY, SMU, KOLKATA	
Editor-in-Chief :	Indian Statistical Institute Series, Springer; 2023-2024
Editor :	Indian Journal of Pure & Applied Mathematics; Since January 2022, continued in 2023-2024
PRADIPTA MAJI, MIU, KOLKATA	
Executive Editor :	Data-Centric Engineering, Cambridge University Press; 2023 - 2024
Associate Editor :	Sadhana, Springer; 2023 - 2024 Pattern Recognition, Elsevier ; 2024
RAGHUNATH CHATTERJEE, HGU, KOLKATA	
Associate Editor :	Frontiers in Genetics; Continued in 2023-2024
Special issue editor :	Frontiers in Bioscience; Continued in 2023-2024
RITUPARNA SEN, ASU, BANGALORE	
Editor :	Applied Stochastic Models in Business and Industry; 2023/2024
Associate Editor :	Sankhya Series B; 2023/2024
SANGHAMITRA BANDYOPDHYAY	
Associate Editor :	IEEE Transactions on Aritifical Intelligence, continued in 2023-2024, IEEE Transactions on Systems, Man, and Cybernetics - Systems, till Dec. 2023
SANKAR KUMAR PAL, CSCR, KOLKATA	
(Emeritus Professor; National Science Chair; Ex-Director, President, ISI)	
Associate Editor :	Information Sciences (Elsevier); 2000 to date Fuzzy Sets and Systems (Elsevier); 2003 to date Int. J. Pattern Recognition and Artificial Intelligence (World Scientific); 2003 to date Journal of Data, Information and Management (Springer); 2018 to date Int. J. Computational Intelligence and Applications (World Scientific); 2021 to date LNCS Trans. on Rough Sets (Springer); 2003 to date Engineering Applications of Artificial Intelligence (Elsevier); 2021 to date

Executive Advisory Editor:	Data-Centric Engineering (Cambridge Univ. Press); 2020 to date International Journal of Approximate Reasoning; 1994 to date International Journal of Computational Science and Engineering; 2011 to date International Journal of Business Intelligence and Data Mining; 2017 to date
Book Series Editor :	Frontiers in Artificial Intelligence and Applications (FAIA), IOS Press, etherlands; 2007 to date
	Statistical Science and Interdisciplinary Research, World Scientific, Singapore; 2008 to date

SHUBHRA SANKAR RAY, MIU & CSCR, KOLKATA

Associate Editor :	Indian Academy of Sciences, Editorial Board of Sadhana; 2019/2024
	Editorial Board of Sadhana, Indian Academy of Sciences; 2019 to date

SUDHEESH KUMAR KATTUMANNIL, ASU, CHENNAI

Associate Editor :	Journal of the Indian Statistical Association; 2022-2024

SUJATA GHOSH, CSU, CHENNAI

Member Editorial Board :	Small Logic Books Series, CSLI Publications; 2023-2024
	Logics, an MDPI Journal; 2023-24

SUSHMITA MITRA, MIU, KOLKATA

Associate Editor :	Information Sciences, Elsevier; Since 2014, continued in 2023-2024 IEEE/ACM Transactions on Computational Biology and Bioinformatics; Since 2016, continued in 2023-2024 Proceedings of INSA; Since 2018, continued in 2023-2024
Founding Associate Editor :	Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery; Since 2015, continued in 2023-2024

SWAGATAM DAS, ECSU, KOLKATA

Associate Editor :	IEEE Transactions on Evolutionary Computation; 2023

TARUN KABIRAJ, ERU, KOLKATA

Associate Editor :	Indian Growth and Development Review (Journal); 2008-2024

UMAPADA PAL, CVPRU, KOLKATA

Associate Editor :	Pattern Recognition, Elsevier; 2023/2024
	Pattern Recognition Letters, Elsevier; 2023/2024
Editor-in-Chief :	Springer Nature Computer Science, Springer; 2023/2024

YOGESHWARAN DHANDAPANI, SMU, BANGALORE

Associate Editor :	Journal of Applied and Computational Topology ; 2019/2024
	Infinite Dimensional Analysis, Quantum Probability and related topics; 2023 to present

Chapter

5

Publications

APA Referencing Style format has been used for enlistment of the institute publications. Book references and articles published in Book Chapters, Conference Proceedings and Journal articles appear alphabetically by Author name(s) for 2023 followed by 2024 under each Division. Names in bold denote ISI faculty.

Total No. of Publications:

5.1 Books Published

Applied Statistics Division (ASD)

1. **Chakraborty, A.** (2023). *Multivariable Calculus* (Vol. 1). Levant Publication.
2. **Chakraborty, A.** (2024). *Linear Algebra* (Vol. 3). Levant Publication.
3. **Sen, R.,** & Das, S. (2023). *Computational Finance with R*. Springer Nature Singapore. https://doi.org/10.1007/978-981-19-2008-0

Computer and Communications Sciences Division (CCSD)

4. **Daya Sagar, B. S.**, Cheng, Q., McKinley, J., & Agterberg, F. (2023). *Encyclopedia of Mathematical Geosciences* (B. S. Daya Sagar, Q. Cheng, J. McKinley, & F. Agterberg, Eds.; Vols. 1 & 2). Springer International Publishing. https://doi.org/10.1007/978-3-030-85040-1
5. Mukhopadhyay, A., Ray, S., Maulik, U., **& Bandyopadhyay, S. (2024).** *Multiobjective Optimization Algorithms for Bioinformatics* (Vol. 1, XV). Springer Nature Singapore. https://doi.org/10.1007/978-981-97-1631-9
6. Nayak, J., Das, A. K., Naik, B., **Meher, S. K.**, & Brahnam, S. S. K. M. (2023). *Nature-Inspired Optimization Methodologies in Biomedical and Healthcare* (J. Nayak, A. K. Das, B. Naik, **S. K. Meher**, & S. Brahnam, Eds.; 1st ed., Vol. 1). Springer International Publishing. https://doi.org/10.1007/978-3-031-17544-2

Library, Documentation and Information Sciences Division (LDISD)

7. **Satpathy, K. C.**, & Patnaik, K. R. (2023). *Future of Libraries*. Wiley India Pvt. Ltd.

Physics and Earth Sciences Division (PESD)

8. Deo, S., & **Rahaman, R.** (2023). *Classical Mechanics: An Introduction* (Vol. 1)

Social Sciences Division (SSD)

9. **Dash, N. S.** (2024). *Bangla Yuktabyanjanbarna: Abhidhanik Bishleshan (Bengali Consonant Cluster: Lexicographic Analysis)* (Vol. 67). Bodh Shabda. https://doi.org/10.1044/2024_JSLHR-23-00254
10. **Madhura Swaminathan**, V. Surjit, & v. K. Ramachandran. (2023). *Economic Change in the lower Cauvery Delta: A Study of Palakurichi and Venmani*. Tulika Books.

Statistical Quality Control and Operations Research Division (SQCORD)

11. Biplab, Das., & **Jagadish**. (2023). *Evolutionary Methods Based Modeling and Analysis of Solar Thermal Systems* (B. Das & **Jagadish**, Eds.; Vol. 1). Springer International Publishing. https://doi.org/10.1007/978-3-031-27635-4
12. Manjunath, P., G, C., **Jagadish** & Olusegun, D. Samuel. (2023). *Biofuel Production, Performance and emission optimization: Statistical and Artificial Intelligence Tools*. Springer.

Theoretical Statistics and Mathematics Division (TSMD)

13. **Bhat, B. V. R.**, & Bhattacharyya, T. (2023). *Dilations, Completely Positive Maps and Geometry* (Vol. 84). Springer Nature Singapore. https://doi.org/10.1007/978-981-99-8352-0
14. Bose, A., **Chakrabarty, A.**, & Hazra, R. S. L. B. of M. T. and R. in M. (2024). *A Little Book of Martingales, Texts and Readings in Mathematics*. Hindustan Book Agency.

Collaborative Publications

15. **Bapat, R. B.**, Karantha, M. P., Kirkland, S. J., **Neogy, S. K.**, Pati, S., & Puntanen, S. (2023). *Applied Linear Algebra, Probability and Statistics*. Springer.
16. **Maji, P.**, Huang, T., **Pal, N. R.**, Chaudhury, S., & **De, R. K.** (2023). *Proceedings, Lecture Notes in Computer Science, Pattern Recognition and Machine Intelligence: 10th International Conference, PReMI 2023* (Vol. 14301). Springer Cham

5.2 Journal Publications

Applied Statistics Division (ASD)

1. Andreeva, E., Bogdanov, A., Datta, N., Luykx, A., Mennink, B., **Nandi, M.**, Tischhauser, E., & Yasuda, K. (2024). The COLM Authenticated Encryption Scheme. *Journal of Cryptology, 37*(2), 15. https://doi.org/10.1007/s00145-024-09492-8
2. **Barui, S.,** Mitra, D., & Balakrishnan, N. (2024). Flexible modelling of a bivariate degradation process with a shared frailty and an application to fatigue crack data. *Reliability Engineering &* System Safety, 242. https://doi.org/10.1016/j.ress.2023.109722
3. Bhasin, D., Karmakar, S., Podder, M., & **Roy, S.** (2023). On a class of probabilistic cellular automata with size-3 neighbourhood and their applications in percolation games. *Electronic Journal of Probability, 28*, 1–60. https://doi.org/10.1214/23-EJP1046
4. **Biswas, A., Bhattacharya, R.,** & Mukherjee, T. (2023). An alternative procedure for testing equality of treatment effects under circular responses. *Chilean Journal of Statistics, 14*(2), 85–98.
5. **Biswas, A., Bhattacharya, R.,** & Sarkar, P. (2024). Fixed width confidence interval estimation for general continuous responses under a response adaptive design,. *Communications in Statistics:Theory and Methods.*
6. **Biswas, A.**, & **Bose, M.** (2023). Sample sizes required to estimate the protective efficacy of a vaccine when there is an unequal allocation of individuals across the vaccine and placebo groups. *Statistical Methods in Medical Research, 32*(10), p1859-1879.
7. **Biswas, A., Bose, M.**, & **Angers, J. F.** (2023). Prior effective sample size in phase II clinical trials with mixed binary and continuous responses. *Statistica Neerlandica, 77*(2), 131–248.
8. **Biswas, A.**, & **Sarkar, P.** (2023). On the "majority is least stable" conjecture. *Information Processing Letters, 179.*
9. Borkotokey, S., Dutta, R., & **Roy, S.** (2023). The Generalized Shapley value of cooperative games as a Social Preference Function. *Group Decision and Negotiation, 32*, 277–300.
10. Bose, A., & **Roy, S.** (2023). Ordinal Bayesian incentive-compatible voting rules with correlated belief under betweenness property. *Economic Letters, 229.*
11. Calderon-Garciduenas, L., Hernandez-Luna, J., Aiello-Mora, M., Brito-Aguilar, R., Evelson, P. A., Villarreal-Rios, R., Torres-Jardon, R., Ayala, A., & **Mukherjee, P. S.** (2023). APOE Peripheral and Brain Impact: APOE4 Carriers Accelerate Their Alzheimer Continuum and Have a High Risk of Suicide in PM2.5 Polluted Cities. *Biomolecules, 13*(6).
12. Castilla, E., & **Ghosh, A.** (2023). Robust Minimum Divergence Estimation for the Multinomial Circular Logistic Regression Model. *Entropy, 25*(10), 1422–1432.
13. Das, S., Roy, A., & **Mukherjee, P. S.** (2024). Image registration for zooming: A statistically consistent local feature mapping approach. *Stat, 13*(1).
14. **Dewanji, A., Koley, T.,** & **Sultana, F.** (2023). Parametric Analysis of Tampered Random Variable Model for Multiple Step-Stress Life Test. *Journal of Statistical Theory and Practice, 17.*
15. Dey, M., & **Bhandari, S. K.** (2023). Bounds on generalized family-wise error rates for normal distributions. *Statistical Papers, 65*, 2313–2326.
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5.5 Sankhyā, the Official Journal of ISI

1. A Brief Overview

The internationally renowned journal Sankhyā was founded by Professor P. C. Mahalanobis in 1932. This quarterly journal, with ISSN 0976-8378, is devoted to original research articles in Applied Statistics, Mathematical Statistics and Probability. Reviews and discussion articles on current research activity in the above areas are also published. A rigorous peer review process is followed for acceptance of articles submitted for publication in Sankhyā. Many seminal articles in Probability, Theoretical Statistics and Applied Statistics have appeared in Sankhyā.

The journal is published in two separate series – Series A and Series B.

Series A, with 2 issues per year (February and August) covers Probability & Theoretical Statistics.

Series B, with 2 issues per year (May and November) covers Applied and Interdisciplinary Statistics.

The Institute has been collaborating with Springer for printing and marketing the international edition of Sankhyā, in both printed and electronic editions. The editorial system is completely electronic, starting from submission to editorial processing and ending in final editorial decision for articles. Free access to articles of every edition of Sankhyā is available through the Sankhyā website.

2. Editorial Board (as on 31 March 2024)

	Name & Affiliation
Editor in-Chief	Dipak K. Dey, University of Connecticut, USA
Series A Editors	Snigdhanshu Chatterjee, University of Minnesota, USA
	Soumendra Nath Lahiri, Washington University in St. Louis, USA
	Parthanil Roy, Indian Statistical Institute, Bangalore, India
	Francisco Louzada, University of Sao Paulo, Sao Paulo, Brazil
	Sujit Ghosh, North Carolina State University, Raleigh, USA
Series B Editors	Debashis Ghosh, University of Colorado, Denver, USA
	Anil K. Ghosh, Indian Statistical Institute, Kolkata, India
	Sanjib Basu, University of Illinois, Chicago, USA
Technical Editor	Abhik Ghosh, Indian Statistical Institute, Kolkata, India
Technical Support	Urmichhanda Bhattacharya, Indian Statistical Institute, Kolkata, India

This journal is abstracted/ indexed in Current Index to Statistics, EBSCO Discovery Service, Emerging Sources Citation Index, Google Scholar, JSTOR, Japanese Science and Technology Agency (JST), Mathematical Reviews, OCLC WorldCat Discovery Service, ProQuest-ExLibris Primo, ProQuest-ExLibris Summon, Research Papers in Economics (RePEc), SCImago, SCOPUS and zbMATH.

3. Issues Published

Regular Issues	Series A:	Volume 85, Issue 2, August 2023
		Volume 86, Issue 1, February 2024
	Series B:	Volume 85, Issue 1, May 2023
		Volume 85, Issue 2, November 2023
Special Issues (if any) with short description	Series B: Volume 85, Issue 1 Supplement, May 2023 (Special issue on Recent Advances in Statistical Finance)	

SANKHYĀ

THE INDIAN JOURNAL OF STATISTICS

Edited by : P. C. MAHALANOBIS

VOLUME 2. PART 1. 1935.

SANKHYĀ

The enchantment of rythm is obviously felt in music, the rhythm which is inherent in the notes and their grouping. It is the magic of mathematics, this rythm which is in the heart of all creation, which moves in the atom and in its different measures fashions gold and lead, the rose and the thorn, the sun and the planets, the variety and vicissitudes of man's history. These are the dance-steps of numbers in the arena of time and space, which weave the *maya* of appearance, the incessant flow of changes that ever is and is not. What we know as intellectual truth, is that also not a perfect rythm of the relationship of facts that produce a sense of convincingness to a person who somehow feels that he knows the truth? We believe any fact to be true because of a harmony, a rythm in reason, the process of which is analysable by the logic of mathematics.

RABINDRANATH TAGORE

Chapter

6

Other Academic Activities

7 No. of Patents

7 Filed
(National – 5, International – 2)

23 No. of MoUs

6 New
(National – 5, International – 1)

17 Existing
(National – 10, International – 7)

244
No. of Visiting Scientists

182 National

62 International

6.1 Patents

IPRs Filed

Sl.	Title of Patent	Application No.	Date of Filing	Name of the Inventor(s)*	Status	Country name where filed	Division Unit, Location
1	A process for obtaining an oxidized form of squalene and compositions therefrom	202331048679	Jul 19, 2023	Suparna Mandal Biswas (AERU), Parimal Karmakar, Madhurima Dutta, Swarupa Sarkar	Filed	India	BSD AERU, Kolkata
2	Action Detection System for Dark Videos using Spatio-Temporal Features and Bidirectional Encoder Representations from Transformers	18122269	Jul 12, 2023	Ashish Ghosh (MIU), H Singh, S Suman, Badri N Subudhi, Vinit Jakhetiya, T Veerakumar	Filed	USA	CCSD MIU, Kolkata
3	Image Enhancement and Object Detection System For Degraded Underwater Images using Zero-Reference Deep Curve Estimation and G-UNET	18230642	Oct 18, 2023	Meghna, B N Subudhi, V Jakhetiya, A Bansal, T Veerakumar, Ashish Ghosh (MIU)	Filed	USA	CCSD MIU, Kolkata
4	Efficient Segmentation of Tumours from Lung CT	02331054137	Aug 11, 2023	Sushmita Mitra (MIU), Surochita Pal Das (MIU), B. Uma Shankar (MIU)	Under Review	India	CCSD MIU, Kolkata
5	Detection of Lung Diseases with Multimodal Imaging	202331070180	Oct 16, 2023	Sushmita Mitra (MIU), Surochita Pal Das (MIU)	Under Review	India	CCSD MIU, Kolkata
6	System and Method for Effective Volumetric Segmentation of Medical Images involving Spatio-Spectral Components	202431005490	Jan 27, 2024	Sushmita Mitra (MIU), Pallabi Dutta (MIU)	Under Review	India	CCSD MIU, Kolkata
7	A System & Method for Self-generation of power by the Electric Vehicle	202341027292	May 26, 2023	Satish Kumar, Jagadish (SQROR), Ragu A, Sagar Yanda	Online Published	India	SQCORD SQCORU, Bangalore

6.2 Memoranda of Understanding

Over the last several years, the Institute has been very actively pursuing institution-level collaboration in fields of mutual interest that has led to Memoranda of Understanding (MoUs) with a number of universities/academic institutions as well as industrial organisations. These MoUs range from collaborative research to research grants for students/faculty as well as student/faculty exchange programmes. At present, the Institute has new MoUs signed and some ongoing ones (both national and international) with the following institutions/ organisations:

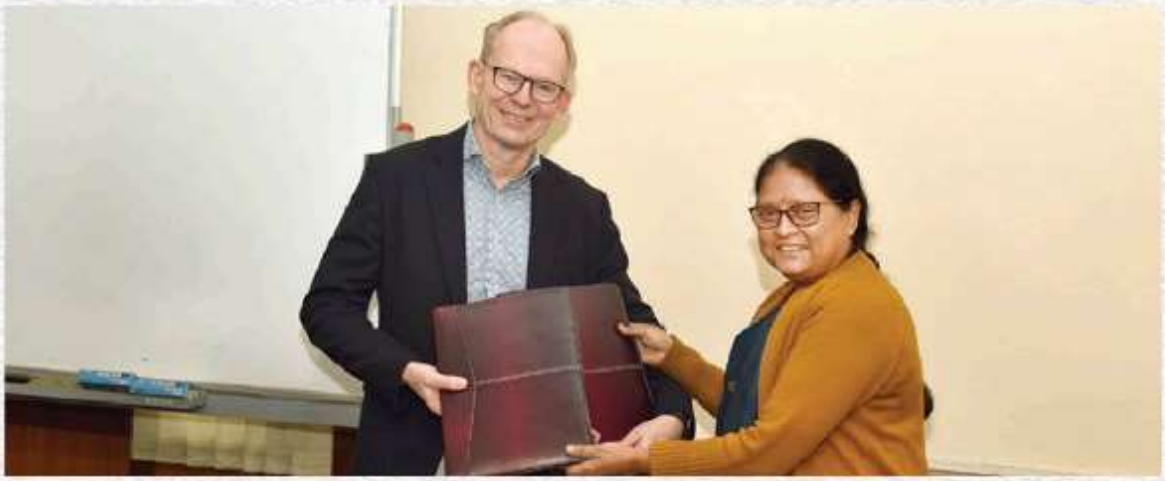
1. New MoU signed

Sl. no.	University/Institution/Organization	Country	Effective from	Duration
1	EfD, University of Gothenburg, Sweden	Sweden	01-01-23	01 year 04 months
2	MedGenome Labs Limited	India	17-08-23	03 Years
3	Eurostat	India	11-09-23	01 year
4	Council of Scientific & Industrial Research (CSIR)	India	06-11-23	02 Years
5	Ericsson India Pvt. Ltd.	India	01-02-24	03 Years
6	Tata Memorial Centre (TMC)	India	02-02-24	01 year

2. Continuing MoUs

A partial list of continuing MoUs is given below:-

Sl. No.	University/Institution/Organization	Country	Valid until
1	Tata Memorial Centre	India	Mar-27
2	Ramakrishna Mission Vivekananda Educational and Research Institute	India	Feb-25
3	CESC Limited	India	Jan-25
4	Moscow State University named after M.V.Lomonosov Tashkent Branch, Tashkent, Uzbekistan	Uzbekistan	Dec-27
5	Medclin Research Private Limited	India	Sep-26
6	Tata Consultancy Services (Extension of Master Collaboration Agreement)	India	Oct-26
7	National Research University, Higher School of Economics	Russia	Aug-26
8	Springer Nature Singapore Pte Ltd.	Singapore	Sep-26
9	Coursera	United States of America	Perpetual
10	Ministry of Science & Technology and IDEAS – Institute of Data Engineering, Analytics and Science Foundation	India	Apr-26
11	Defense Research and Development Organisation (DRDO)	India	Oct-25
12	University of Groningen	Netherlands	Feb-25
13	University of Reading	England	Jun-24
14	Ramakrishna Mission Residential College, Narendrapur	India	Mar-26
15	Tata Steel Limited	India	Feb-25
16	The Institute of Cost Accountants of India	India	July-27
17	University of California	United States of America	Aug-27



6.3 Museums

6.3.1 Geology Museum

GENERAL INFORMATION	
Name of In-charge	Dhurjati Prasad Sengupta, Shiladri Sekhar Das, Debarati Mukherjee
Physical Address	Ground floor, Platinum Jubilee Building, ISI, Kolkata-700 108
Founded in	1962
Founded by	Pamela L. Robinson along with Sohan Lal Jain and Tapan Roy Chowdhury
Maintained by	Geological Studies Unit

Brief Overview

The Museum of the Geological Studies Unit, Indian Statistical Institute, Kolkata, is a unique repository of terrestrial Mesozoic vertebrates as well as Cenozoic marine vertebrates and invertebrates. The museum has the holotypes of more than 50 new taxa of fossil vertebrates ranging from Permian (~255 My) to Cretaceous (65 My) Period as well as many new invertebrate taxa ranging from Eocence (~55 My) to Miocene (~5 My). Complete and partial skeletons of several vertebrate fossils including the oldest Permian reptile of India, Triassic terrestrial vertebrates, Jurassic and Cretaceous dinosaurs, dinosaur eggs and several Jurassic fishes are exhibited in this Museum. There are several holotype and paratype specimens kept in the repositoryas well. The museum also contains fossils of Eocene whales and other marine mega-invertebrate fossils, foraminifera. It also contains stromatolites and fossil plants among others.

Major Collections

Sl. No.	Name of Collection	Brief Overview of Collection
1	Mounted skeleton of *Barapasaurus tagoeri*	*Barapasaurus* is a genus of basal sauropod dinosaur from Early Jurassic rocks of India.
2	Mounted skeleton of *Isisaurus colberti*	*Isisaurus* is a genus of titanosaurid dinosaur from the Late Cretaceous period from India.
3	Skeletal elements of prosauropods and abelisaurids	Prosauropods were large herbivorous dinosaurs of the Triassic and Early Jurassic. *Abelisaurids* were carnivorous bipedal theropod dinosaurs. *Rahiolisaurus* is an abelisaurid which existed in India during the Late Cretaceous period.
4	Mounted skeleton of *Hypardepedon huxlei*	Rhynchosaurs are a group of extinct herbivorous Triassic archosauromorph reptiles with a unique dentition pattern.
5	Numerous skeletal elements of *Parasuchus hislopi*	Phytosaurs are an extinct group of large, mostly semiaquatic Late Triassic archosauriform reptiles having superficial similarity with the crocodiles.
6	Numerous skeletal elements of *Wadiasaurus indicus* and *Reschnisaurus cristarhynchus*	kannemeyeriid dicynodont (non-mammalian synapsid) from the Middle Triassic (Yerrapalli Formation of India.
7	*Endothiodon mahalanobisi* and related fauna	Various medium and small dicynodonts are known from Late Permian Kundaram Formation of India that includes *Endothiodon*.
8	*Pamelaria dolichotrachela* and *Yerrasuchus deccanensis*	*Pamelaria* is an extinct allokotosaurian archosauromorph reptile and *Yarasuchus* is an extinct genus of avemetatarsalian archosaur known from Middle Triassic of India.
9	Numerous skeletal elements of *Shringasaurus indicus*	*Shringasaurus* (meaning "horned lizard") is an extinct genus of allokotosaurian archosauromorph from the Middle Triassic (Anisian) of India.
10	Numerous skeletal elements of *Cherninia denwai, Paracyclotosaurs crookshanki, Eryosuchus rajareddyi, Compsocerops cosgriffi* and *Panthasaurus maleriensis*	All temnospondyl amphibians known from various Triassic Formations of India.
11	Many new taxa of Cenozoic gastropods	
12	Other Cenozoic invertebrate taxa	

New Initiatives

- The outreach initiative has been taken by Dr. Sanjukta Chakravorti, former Research Fellow and Visiting Professor of ISI/GSU in 2021-2022, through an engagement grant from the Palaeontological Association of London. Many awareness programmes of that outreach grant have been extended in 2022 – 2023. You Tube video of the said programs are also uploaded. The links are as follows- 1. https://youtu.be/zG2iv2owV-w and 2. https://youtu.be/h0ESOphF83Q
- 3D Printing of the entire skeleton of Panthasaurus maleriensis has been done.
- The visitor's book has been digitized.

Visitors

Many national experts as well as students of vertebrate palaeontology visited the Museum in 2022-23 to study the rare collections.

Sl. No.	Name	Affiliation	period of visit
1	Sulagna Sen,	PhDScholar, IIT Kharagpur	May 27, 2022
2	Sulagna Sen,	PhD Scholar, IIT Kharagpur	May 30 – June 17, 2022
3	Lukasz Czepinski	Post doc, Institute of Paleobiology, Polish Academy	March 20-29, 2023

6.3.2 Prasanta Chandra Mahalanobis Memorial Museum and Archives

GENERAL INFORMATION	
Name of In-charge (2023-24)	Dr. Kishor Chandra Satpathy
Physical Address	Amrapali, ISI, 204 B T Road, Kolkata-700 108
Founded in	29th June, 1993
Founded by	Indian Statistical Institute

Brief Overview

The Prasanta Chandra Mahalanobis Memorial Museum & Archives (PCMMM&A) was founded in 1993 to commemorate the birth centenary of pioneer statistician and the founder of the Indian Statistical Institute, Professor Prasanta Chandra Mahalanobis (PCM). The museum and archives highlight PCM's life and works, including his contributions to the fields of statistics, economics, and planning in India. In addition, it contains his private collection of books and an assortment of rare photographs and documents. The primary objectives of the Prasanta Chandra Mahalanobis Memorial Museum & Archives are to collect, preserve, restore, display, disseminate, and document of personal, administrative, and rare source materials associated with the life and legacy of Prof. Mahalanobis and the establishment of the Indian Statistical Institute, as well as the development of the Institute and statistical science in India.

The Museum & Archives

PCMMM&A is housed in Amrapali, the erstwhile residence of Prof. Mahalanobis, which is situated on the institute's campus in Kolkata. A permanent exhibition featuring photographic displays about the life and work of PCM is located on the eastern side of the house's ground floor. A total of five galleries make up the museum's exhibit. These galleries feature 921 exhibits spread across 101 panels. The house's first floor has been preserved for the audience, including an open lounge (the Chatal), PCM's study, and private areas of the residence. On the first floor, a new gallery opened in 2016 depicting Prasanta Chandra Mahalanobis and his wife Nirmal Kumari Mahalanobis's special relationship with Rabindranath Tagore.

The archival materials of PCMMM&A traces back the evolution of statistics in the Indian subcontinent during and after the PCM's lifetime, paying particular attention to his outstanding contributions in this field. The archival materials include official and personal documents, files, correspondence, scientific and literary papers, photographs, newspaper cuttings, diaries, and manuscripts related to Prasanta Chandra Mahalanobis and Nirmal Kumari Mahalanobis. These collections also includes audio-visual materials such as sound recordings, film footage, negatives, and slides. There are approximately 3 lakh documents, with approximately 1.9 lakh having already undergone preservation treatments, depending on their condition. The digitization of documents began in 2007. To date, approximately 25,000 documents have been digitized, with metadata for approximately 20,000 documents saved on a customized server and approximately 2000 documents uploaded to the D-Space server.

Note: Presently the Museum & Archives has been shifted to the third floor of the library building temporarily for the renovation work of the existing museum building (Amrapali). The physical museum space is closed for the time being for the general visitors. With prior permission serious visitors can access the museum and archives. Also, PCMMM&A has a presence on virtual platforms (Instagram, Facebook & Twitter). General visitors can be reached through these digital mediums.

PCM Memorial Museum and Archives: Major Collections	
Name of Collection	**Brief Overview of Collection**
Manuscripts	3,00,000 Manuscripts (Typescript/ Handwritten)
Books	850
Audio-video [Spool, Record, Cassettes]	93 nos., 89 nos.,101 nos.
Photographs	6700 approx.
Negatives	5000 approx.
Slides	1236 slides approx.
Artifacts	1330 approx.

Researchers Visited/ Consulted PCMMM&A 2023-24	
Name of Activity	**Affiliation**
Reference Services for Researchers and Scholars	Professor Sumitra Purkayastha, ASU, ISI Kolkata Gautham S, University of Columbia, NYC Shubham A Singh, Germany Sayori Ghoshal, Krea University, Andhra Pradesh Professor Tumpa Mukherjee, HOD Sociology, Women's Christian College, University of Calcutta Pramit Bhattacharya, Journalist, Mint & Fellow, New India Foundation, Bengaluru Professor Elisabeth Burton, University of Toronto Professor Reinhold Martin, Columbia University Saarang Narayan, University of Leeds Nikhil Dharmaraj, University of Cambridge Sutapa Malakar, Assistant Professor, Economics, East Calcutta Girls' College

Major Activities during 2023-24

Museum Visit

- Guided tours were provided to the visitors by the PCMMM&A Trainees. During 2023-2024 PCMMM&A received a total no. of 768 visitors.

Preservation Treatment

- Conservation and preservation of the archival documents ensures longevity and availability of the valuable documents for future research During this financial year, approximately 1979 nos. of archival documents were provided preservation treatment after assessing their condition.

New Initiatives

A Public Lecture series has been launched by PCMMM&A. Topics of the lectures are following:

1. "Knowledge Worlds: Research Universities and Frontiers in the United States since 1945". Speaker: Prof. Reinhold Martin (Columbia University), 13th March 2024
2. "Surveillance in Transit: An Abolitionist Chronology of AI, Power, Complicity and Eugenics in the Indian Ocean World C. 1850- Present." Speaker: Nikhil Dharmaraj (MPhill Student, University of Cambridge), 28th March 2024

POSTERS

Current Project:

Flyer

- Call for Volunteers Programme for PCMMM&A

Special Visitors of PCMMM&A 2023-24

- Swami Upasanananda, Ramakrishna Mission, Barrackpore
- Dr. Nabi Hasan, Librarian & Head, Central Library, IIT Delhi
- Raghu Nandan Sengupta, Professor, Department of Industrial and Management Engineering, IIT Kanpur
- Prof. P.G. Dastidar, Visiting Professor, SGT University, Gurugram, Former Scientist G/Adviser at the Ministry of Earth Sciences, Government of India
- Dr. Jay Prakash, Assistant Professor (CSED), National Institute of Technology, Calicut
- Philip E. Pare, Assistant Professor, Elmore Family School of Electrical and Computer Engineering, Purdue University
- Dr. Badan Barman, Assistant Professor, Department of Library and Information Science, Gauhati University, Assam
- Vinod Kumar K T, Librarian, LBS College of Engineering, Kasaragod, Kerala
- Dipankar Mandal, IIT Kharagpur
- Melinda Pavek, US Consul General Kolkata
- Dr. Neeza Singh, Librarian, T S Central State Library in Chandigarh
- Professor Kadambari Baxi, Barnard College, Columbia University

Sl. No.	Participation in events Brief Overview
1.	**Exhibitions** **Offline** 1. Exhibition on 'History of Computing' on the occasion of National Statistics Day in collaboration with Repro Photography Unit (Date: 29th June 2023) 2. Curated an exhibition on Professor C. R. Rao on the occasion of 93rd Foundation of Indian Statistical Institute (Date: 19th December 2023). 3. Exhibition showcasing guest faculties, researchers & visitors from USA at ISI Kolkata on the occasion of the visit of US Consul General Melinda Pavek from U.S. Consulate General, Kolkata (Date: 17th January 2024).
2.	**Online** Prasanta Chandra Mahalanobis Memorial Museum & Archives (PCMMM&A) had celebrated world heritage week in the virtual platform (Instagram & Facebook). (Date: 19.11.2023 to 25.11.2023)   
3.	**Outreach** Prasanta Chandra Mahalanobis Memorial Museum & Archives have participated in ***Acharya Satyendra Nath Bose Bijnan 'O' Prajukti Mela*** (Science & Technology Fair) and won second best stall award ***(Date: 19th Jan 2024 to 23rd Jan 2024 at Hedua Park.)*** 

6.4 Scientific Assignments

A L N MURTHY, SQCORU, Hyderabad

1. Academic Dissertation Guidance, Telco Customer Churn Prediction by Mr. Susovan Sabud (MQMS-2219), MSQMS Batch IX (2022-2024), Hyderabad/ Indian Statistical Institute (December 2023 to January 2024, Semester III).
2. Academic Dissertation Guidance, Super ensemble classifier for improving predictions in imbalanced datasets of customer loans by Mr. Pravash Handal (MQMS-2207), MSQMS Batch IX (2022-2024), Hyderabad/Indian Statistical Institute (December 2023 to January 2024, Semester III).
3. Academic Dissertation Guidance, Evolution of Deep Learning Models for Image Classification and A Comparison of Recent and Early Models by Mr. Siripuram Vishnu Sai (MQMS-2213), MSQMS Batch IX (2022-2024), Hyderabad/Indian Statistical Institute (December 2023 to January 2024, Semester III).
4. Academic Teaching, Applied Regression Analysis, MSQMS Batch IX (2022-2024), Hyderabad/Indian Statistical Institute (July - November 2023, Semester III, Full course).

ABHIK GHOSH, ISRU, Kolkata

1. Research Collaboration, High-dimensional Statistical Inference, Visiting Prof. Magne Thoresen., University of Oslo, Norway. (May-June, 2023).

ABHIROOP MUKHOPADHYAY, EPU, Delhi

1. Presenter, Primary Health in India, HFACT Workshop, Johannesburg, South Africa (2023/ 3 days).
2. Invited Speaker, Female labor force participation and the job challenges in India, Round table discussion with South Asia Regional Director for Human Development, World Bank, World Bank, India (December 2023).
3. Invited Speaker, Primary Health India, HFACT Seminar, Online (University of York) (December 2023).
4. Invited Speaker, Reimagining Education: Do Science Experiments Improve Human Capital?, Workshop, University of Warwick (July 2023).
5. Instructor, Difference in Difference Estimation, Workshop, IFPRI, Delhi (July 2023).
6. Invited Speaker, Tertiary Education and Rural Prosperity, Seminar, University of Manchester (June 2023).
7. Invited Speaker, Tertiary Education and Rural Prosperity, Seminar, University of Warwick (June 2023).
8. Visiting Professor, Private Schools in India, Visiting Fellow, Institute of Advance Study, University of Warwick (May-July 2023).

AMITA PAL, ISRU, Kolkata

1. Resource Person, Recent Advances in Statistical Learning, Faculty Development Programme on Impact of Emerging Technologies in AI/ML and Data Science, Department of Computer Science & Engineering, Madanapalle Institute of Technology & Science, Madanapalle (Andhra Pradesh) (February 29, 2024).

ANISUR RAHAMAN MOLLA, CSRU, Kolkata

1. Program Committee Member, Paper reviewer, 25th International Conference on Distributed Computing and Networking (ICDCN 2024), ICDCN 2025, IIT Madras, Chennai (2024).

ANSUMAN BANERJEE, ACMU, Kolkata

1. Visiting Researcher, Formal Verification, Collaborative research, IMEC, Leuven, Belgium (May 15, 2023 to June 30, 2023).
2. Conference presentation, Paper presentation, International Conference on Algorithms, Computing and Systems, Greece (Oct 19-21, 2023).

ANTAR BANDYOPADHYAY, SMU, Delhi

1. Invited Seminar Speaker, Seminar entitled "Right-Most Position of a Last Progeny Modified Branching Random Walk" was presented on October 04, 2023, Probability Seminar, Department of Pure Mathematics and Mathematical Statistics, Cambridge University, Cambridge, UK (October 01 - 04, 2023).
2. Invited Seminar Speaker, Seminar entitled "Right-Most Position of a Last Progeny Modified Branching Random Walk" was presented on September 07, 2023, Statistics and Probability Seminar, School of Mathematical Sciences, University of Nottingham, Nottingham, UK (September 04 - 09, 2023).
3. Invited Seminar Speaker, Seminars entitled "Right-Most Position of a Last Progeny Modified Branching Random Walk" and "Interacting Urn Models" were presented on September 13 and 21, 2023 respectively in the Probability Seminar, Probability Seminar, Department of Mathematical Sciences, Durham University, Durham, UK (September 10 - 30, 2023).

ARIJIT CHAKRABARTI, ASU, Kolkata

1. Invited lecture, Multiple hypothesis testing in sparse problems with one-group priors, Workshop on Multiple Testing, Department of Statistics, University of Calcutta (06/01/2024).

ARIJIT CHAKRABARTY, SMU, Kolkata

1. Speaker in Workshop on Random Matrix Theory, Random Matrix Theory: An Introduction, Workshop on Random Matrix Theory, Center for Computational &

Data Sciences, Independent University, Bangladesh (30 June 2024 - 4 July 2024).

ARUP BOSE, SMU, Kolkata

1. Receive the P C Mahalanobis International Award from the International Statistical Institute, Lecture on receiving the P C Mahalanobis Award, Wrold Statistics Congress, Ottawa Canada (July 16–20, 2023).
2. Special Invited lecture, Limiting Spectral Distribution of Random Matrices with Independent Entries, International Indian Statistical Associztion Annual Conference, Colorado School of Mines (June 01–04, 2023).
3. Invited talk (online), Lecture on Invitation to Random Matrices, Workshop on Statistics and Computation, CMI (June 12–23, 2023).
4. Plenary Lecture, Wigner matrices with independent entries, International Conference on mathematics and Applications, Bardhaman University (March 05-06, 2023).

ARUP KUMAR DAS, SQCORU, Kolkata

1. To Deliver an Invited Talk, Two Conjectures in Complementarity Theory, International Conference on Operations Research and Game Theoretic Approach in Decision Making, Indian Statistical Institute, Delhi (January 17 – 19, 2024).
2. To Deliver an Invited Talk, Concepts of Mathematics and Optimization Theory in Research, Program for Research Scholars, IIITDM, Jabalpur (7th November 2023).
3. Ms. Aritra Dutta received her Ph. D. degree in Mathematics from Jadavpur University under the supervision of Dr. Arup K Das of Indian Statistical Institute in December, 2023, A Contribution To Complementarity Theory, Ph D Supervision, Mathematics Department, Jadavpur University (Awarded Ph D degree in Mathematics in December 2023).

ASHOK SARKAR, SQCORU, Mumbai

1. Consultation, Network planning and route optimization of 6 bus routes, Consultancy Project, Greencell Express Private Limited, Mumbai (Feb - Mar, 2024).
2. Consultancy Project, Study of sample size, sample coverage, Analysis and reporting, Delhi (Mar, 2024).

AYANENDRANATH BASU, ISRU, Kolkata

1. Invited Speaker, Goodness of fit and Change Points, 6th Workshop on Goodness-of-fit, Change Points and Related Methods, Skukuza Lodge, Kruger National Park, South Africa/North West University, South Africa (25-29 August, 2023).

AYINEEDI VENKATESWARLU, CSU, Chennai

1. Invited Speaker, Linear Recurring Sequences, AIS - Advanced Topics in Finite Fields (2023), The Institute of Mathematical Sciences, Chennai (17/07/2023 to 22/07/2023).

B V RAJARAMA BHAT, SMU, Bangalore

1. Invited speaker, Peripheral Poisson boundary., Colloquium, IISER Pune (17 Nov. 2023).
2. External expert, Promotion, Faculty evaluation committee meeting, IISER Pune (24 Jan. 2024).
3. Invited speaker, A minimal completion theorem and almost everywhere equivalence of completely positive maps., International Conference on Spectral and Approximation Theory (ICSAT-2023), Cochin University of Science and Technology(CUSAT), Cochin (27-30 Nov. 2023).
4. Member, Programs committee of NBHM, NBHM Meeting, IIT Mumbai (Aug. 4, 2023).
5. Committee member, Mathematics, INSPIRE Faculty selection, Indian National Science Academy (INSA) (Dec 27-28, 2023 (online)).
6. Invited speaker, Peripheral Poisson boundary., Conference on Noncommutative analysis on groups and quantum groups., Université de Franche-Comté, Besancon, France. (Dec. 18-21, 2023).
7. Member, Review Committee, Mathematics, CEPRC Meeting, IISER Pune (Feb 14-16, 2024).
8. Plenary Speaker, Peripheral Poisson boundary., In house symposium in mathematics, IISER, Bhopal (Feb2-4, 2024).
9. Invited speaker, Invariants., Singularity (Organised by students), IISER, Bhopal (Feb2-4, 2024).
10. Invited speaker, Why square has no square root?, KSS Nambooripad Endowment Lectures 2024, Institute of Mathematics Research and Training (IMRT) Thiruvananthapuram, Kerala (Jan. 8, 2024 (online)).
11. Member, Integrated MSc-PhD program, Board of Studies meeting, Kerala School of Mathematics (July 24, 2023 (online)).
12. External expert, Mathematics, Faculty selection, IIT Mumbai (March 14, 2024).
13. Invited speaker, Peripheral Poisson boundary, Mathematical Physics in Quantum Technology: From Finite to Infinite Dimensions workshop, International Center for Mathematical Sciences, Edinburgh, UK. (May 22-26, 2023).
14. Organiser, Quantum Probability, Perspectives in Quantum Probability, ISI Bangalore (May 5, 2023).
15. Invited speaker, Peripheral Poisson boundary, Hybrid QBIC workshop 2023., Tokyo University of Science (Oct 11-13, 2023 (online)).
16. External expert, Mathematics, Faculty selection, IISER, Trivandrum (Oct. 21, 2023 (online)).
17. Invited speaker, Extreme points of quantum coupled systems., KRP Memorial lectures, IIT Tirupathi (Oct., 7, 2023).
18. Invited speaker, Peripheral Poisson boundary., Inter IISER-NISER Math meet, NISER, Bhubaneswar (Sept. 29-Oct. 1, 2023).

B. S. DAYA SAGAR, SSIU, Bangalore

1. Attended AGU HRC Meeting as a Member, AGU HRC Meeting, AGU HRC Meeting, AGU HeadQuarters in Washington DC (2023 in May and October).

BIKRAM MAHAPATRA, SOSU, Kolkata

1. Project Team Member, Research Assistance & Supervised field work, "Delivery of Entrusted Services and Financial Health of Rural Local Bodies in West Bengal" - Report of a commissioned project funded by Fifth State Finance Commission West Bengal, Head of the Unit & PI (Dec 2022 - August 2023).
2. Resource Person, Speaker for all the Hands on Sessions, A Five-days Workshop on "Official Statistics and Data Science Essentials: Sampling, Visualization, Reporting", Sikkim Manipal Institute of Technology, Sikkim (February 19 to February 23, 2024).
3. Co-supervisor, Co-supervised a Intern, Geo-spatial Data Analysis of Rural Govt. In West Bengal, Sampling & Official Statistics Unit(SOSU) (Jan-Feb 2024).
4. Resource Person, Speaker for the Hands on Sessions, Training Programme on "SURVEY METHODOLOGY AND DATA ANALYTICS' for ISS Probationers (45th batch), Sampling & Official Statistics Unit(SOSU) (March 04, 2024 to April 26 2024).

BISWABRATA PRADHAN, SQCORU, Kolkata

1. To chair a session and deliver an invited talk at the workshop, Session chair and delivering invited talk, International Workshop on Reliability Theory & Survival Analysis, Manipal Institute of Technology, Manipal (20 - 22 December 2023).

BISWANATH DUTTA, DRTC, Bangalore

1. Invited Talk, Linked Data for Libraries and Ontology and Knowledge Graph, The Refresher Course on "Online Refresher Course in Library and Information Science (12-02-2024 to 26-02-2024)", Dr. Babasaheb Ambedkar Marathwada University, Maharastra (February 12-26,2024).
2. Invited Talk, Linked Data Technology and glimpses of Applications in Libraries, National Conference on Global Trends in Libraries & Librarianship (KCLACON2024), NEHRU Arts and Science College, Kanhangad, Kerala (May 23-25, 2024).

BOBY JOHN, SQCORU, Bangalore

1. Invited Talk, Data Analysis Techniques using SPSS, Statistical Data Analysis using SPSS, Bangalore Institute of Technology (BIT), Bangalore (2023).
2. Invited Lecture, Analytics, Data Analytics using Python, Indian Audit and Accounts Department, Government of India (2023 / 2 days).
3. Invited Lecture, Applied Statistics, Workshop on Research Methodology, Karnataka Science and Technology Academy (KSTA), Government of Karnataka (2024).
4. Invited Lecture, Statistics using R, Workshop on Statistical Data Analysis using R, Bangalore Institute of Technology (BIT), Bangalore (2024).
5. Invited Lecture, Machine Learning using Python, Workshop on Machine Learning, Vellore Institute of Technology (VIT) (2024).

C. R. E. RAJA, SMU, Bangalore

1. Chief Guest, Keynote address, National conference on Recent Trends in Electronics, Mathematics and Statistics, Kristu Jayanti College, Bengaluru (3rd March 2023).

DARPA SAURAV JYETHI, TASU, Tezpur

1. To present a paper, Effect of weekdays and weekends on ambient PM2.5 levels in five Indian megacities, ISES Annual Meeting, Chicago, USA (2023).

DEBAPRIYO MAJUMDAR, CVPRU, Kolkata

1. Technical Committee Chair and Speaker, Machine Learning and Deep Learning, Data Analytics, Machine Learning and Artificial Intelligence (DAMLAI) 2024, Gujarat Technological University, Ahmedabad, India (21-23 March, 2024).

DEBASHISH GOSWAMI, SMU, Kolkata

1. Invited lecture in a conference, Operator algebra and quantum groups, IWOTA, Helsinki, Finland (2023/2024).
2. Collaborative visit and discussion, Operator algebra and quantum groups, visit to Dept of Maths, Univ of Oslo, Oslo, Norway (2023/2024).
3. Invited lecture in a conference, Operator algebra and quantum groups, NCG and Applications, Cortona, Italy (2023/2024).

DHURJATI PRASAD SENGUPTA, GSU, Kolkata

1. Invited Speaker, Topic: A New look at the old Gondwana, 47th S Ray Memorial Lecture, Geological Institute, Presidency University, Kolkata (7 th September 2023).

DIGANTA MUKHERJEE, SOSU, Kolkata

1. Supervisor, PhD thesis, PhD thesis of Sudip Ratan Chandra, Department of Mathematics, Jadavpur University (2016 – 2019, Awarded March 2024).
2. Supervisor, PhD thesis, PhD thesis of Sourojyoti Barick, Applied Statistics Division, Indian Statistical Institute, Kolkata (2022 – Presently working (2024)).
3. Co-Supervisor, PhD thesis, PhD thesis of Abhishek Ray, Department of Economics, XLRI Jamshedur (2022 – Presently working (2024)).
4. Speaker, Seminar, Seminar at Centre for Environmental Finance and Department of Mathematics, Florida International University (November 2023).

DIPTI PRASAD MUKHERJEE, ECSU, Kolkata

1. Invited Talk, Introduction to Artificial Intelligence, FDP on AI and Digital Empowerment, Prabhu Jagatbandhu College, Howrah (21 November 2023).
2. Invited Talk, Research Methodology, Research Methodology: Enhancing Research Skills for Academic Excellence, KL (Deemed) University, Hyderabaad (26 June 2023).
3. Invited Talk, Can we make a sheep as intelligent as human being?, National Science Day, Visva-Bharati, Shantiniketan (28 February 2024).
4. Keynote Speaker, Application-driven Graphical Models, 2nd Doctoral Symposium, HUMAN 2024, Sister Nivedita University, Kolkata (30 March 2024).
5. Invited Talk, Introduction to Artificial Intelligence, Seminar on AI, Behala College, Kolkata (4 October 2023).
6. Invited Talk, On exploiting image and video contents, Inter/Multidisciplinary Refresher Course in Digital Information System and Big data Analytics, A.K.Choudhury School of Information Technology, University of Calcutta " in collaboration with UGC-HRDC, University of Calcutta (8 March 2024).

FARZANA AFRIDI, EPU, Delhi

1. Visiting Professor, research and teaching, Munk School of Global Affairs and Public Policy, University of Toronto, University of Toronto (2023).
2. Visiting Senior Fellow, research and teaching, National University of Singapore, Singapore (2023).

GURUPRASAD KAR, PAMU, Kolkata

1. IInvited Speaker in "Condensed Matter meets Quantum Information" at ICTS, Bangalore, Series of talks on quantum information theory, ICTS-COMQUI2023, International Centre for Theoretical Sciences (ICTS), Bengaluru North - 560 089, India (25 September 2023 to 06 October 2023).

HARI CHARAN BEHERA, SRU, Giridih

1. Speaker, Participatory Rural Appraisal, UGC sponsored Short Term Course in Research Methodology in Social Sciences and Humanities, UGC Human Resource Development Centre (HRDC), University of Calcutta (13 January 2024 (Online)).
2. Keynote Address, "Impact Assessment of PMAY-G in Rural Jharkhand", ICSSR Sponsored National Workshop, Auditorium, Central University of Jharkhand, Cheri-Manatu Campus (18th March, 2024).
3. Speaker, Harmony with nature: Exploring Shared Indian Philosophies on Sustainable Resource Use and Conservation, Two-Day National seminar on Reviving the Indian Narratives on the Traditional Communities residing in the Hills and Forests, IGNCA, New Delhi. (21-22 November 2023).
4. Speaker, Introduction to Entrepreneurship, Refresher Course in Multidisciplinary Research, MMTTC of Indira Gandhi National Tribal University (IGNTU), Amarkantak, MP (22 March 2024).
5. Speaker, Feasibility Analysis and Venture Evaluation through "FAKTS", Refresher Course in Multidisciplinary Research, organized by MMTTC, of Indira Gandhi National Tribal University (IGNTU), Amarkantak, MP (24 March 2024.).
6. Resource person, Participatory Rural Appraisal and Mixed Methods classes, CSSR Sponsored Ten Days Research Methodology Course (RMC), Department of HSS, NIT Rourkela (25th April, 2023).
7. Panel speaker, Agrarian Transition in Jharkhand: A Comparision of Issues of Land and Livelihoods among STs and non-STs, in the Panel-4 at the 64th Annual Conference of the Indian Society of Labour Economics (ISLE), School of Economics, University of Hyderabad, Telangana (29-31 March 2024).
8. Speaker, Introductions to SPSS, two-days National Workshop on "PYTHON AND SPSS FOR SCIENCE", Department of Physics and Department of Computer Science in collaboration with IQAC, Sidho-Kanho-Birsha University, Purulia (29th and 30th November 2023).
9. Speaker, Participatory rural appraisal and vulnerability assessment, Faculty Induction Programme being organized by MMTTC, IGNTU, IGNTU, Amarkantak, MP (4th March 2024 (Online)).
10. Resource person, PRA and Survey Methods, ICSSR sponsored Ten-Day Research Methodology Course (RMC), School of Humanities, Social Sciences, and Management (SHSS&M) at the Indian Institute of Technology (IIT), Bhubaneswar (7th June 2023).
11. Speaker, Tribes and Land Tenure Systems in Jharkhand: Continuity and Changes, Jharkhand Janajatiya Mahotsava 2023, RD Munda Tribal research Institute and Government of Jharkhand (9-11 August 2023).
12. Speaker, In Harmony with Nature: Exploring Shared Indian Philosophies and wisdom on Sustainable Resource Use and Conservation, Malavīya Mission-Teacher Training Programme (MM-TTP), Coimbatore Institute of Technology-MMTTC (9th March 2024).

ISHA DEWAN, SMU, Delhi

1. Tutorial Speaker, Reliability and Survival Analysis, International Workshop on Reliability Theory and Survival Analysis, Manipal Institute of Technology, (Dec 20-22, 2023).
2. Invited Speaker, Statistical models and methods for time-to-event analysis of health data, PCM birthday, Indian Councilof Medical Research (June 30, 2023).

ISSAN PATRI, SMU, Delhi

1. Academic Collaboration, von Neumann algebras and descriptive set theory, Collaborative Visit, Universite Paris Cite (13 June-31 July, 2023).

2. Academic collaboration, von Neumann algebras, Collaborative Visit, IIT Madras (2023).
3. Conference Speaker, Invited Speaker at Conference, Annual Meet of Ramanujan Mathematical Society, IIT Guwahati (December, 2023).

JAGADISH, SQCORU, Bangalore

1. Expert Speaker, Data Analytics for Mechanical Engineers, One Day Workshop on Data Analytics, Department of Mechanical Engineering, MVJ College of Engineering, Bangalore, Karnataka, India. on 27th July 2023 (2023).
2. Expert Talk, Optimization of Nanocomposite using Minitab, FDP, Department of Mechanical Engineering, Dept. of Mechanical Engineering, PES Institute of Technology and Management, Shivamogga, Karnataka, India on 12th December 2023 (2023).
3. Guest speaker, Design of Experiments for Mechanical Engineers, Workshop, Department of Mechanical Engineering, NITTE Meenakshi Institute of Technology, Yelahanka, Bangalore, Karnataka, India on 16th December 2023 (2023).
4. Resource speaker, 04 Experimental Design for Research Work, FDP, Karnataka Science and Technology Academy (KSTA), Department of Science and Technology, Government of Karnataka, Vidyaranayapura Post, Bangalore during a five day webinar on "Statistical Data Analysis for Research Work" on 18th January 2024 (2023).
5. Resource speaker, Introduction to Sampling Distribution & Estimation of Confidence Interval for Research Work, FDP, Karnataka Science and Technology Academy (KSTA), Department of Science and Technology, Government of Karnataka, Vidyaranayapura Post, Bangalore during a five day webinar on "Statistical Data Analysis for Research Work" for science & engineering Research Students/ teaching faculty on 22th January 2024 (2023).
6. Resource speaker, Challenges of Managing Supplies in Defence, Training Program, Defence Institute of Quality Assurance (DIQA) during Senior Quality Management Course on 19th February 2024 (2023).
7. Participated, Digital transformation of Supply Chain Management, AICTE-ATAL Sponsored Faculty Development Program on Digital transformation of Supply Chain Management, RVCE Bangalore (2023).
8. Convener, Selection interview for PLP recruitment, PLP recruitment for the start-up grant project, ISI Bangalore (2023).
9. Convener, Selection interview for Research Assistant recruitment for the ICSSR project, Selection interview for Research Assistant recruitment for the ICSSR project, ISI Bangalore (2023).
10. Member, Admission Committee, MSQMS-Admission Committee, SQC & OR Unit, ISI Bangalore (2023).
11. Observer, BMath (Hons) selection interviews, BMath (Hons) selection interviews held between 26th June and 6th July, 2023, ISI Bangalore (2023).
12. Supervisor, Modelling and Optimization of FDM Process using Machine Learning and Nature-Inspired Optimization Techniques, M.S Student Supervision, SQC & OR Unit, ISI Bangalore (2023).
13. Supervisor, Modelling and Optimization of Abrasive Waterjet Machining Process using integrated ML and Evolutionary Algorithms., M.S Student Supervision, SQC & OR Unit, ISI Bangalore (2023).
14. Supervisor, Fabrication and Experimental Investigation of Iron Ore Tailing and Granulated Blast Furnace Slag-Based Geopolymer Eco-friendly Bricks, M.Tech Student Supervision, SQC & OR Unit, ISI Bangalore with NIT Raipur (2023).

JAYDEB SARKAR, SMU, Bangalore

1. Conference, Plenary speaker, Workshop on Operator Theory, Complex Analysis, and Applications 2023 (WOTCA 2023), Evora, Portugal (July 2023).
2. Organization of a conference, Analysis, Operator Theory in Lille: a conference in honor of Dan Timotin., Lille, France (November 2023).

JIBAN K. PAL, LIBRARY, Kolkata

1. Resource Person, to deliver Invited Talks, Value Added Training Program on Information Literacy in Digital Era: from WWW to ChatGPT, under IQAC Program of the UGC, Government of India, Khudiram Bose Central College (KBCC), Kolkata (2023 (July 10 to 15)).
2. Session Chair, Information Resilience and FAIRIfication of Data, International Conference on Building Information Resilient Society in the Changing Information Ecosystem, University of Calcutta (March 27-28, 2024).

KAJAL DIHIDAR, SOSU, Kolkata

1. Master's Project Supervision, Project title: On a modification of a randomized response technique to estimate simultaneously two sensitive population proportions., Master's Project of students of Kalyani University, Not Applicable (2023).
2. Master's Project Supervision, Project title: Estimating the population means of two sensitive quantitative variables simultaneously based on two different models, Master's Project of students of Kalyani University, Not Applicable (2023).

KALPANA T M, LIBRARY, Chennai

1. Participation, The Role of Physical Library in the Era of Internet, Meeting, The Institute of Mathematical Sciences, Taramani (29th December 2023).

KINGSHOOK BISWAS, SMU, Kolkata

1. Teaching in workshop on Several Complex Variables, Several Complex Variables, Interactions in Several Complex Variables, IISER Pune (December 11th to December 13th, 2023).
2. Speaker in invited seminar talk, Loewner evolution of hedgehogs and 2-conformal measures of circle maps, TIFR weekly colloqium, TIFR Mumbai (December 14th, 2023).

KIRANMOY DAS, ISRU, Kolkata

1. Researcher, Research and Teaching, Statistics and Data Science, Beijing Institute of Mathematical Sciences and Applications (2023-24).

KISHOR CHANDRA SATPATHY, LIBRARY, Kolkata

1. Presented a paper entitled "Preserving and Ensuring Accessibility of Audio Visual Collection of Archives to Community for Sustainability", Southeast Asia-Pacific Audiovisual Archive Association 27th Conference, Mahatai Pattaya Convention Center, Thailand (10 -11 May, 2023)
2. Invited Speaker, Best Practices in LIS- A case Study of ISI Kolkata, National Librarians Day, IIM Bangalore (11 August, 2023).
3. Invited Speaker, Ethical and Legal Issue in Plagiarism, Special Lecture, Visva-Bharati (11 July, 2023).
4. Invited Speaker, Next generation Libraries and ICT, 5-Day Professional Development Program on "ICT Applications in Library and Information Science", Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore. (13 July, 2023).
5. Invited Speaker, The Day of Reading, Commemorative Programme in memory of P.N. Panicker, Gobardanga Hindu College (14 July, 2023).
6. Invited Speaker, Infrastructure and Inventory Control, National seminar, entitled "LiNE 2024", KULISAA and the Department of Library and Information Science, Kalyani University (15 March, 2024).
7. Invited Speaker, Innovative Library Spaces & Services, Refresher Course on 'Recent Trends and Technologies in LIS Education and Services', UGC-Human Resource Development Center, Doctor Harisingh Gour Vishwavidyalaya, Sagar. (2 September, 2023).
8. Invited Speaker, New Role of Libraries in Education and Research, Special Lecture, Assam University (22 December, 2023).
9. Chairman, Lessons from the life and philosophy of Dr. S. R. Ranganathan in the context of data-driven librarianship, 41st Study Circle Meeting of IASLIC, Kolkata (22 June, 2023).
10. Invited Speaker, Changing and New Role of Libraries, IASLIC 340th Study Circle Meeting, Kolkata (8 June, 2023).

KUNTAL GHOSH, MIU & CSCR, Kolkata

1. Invited Speaker, Complex Network: What it is Structurally & Statistically? History, Properties & Applications, Seminar on Network Science and Dementia, Bengal Cognitive School (19.04.2024).
2. Project Review & Steering Group Member, Development of an Integrated Solution for Automatic Assessment of Autism, Research Project (Budget 1.84 crores) implemented by Centre for Development of Advanced Computing (Kolkata & Noida) and National Institute for the Empowerment of Persons with Intellectual Disabilities (Divyangjan), and Regional Centre. NIEPID-Kolkata, Ministry of Electronics and Information Technology, Government of India (2020-2023).
3. Invited Talk, Visual Optics and Visual Perception: Where Optics Meets Visual Cortex, Raman Memorial Seminar, Sister Nivedita University (22.11.2023).
4. Invited Talk, From Experiments to Models: Your Blind Spot can be a Simple Object of Study to Partially Understand How We See, Seminar organized by Department of Physics, Brahmananda Keshab Chandra College, Department of Physics in collaboration with IQAC, Brahmananda Keshab Chandra College (22.12.2023).
5. Invited Speaker, Building Humanoid Systems Require Deeper Insights in Human Information Processing: Case Studies in Vision, Session on My Story - Motivational Session, IIIC section of Narula Institute of Technology (29.11.2023).
6. Invited Lecture, From Neuron to Deep Neural Network: a scintillating journey (Part 1 and Part 2), AICTE Sponsored 5 Days online STTP on "Next Generation AI – Research Perspectives", NIT Nagaland (March 18-22, 2024).
7. Invited Speaker, Interplay of Extrinsic and Intrinsic Features in Blind-Spot Filling-In, International Conference on Trends in Optics & Photonics: In commemoration of Birth Anniversary of Professor Monoranjon De, Department of Applied Optics & Photonics, University of Calcutta (November 24-25, 2023).
8. Keynote Speaker, From Learning to Deep Learning, FDP on Advanced Machine Learning and its Applications, Dept. of Computer Science, Netaji Subhas & Engineering College, Kolkata
9. Special Session Chair, From Learning to Deep Learning, 10th International Conference on Pattern Recognition and Machine Intelligence (PReMI"23), Machine Intelligence Unit, ISI, Kolkata.

M KRISHNAMURTHY, DRTC, Bangalore

1. Resource Person, Digital Literacy, Hello Gelayare, Dooradarshna, Bangalore (8 Sept, 2023).
2. Resource Person, Digital Library: An overview, Training program for the Panchayat raj system Library staff, Organized by District Training Institute, Bangalore on Aug 4, 2023 (Aug4, 2023).
3. Resource Person, Cini-Samvada, Akashavani-All India Radio Program, All India Radio Program (Dec 1, 2023).

4. Visiting Scientist, Ontology Information System, Visiting Scientist series, Wee kim Wee School of Communication and Information, Nanyang Technology University, Singapore (July 5-14, 2023).
5. Resource Person, Cini-Samvada, Akashavani- Radio CiniSamvada, All India Radio, Bangalore (Nov24, 2023).

M SWAMINATHAN, EAU, Bangalore

1. Lecture, Food Security in India: New Challenges, K N Raj Memorial Lecture, Centre for Development Studies Thiruvananthapuram (Feb 5, 2024).
2. Lecture, New Issues in Rural Credit, C O Abraham Memorial Lecture, St Berchmann's College Changannachery (March 17 2024).
3. Lecture, Agriculture, Women and Work, School of Public and International Affairs MPP students, Columbia University (November 14 2023).
4. Visiting Professor, Lecture on Food Security, Seminar/ Lecture, Cornell University, Tata Cornell Institute for Agriculture and Nutrition (Sept-Nov 2023).

MALAY BHATTACHARYYA, MIU, Kolkata

1. Invited Speaker, Learning from the Microbial Environment, XICAI 2024, Bhubaneswar, India (Mar 01, 2024).

MATHEW C. FRANCIS, CSU, Chennai

1. Collaborative research, Krenn's Conjecture in graph theory, Visiting Prof. L. Sunil Chandran and his research group, Department of Computer Science and Automation, Indian Institute of Science, Bangalore (April 24 - May 4, 2023).
2. Collaborative research, Graph theory and graph algorithms, Visiting Prof. Martin Golumbic at the Caesarea Rothschild Institute, University of Haifa, University of Haifa, Israel (June 11-23, 2023).
3. Invited speaker, To deliver a plenary lecture, 2023 Haifa Workshop on Interdisciplinary Applications of Graphs, Combinatorics and Algorithms, University of Haifa, Israel (June 20-22, 2023).
4. Collaborative research, Graph coloring, Visiting Dr. Manu Basavaraju and his research group, Department of Computer Science and Engineering, NIT Surathkal (May 5-21, 2023).

MONALI MITRA PALADHI, LIBRARY, Kolkata

1. Paper presentation, Participatory Learning Space for Student Wellbeing: A Proposed Model for Academic Library, International Online Conference on Interdisciplinary Collaboration and Opportunities: Social Science, STEM and Information Science, Shankar Polytechnic College, Sankarnagar, Tirunelveli in association with San Jose State University School of Information, California and Society for the Advancement of Library and Information Science (28-29 February, 2024).

MONISANKAR BISHNU, EPU, Delhi

1. Research, Consumption externalities, taxes, education, Research visit, Australian National University, Australia (2024).

MOUTUSHI CHATTERJEE, SQCORU, Bangalore

1. Invited anonymous reviewer for some international Journals, i) Journal of Statistical Computation and Simulation, ii) Journal of Quality Technology (2023-2024).
2. Resource Person, 'Exploratory Data Analysis Using R', Short Term Course- Research scholars of Bangalore University, Malaviya Mission Teacher Training Centre (MMTTC), Bangalore University Centre (February, 2024).
3. Resource Person, Training to use Statistical Package R, Statistical Data Analysis for Research Work, Karnataka Science and Technology Academy (January, 2024).

NIKHIL RANJAN PAL, ECSU, Kolkata

1. Invited Speaker, To deliver an invited talk and have research discussion, Visiting Swinburne Intelligent Data Analytics Lab, Swinburne Intelligent Data Analytics Lab at Swinburne University of Technology, Melbourne, Victoria, Australia (6/2/2024 -10/2/2024).
2. Keynote Speaker, To Deliver a Keynote Speech, International Symposium on Fundamentals of Mathematics and Physics and Artificial Intelligence, China University of Petroleum, Qingdao, China (August 19, 2023).
3. Plenary Speaker, To deliver a Plenary Speech, 30th International Conference on Neural Information Processing (ICONIP 2023), Empark Grand Hotel Changsha, No. 199, Jintai Road, Kaifu District, Asia /Asia Pacific Neural Network Society (APNNS) (November 20-23, 2023).
4. Keynote Speaker, To Deliver a Keynote Speech, The 2023 International Conference on New Trend in Computational Intelligence, NTCI 2023, Qingdao, Kangda Haosheng Hotel, No. 159 Changjiang West Road, Huangdao District, Qingdao/China University of Petroleum (November 3-5, 2023).

NILADRI SEKHAR DASH, LRU, Kolkata

1. Guest Faculty, Digital Humanities, Intensive Course on Digital Humanities at the Centre for Translation and Digital Humanities (DHTraC), Ravenshaw University, Cuttack, Odisha, India. (02-05 March 2024).
2. Expert Member, Cognitive Science, Erasmus+iBrain Focussed Experts meeting for material development in Bilingualism and Cognition, University of Hyderabad (1 & 2 December, 2023.).
3. International Expert, Scientific Project Review, German-Serbian Collocation Dictionary for Foreign Language Learning and Teaching, Science Fund of the Republic of Serbia (10-15 August 2023).

4. Language Expert, Comprehensive Hindi to Hindi Dictionary, Development of Conceptual Equivalent words from Bengali for Hindi Shabd Sindhu (Comprehensive Hindi to Hindi Dictionary), Central Hindi Directorate, Dept. of Higher Education, Ministry of Education, New Delhi, Govt. of India, (12-13 April 2023.).
5. Guest Faculty, Linguistics, Special Course of Rudimentary Linguistics at the Dept. of English, Taki Govt. College, Taki, 24 Parganas (N), West Bengal, India. (14 December 2024.).
6. Invited Speaker, Special Invited lecture, CALTS's SoH Special Lecture, School of Humanities, University of Hyderabad, Telegana, (14 February, 2024.).
7. Co-Chair, International Conference, Language Resources and Evaluation: : 20th International Conference on Natural Language Processing (ICON-20), Goa University, Goa, India, (14-17 December 2023).
8. External Expert, Syllabus Review, Review of the Trends in Applied Linguistics (HS 725), Humanities and Social Sciences, Indian Institute of Technology Patna, Bihar, India (16-18 June 2023).
9. Invited Speaker, Translation Techniques, 5-Day long Translation Training Programme, Dept. of Comparative Indian Languages and Literature, Calcutta University, (19-21 December 2023.).
10. Invited Speaker, Guest Lecture, Interdisciplinary Academic Forum, Sister Nivedita University, Salt Lake, Kolkata, (20 September 2023).
11. Advisory Committee Member, International Conference, International Conference of the Linguistic Society of India (ICOLSI-45), Department of Linguistics, Aligarh Muslim University, Aligarh, India, (20-22 November 2023.).
12. Board of Studies Member, MA Linguistics Programme, MA Linguistics Programme, Dept of Linguistics, Central University of Rajasthan, Rajasthan, India., Dept of Linguistics, Central University of Rajasthan, Rajasthan, India. (2022/2024).
13. External Expert, RAC for the PhD program., RAC for the PhD program. School of Humanities, Management & Social Sciences, The Neotia University, Kolkata, The Neotia University, Kolkata (2022/2024).
14. Board of Studies Member, Academic Committee, Dept. of Mizo, Mizoram University, Aizawl-796004, Mizoram, India., Dept. of Mizo, Mizoram University, Aizawl-796004, Mizoram, India. (2023/2026).
15. Invited Speaker, International Seminar, International Mother Language Day, Sri Lanka Foundation Institute, Colombo, Sri Lanka, (21 February 2024.).
16. Invited Speaker, Special Lectures, 2-day National Conference on Ethnomedicine in Kerala, International Centre for Free and Open Source Software, Govt. of Kerala, Trivandrum (21-22 August 2023).
17. Linguistics Expert, CSTT, -day National Seminar on Scientific and Technical Terminology in Mathematics, Ministry of Education, Govt. of India, Darjeeling Government College, Darjeeling, West Bengal, India (21-22 March 2024.).
18. Invited Speaker, Special Lecture, Research and Publication Ethics, Sanskrit College and University, Kolkata, India, (22 June 2023.).
19. Invited Speaker, Refresher Course, Online Refresher Course on Language and Linguistics, Dept. of Linguistics, Osmania University, Hyderabad, India, (23 January to 06 February 2024.).
20. Linguistics Expert, CSTT, Finalization of Learner's Glossary (I-V), Commission of the Scientific and Technical Terminology, Ministry of Education, Govt. of India, CSTT Office, New Delhi. (24-25 April 2023.).
21. Panel Member, UGC NET, Test Development and Paper Setting: Linguistics (31): UGC-NET 2023:, National Testing Agency (NTA), Govt. of India, NTA Office, Okhla, New Delhi. (25-29 September 2023).
22. Invited Speaker, Digital Humanities, Post Congres Workshop on Anthropology and Digital Cultures., Department of Anthropology, University of Hyderabad, (26-27 October 2023.).
23. External Expert, Syllabus Review, Review of the 4-years Integrated BA in Linguistics, Dept. of Linguistics and Language Technology, Tezpur University, Tezpur, Assam, India (26-30 March 2024.).
24. External Expert, Interview, Selection of Faculty member, Utkala University of Culture, Bhubaneswar, (27-29 July 2023.).
25. Invited Speaker, Special Lecture, New Avenues of Linguistics and Language Technology, Centre for Linguistic Science and Technology, Indian Institute of Technology, Guwahati, Assam (28 April 2023).
26. External Expert:, Selection, Selection of Junior Research Fellow, School of Languages and Linguistics, Jadavpur University, (29 August 2023.).
27. Invited Speaker, Language and Culture, 3-Day International Conference on South Odisha History, Language and Culture on the Occasion of Bishwa Odia Bhasha Sammilani, Berhampur University, Odisha, (29-31 January 2024.).
28. Invited Speaker, International Conference, International Conference on New Frontiers in Techno-Humanities, Techno-Humanities Research Centre, Ip Ying To Lee Yu Yee School of Humanities and Languages, Caritas Institute of Higher Education, Hong Kong, (3-4 January 2024.).
29. Expert, Committee Meeting, Meeting on "Revisiting the Curriculum and Content of Translation Studies in the Light of National Education Policy-2020", School of Translation Studies and Training, IGNOU and Bharatiya Bhasha Samity, MoE, Govt. of India, (5-6 December 2023.).

30. Linguistics Expert, CSTT, Review of CSTT Principles for Terminology Preparation: Commission of Scientific and Technical Terminology (CSTT), Ministry of Education, Govt. of India, Odisha State Bureau of Text Book Preparation and Production, Bhubaneswar, Odisha. (7-10 January 2024).
31. Linguistics Expert, CSTT, Finalization of Fundamental Glossary of Linguistics (English-Hindi) for the Commission of Scientific and Technical Terminology, Ministry of Education, Govt. of India, held at CSTT Office, New Delhi. (7-11 August 2023).
32. Invited Speaker, Special Guest Lectures, PG Department of Linguistics and Department of Political Science, Berhampur University, Berhampur, Odisha, (7-8 November 2023.).
33. Linguistics Expert, CSTT, Finalization of Fundamental Glossary of Mathematics (English-Hindi-Bangla) for the Commission of the Scientific and Technical Terminology, Ministry of Education, Govt. of India, Indian Statistical Institute, Kolkata, (8-12 May 2023.).
34. Coordinator of West Bengal, Language Documentation, Swadesh Word List-100 Project of the Society for Endangered and Lesser-known Languages, (SEL-India) (https://selindia.org/#) (August-December 2023).
35. Invited Speaker, Guest Lecture, 15-day Summer School in Computational Linguistics, Central Institute of Indian Languages, Mysore, (June 19 - July 3, 2023.).
36. Advisor, Dictionary Compilation, Lexicographic Rules and Lexical Mapping: Bengali Dictionary Project., Oxford University Press, Oxford, UK (June-October 2023).

PRADIPTA MAJI, MIU, Kolkata

1. Speaker, Invited Talk, Faculty Development Programme on Real Life Applications of AI, ML and Data Science, National Institute of Technology, Warangal (April 2023).
2. Program Chair, Program Chair, 10th International Conference on Pattern Recognition and Machine Intelligence, ISI Kolkata (December 12-15, 2023).
3. Speaker, Keynote Talk, International Joint Conference on Rough Sets (IJCRS), Krakow, Poland (October 2023).

PRASANTA DUTTA, PAMU, Kolkata

1. To provide assistance in the 7th International Conference on Complex Dynamical Systems & Applications, 2024 (CDSA 2024), Topic : Complex Dynamical Systems & Applications; Type : Assistance, 7th International Conference on Complex Dynamical Systems & Applications, 2024 (https://www.isical.ac.in/~pamu/cdsa2024), Digha Science Centre & National Science Camp (25th to 27th January 2024).

PREETI PARASHAR, PAMU, Kolkata

1. To Chair a Session in an International Conference, Invited Session Chair, International Conference on Photonics, Quantum Information, and Quantum Communication, S. N. Bose National Centre for Basic Sciences, Kolkata (January 29 - February 02, 2024).

RABINDRANATH JANA, SRU, Kolkata

1. Supervisory jointly with Dr. Hari Charan Behera for three PG students, Teaching and training in (i) Statistical methods with applications and (ii) Social Networks and its Analytical Techniques, LoA Programme, RKMVERI, Narendrapur (2023-2024).
2. Member of Ph.D. Advisory Committee, RKMVERI, Narendrapur, To extend technical support and intellectual insights in the research programmes; attend the meetings of the Advisory Committee (roughly once a semester) and the Scholars' occasional seminars., Ph.D. works, RKMVERI, Narendrapur (April 2023-March 2024).

RAGHUNATH CHATTERJEE, HGU, Kolkata

1. Speaker, Real Time PCR and its applications, Invited Speaker, Department of Biophysics, University of Calcutta (Feb 22, 2024).
2. Board Member, INDIAN SOCIETY OF HUMAN GENETICS, Annual Conference, Gujarat Biotechnology Research Centre (Jan 23, 2024).
3. Speaker, Genetics and epigenetics for Mental and Neurological Healthcare Professional, Invited Speaker, NIMHANS, Bengaluru (Jul 03, 2023).
4. Speaker, Special Lecture, Invited Speaker, IPGME&R Kolkata (Jun 28, 2024).
5. Speaker, Mastering the Basics of BioinformaticsOne Day workshop on Mastering the Basics of Bioinformatics, One Day workshop, Department of Biochemistry, Asutosh College (May 30, 2023).

RAJAT KUMAR DE, MIU, Kolkata

1. To present outcome of DST-NSF project, Presentation, 2023 NSF-TIH Principal Investigators' Meeting, Baltimore, USA (2023).

RAMESH SREEKANTAN, SMU, Bangalore

1. Visting Scientist, Mathematics, Mathematics, Max Planck Institute for Mathematics (May 1, 2024–May 30 2024).

RITABRATA MUNSHI, SMU, Kolkata

1. Speaker in a conference, Circle method and subconvexity, Delta symbols and the subconvexity problem, American Institute of Mathematics, California Institute of Technology, California, USA (16-20 October, 2023).

RITUPARNA SEN, ASU, Bangalore

1. Visiting Associate Professor, Teaching and research, Visiting Faculty, University of California Santa Barbara (2023-24).
2. Invited talk, Bayesian Testing of Granger Causality in Functional Time Series, Statistics Colloquium, Rice University (March 25, 2024).
3. Invited talk, Copula estimation for nonsynchronous financial data, Market Microstructure, Quantitative Trading, High Frequency and Large Data, University of Chicago (May 2-4, 2024.).

SABYASACHI BHATTACHARYA, AERU, Kolkata

1. Delivering Lecture, Applied Multivariate Data Analysis, Lecture on Applied Multivariate Data Analysis, University of Burdwan (10th Feb 2024).
2. Workshop, Data Analysis, Statistical Methods and Exploratory Data Analysis for Social Scientists: A Hands-On R Workshop, Tura Campus, Department of Management & Placement And Counseling Cell, North-Eastern Hill University, Meghalaya. (20-25 Nov, 2023).
3. Workshop, Application of Statistics and Machine Learning, DST SERB High-end Workshop on Application of Statistics and Machine Learning in Environmental Research., ISI Tezpur campus (4-10 March, 2024).
4. Delivering Lecture, Professor Prasanta Chandra Mahalanobis Memorial Lecture, Professor Prasanta Chandra Mahalanobis Memorial Lecture, Durgapur Government College (9th January, 2024).

SAGAR SIKDER, SQCORU, Mumbai

1. Consultation, Project handholding sessions, Consultancy Project, Deepak Fertilizer Limited, Mumbai (Sep 2023 - Mar 2024).

SAMIR KUMAR NEOGY, SQCORU, Delhi

1. Invited Speaker, Applications of Static and Dynamic games in Decision Making, Monthly Mathematics Lecture Series-5, School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi (29 dec 2023).
2. Invited talk, On some open problems involving network data in data science, International conference on Statistics, data science and Reliability Exporing trends Methods and Applications, MD University, Rohtak (Dec 24-26, 2023).

SANDIP MITRA, SOSU, Kolkata

1. Invitation to act as Moderator during Joint Sessions of IAS OTs 2022 Batch & 2023 Batch, IAS Probationers'presentation, IAS(P) Officer Training, Administrative Training Institute, Govt of West Bengal, Kolkata May 6, 2024.
2. Academic Advice by ISI team (Nachiketa Chattopadhyay, Debasis Sengupta, Ranjan Set, Sandip mitra, Alak Kar)), Developing design for proposed International Passenger Survey, meetings, ISI at the request of Ministry of Tourism, Govt of India (2024).
3. Providing guidance for Tripura Institution for Transformation (TIFT) under Niti Aayog, Expression of Interest to onboard ISI as LKI/TIFT/SSM/NITI Aayog, Proposed collaboration involving Debasis Sengupta, Nachiketa Chattyopahyay, Sandip Mitra, Ranjan Seth, TIFT online (2024).
4. Guidance for Field work of students of State Labour Institute, Human Resources Management: Field Visit to an Autonomous Govt Funded Institute to Understand Ground Realities, PGHRD &LW, SOSU and CE Office, ISI (30/04/2024-04/05/2024).

SANGHAMITRA BANDYOPADHYAY, MIU, Kolkata

1. Invited Talk, "Metaheuristics in Optimization and Applications: Multiple Objectives and Modality", FUZZ-IEEE, IEEE Fuzzy Systems Society,Incheon, Korea (Aug 13- Aug 17, 2023).
2. Academic visit and invited talk, "Multiobjective Optimization and Beyond: Methods and Applications", Invited Talk, University of Technology Sydney, Australia, University of New South Wales, Canberra campus, Australia (May 31, 2023 - June 9, 2023).
3. Keynote Lecture, Machine Learning Approaches for Improving the Quality of Healthcare, IEEE SMC Conference, IEEE SMC Society, Hawaii, USA (September 30-October6, 2023).

SANJIT MAITRA, TASU, Tezpur

1. Symposium, Remote Sensing for Agriculture, Ecosystems, and Hydrology XXV, SPIE Sensors+Imaging, Amsterdam, Netherlands (September, 2023).

SANKAR KUMAR PAL, CSCR, Kolkata, Emeritus Professor; National Science Chair; Ex-Director, President, ISI

1. Invited Talk and collaborative research, Pattern recognition and AI, Image/video processing, and Granular mining, Knexus Research Corporation, MD, USA (30 May – 08 June 2023)
2. Collaborative research, Artificial intelligence and machine learning, Arndit Ltd., St John's Innovation Center, Cambridge, UK and Cambridge University, UK (01 Aug – 01 2023)
3. Invited interview atCambridge University Central library, Research project titled 'Commonwealth Students, UK Higher Education and Global Knowledge Making 1950-2000', funded by the Economic and Social Research Council (ESRC), UK, University of Leicester and the University of Warwick, UK, in collaboration with the British Library, Cambridge University Library, Cambridge, UK,. (The recorded interview is deposited in the British Library Sound Archive as an oral history resource.) (17 Aug 2023)

4. Chief Guest and Keynote speech, CSIR's "JIGYASA" (a flagship programme of CSIR on student-scientist connect) on "AI based activities" for school and college students, CSIR-Central Electrochemical Research Institute (CECRI), Karaikudi, Tamil Nadu, India (30 August 2023)
5. Keynote speaker, Workshop on Deep Learning Applications for Smart Cities, NIT Rourkela (11 September 2023)
6. Chief Guest and Convocation Address, Annual Convocation, Ram Krishna Mission Vivekananda Centeneray College, Rahara, West Bengal (29 September 2023)
7. Keynote talk, 6th Int. Conf. on Electrical Information and Communication Technology (EICT-2023), Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh (07-09 December 2023)
8. Guest Speaker, Kshitij 2024, Annual Techno-management Symposium of IIT Kharagpur (21 Januar 2024)
9. Distinguished Lecture, Bennett University (Times of India Group), Greater Noida (08 February 2024)
10. Inaugural Keynote talk, International Conference on Industrial Engineering & Analytics (ICONIEA 2024), IIT Kharagpur (16 February 2024)
11. Keynote Talk, 8th Int. Conf. on Artificial Intelligence, Automation and Control Technologies (AIACT 2024), Phuket, Thailand (29 February – 02 March 2024)
12. Invited Talk and collaborative research, Texas A&M University at Qatar, Doha, Qatar (23-26 March 2024)

SHANTA LAISHRAM, SMU, Delhi

1. Problem Coordinator, IMO 2023, International Mathematics Olympiad (IMO) 2023, Chiba, Japan (08-12 July 2023).
2. Academic & Research Collaboration, Number Theory, Academic Visit, Nihon University, Japan (12-20 July 2023).
3. Workshop, Arithmetic Dynamics, Workshop Arithmetic Dynamics, KSOM Kozhikode (15-20 May 2023).
4. Academic & Research Discussions, Number Theory, Academic Visit, NISER Bhubaneswar (20-22 April 2024).
5. Academic Visit, Number Theory, Academic Visit, Chiba University, Japan (20-23 July 2023).
6. Collaborative Visit, Number Theory, Academic Visit, IMSc Chennai (21-27 January 2024).
7. Conference, Conference, the 9th SEAMS-UGM 2023 International Conference on Mathematics and Its Applications, UGM, Yogyakarta, Indonesia (25-28 July 2023).
8. Academic and Research Discussions, Diophantine Equations and Recurrence Sequences, Academic Visit, Manipur University, Imphal (3-6 April 2023).
9. Workshop, Workshop, Words and Transcendence - II, HRI Prayagraj (5-11 February 2024).
10. Collaborative Visit, Number Theory, Academic Visit, BITS Goa (6-10 September 2023).
11. Resource Generation Camp, Mathematics Olympiad, Resource Generation Camp, IOQM, Homi Bhabha Centre for Science Education, TIFR, Mumbai (6-9 March 2024).
12. Workshop, Workshop, Workshop on "Words and Transcendence", KSOM Kozhikode (7-12 August 2023).
13. Academic Collaboration, Number Theory, Academic Visit, IMSc Chennai (7-13 December 2023).

SHUBHRA SANKAR RAY, MIU, Kolkata

1. Coordinator, Coordinator of Project Review Committee, Committee on Electrical, Electronics and Computer Engineering (PAC-EECE) of Science and Engineering Research Board (SERB), SERB DST (20/07/2023).

SM SUBHANI, SQCORU, Hyderabad

1. As an expert to derive ranking formula for online examinations of TSPSC, To derive ranking formula for normalization of online examinations in multi-sessions., Experts meet, Telangana State Public Service Commission (TSPSC) (Two days; 10th April 2023 and 25th May 2023).

SOUMYANETRA MUNSHI, ERU, Kolkata

1. Seminar, Conflict with Third-Party Intervention and Revenge: A Game-Theoretic Exploration, Departmental Seminar, IIT Kanpur (April 6 2023).

SUJATA GHOSH, CSU, Chennai

1. Academic visit, PhD guidance of a student, Tsinghua-Amsterdam Joint Research Center in Logic, Tsinghua University, Beijing, China (April - June, 2023).
2. Invited Speaker, Logic, World Logic Day Celebration Event, Madras School of Economics, Chennai, India and Online (January 20 and 27, 2024).
3. Programme Committee Member, Peer Review, 7th International Workshop "Women in Logic", Rome, Italy (July 1, 2023).
4. Programme Committee Member, Peer Review, 29th Workshop on Logic, Language, Information and Computation (WoLLIC 2023), Halifax, Canada (July 11-14, 2023).
5. Invited Speaker, Logic, The Tsinghua Logic Summer School, Tsinghua University, Beijing China (June 26-30, 2023).
6. Programme Committee Member, Peer Review, Theoretical Aspects of Rationality and Knowledge (TARK 2023), University of Oxford, UK (June 28-30, 2023).
7. Programme Committee Member, Peer Review, 6th Asian Workshop on Philosophical Logic, Sapporo, Japan (March 4-6, 2024).
8. Programme Committee Member, Peer Review, 20th Pacific Rim International Conference on Artificial Intelligence (PRICAI 2023), Jakarta, Indonesia (November 15-19, 2023).

9. Invited Speaker, Logic, 9th International Conference on Logic, Rationality and Interaction, Shandong University, Jinan, China (October 26-29, 2023).
10. Programme Committee Member, Peer Review, 9th International Conference on Logic, Rationality and Interaction (LORI 2023), Jinan, China (October 26-29, 2023).
11. Programme Committee Member, Peer Review, 5th International Conference on Logic and Argumentation (CLAR 2023), Hangzhou, China (September 10-12, 2023).
12. Attending PhD Defense and Invited Speaker, Logic, PhD Defense of Lei Li and JRC Joint PhD Celebration Event, University of Amsterdam (September 11 and 12, 2023).
13. Programme Committee Member, Peer Review, Dynamic Logic - New trends and applications (DaLí 2023), Tbilisi, Georgia (September 15-16, 2023).
14. Academic Visit, Large Language Models, Discussion at ANITI with Nicholas Asher and his group, Toulouse, France (September 15-18, 2023).
15. Programme Committee Member, Peer Review, 26th European Conference on Artificial Intelligence (ECAI 2023), Kraków, Poland (September 30 - October 4, 2023).

SURESH NAYAK, SMU, Bangalore

1. Invited Lecturer at Workshop, Residues and Trace maps in Grothendieck duality, Dualities in Topology and Algebra, International Centre for Theoretical Sciences, Bangalore (2023 May 15th - 26th).

SUSHMITA MITRA, MIU, Kolkata

1. Keynote talk, Keynote talk, Harnessing artificial intelligence for healthcare, IWAIA, Doha, Qatar (December 09, 2023).
2. Academic, Research collaboration, NA, Purdue University (February 10- March 10, 2024).
3. Academic, Research collaboration, NA, Lake Forest College (February 10- March 10, 2024).
4. Academic, Research collaboration, NA, University of Iowa (February 10- March 10, 2024).
5. Keynote talk, From learning to deep learning, FDP, Netaji Subhash Engg College Kolkata (January 10, 2024).
6. Keynote talk, Harnessing AI for Healthcare, International Conference on Knowledge for Sustainable Development, University of Hyderabad (January 19, 2024).
7. Keynote talk, Harnessing AI for Healthcare, IEEE CIS Inaugural Workshop on Women in AI, IIT Indore (January 22, 2024).
8. Invited talk, Life is a Journey, International Women in Engineering Day, IEEE WIE Bhubaneswar Chapter (June 16, 2023).
9. Attending Webinar, Webinar, Harnessing artificial intelligence for healthcare, Mongolian Society of Artificial Intelligence in Medicine (May 05, 2023).
10. Keynote talk, Harnessing AI for Healthcare, 8th International Conference CVIP, IIT Jammu (November 4, 2023).
11. Tutorial talk, Other Pieces of the Puzzle: Research Funding, Publishing, Mentoring, 3rd IEEE International Conference on Emerging Techniques, Mahindra University, Hyderabad (September 21, 2023).

SWAGATAM DAS, ECSU, Kolkata

1. Plenary Lecture, On the Transformative Landscape of Generative AI, AI Journey Conference, Sber Bank COnsortium, Russia (2023).

SWAPAN RANA, PAMU, Kolkata

1. To Chair a Session in an International Conference, Invitational, International Conference on Photonics, Quantum Information, and Quantum Communication (PQIQC-2023), S. N. Bose National Centre for Basic Sciences, Kolkata (January 29 - February 02, 2024).

T. KARTHICK, CSU, Chennai

1. Workshop, Invited Speaker, Recent Trends on Applied Mathematics, St.Joseph's College of Engineering (August 25, 2023).
2. Conference, Invited Speaker, International Conference on Graph Innovations, Bharata Mata College, Cochin (December 16, 2023).
3. Conference, Invited Speaker, International Conference on Graph Theory and its Applications, Amrita Vishwa Vidyapeetham, Coimbatore (December 18-20, 2023).

TANVI JAIN, SMU, Delhi

1. Workshop Organizer and Speaker, Organized an NCM workshop jointly with Dr. J.S. Matharu and delivered 3 lectures of 1.5 hours each, NCM Workshop on Matrix Theory, NCM held at Panjab University (December 18-23, 2023).
2. Invited Speaker, Invited talk, Frontier Symposium in Mathematics, IISER TVM (February 17-19, 2023).
3. Invited Speaker, Talk for research scholars and M.Sc. students in Mathematics, Mathematics talk, NiT Jalandhar (March 14, 2023).
4. Invited Speaker, Invited talk, Celebrating Women in Mathematics, Jawaharlal Nehru University (May 19, 2023).
5. Invited speaker, Popular Math talk, Summer School for Women in Mathematics and Statistics, ICTS Bangalore (May 29-June 9, 2023).
6. Invited Speaker, Talk at conference, International Conference on Pure and Applied Mathematics (ICPAM 2023), NIT Jalandhar and MNIT Jaipur (October 26-28, 2023).
7. Invited speaker, Invited talk, 2nd International Conference on Mathematical Analysis and Applications in Modeling (ICMAAM 2023), Jadavpur University (October 9-11, 2023).

TAPAN KUMAR MANDAL, LIBRARY, Kolkata

1. Delivering lectures/class for BLISc Students, Academic Cousellor, NSOU, Dewey Decimal Classification-Practice, Bijoy Krishna Girls College, Howrah (2023-).
2. Reviewer, College Libraries, UGC-CARE Enlisted Peer-reviewed Quarterly Journal, Reviewing scientific article, Evaluation of scientific articles, WBCLA, Kolkata (2023-).
3. External Expert, Evaluation Committee for procurement of books in the library at NILD, Book Selection Committee, NILD, Kolkata (March2023-).

TARUN KABIRAJ, ERU, Kolkata

1. Speaker to deliver key note address in a National Seminar, Delivered Key Note Address at Rabindra Bharati University, Seminar on "Contemporary Issues in Development Economics", Dept. of Economics, Rabindra Bharati University (19-20 February, 2024,).
2. Chairperson,Technical Session 1 on Microeconomics, Conference at Jadavpur University, Chairing a Technical Session on Microeconomics, Conference on "Contemporary Issues in Development Economics", Deparment of Economics, Jadavpur University (21-22 December, 2023).
3. External Member of the Advisory Committee, National Conference at Narula Institute of Technology, Planning in organizing a Two-day National Conference, Two-day National Conference on "Contemporary Issues and Challenges in Management & Technology", Dept. of Business Administration, Narula Institute of Technology, Kolkata (22-23 November, 2023).
4. Speaker to deliver key note address, Conference, Narula Institute of Technology, Deliver Key Note Address at National Conference, National Conference on "Contemporary issues and challenges in management and technology, Department of Business Administration, Narula Institute of Technology, Kolkata (22-23 November, 2023).
5. External member, Board of Studies, Dept. of Economics, Jadavpur University, Provide inputs to implement academic programs of the Department throughout the year, Meeting of the Board of Studies, Dept. of Economics, Jadavpur University, Department of Economics, Jadavpur University (Different dates during 2023-24).

TILAK NAYAK, HGU, Kolkata

1. Sample Collection, Patient Blood Sample Collection, Sample Collection, Howrah and Khanpur, Head HGU (2023-2024).
2. Organizing a workshop, DNA Methylation and Gene Expression Analysis, Workshop, HGU, Kolkata (Feb 16-17, 2024).

TRIDIB KUMAR MONDAL, GSU, Kolkata

1. Academic Resource Person, Field Training Instructor, Geological Field Work, Geological Survey of India (Govt. of India) (2023 onwards).
2. Research Advisory Committee (RAC) meetings, Evaluating Doctoral students, Member of the RAC, Research Advisory Committee (RAC) member Jadavpur University (2023 onwards).

TRIDIP RAY, EPU, Delhi

1. Invited Seminar, Invited Seminar, Department Seminar Series, Department of Economics, Ashoka University (November 29, 2023).

UJJWAL BHATTACHARYA, CVPRU, Kolkata

1. Paper presentation and conference attendance, Conference Participation, 2023 IEEE International Conference on Image Processing (ICIP), Kuala Lumpur, Malaysia (2023 / 08-11 October 2023).

UMAPADA PAL, CVPRU, Kolkata

1. Collaborative research, Scientific, Nil, University of Malay, Malaysia (2023/2024).
2. Collaborative research, Scientific, Nil, Jiangnan University, China (2023/2024).

UTPAL GARAIN, CVPRU, Kolkata

1. Invited Talk, Generative AI and Large Language Models, Capital One Technology Seminar, Capital One Datalabs India, Bangalore (2023).
2. Examiner, Thesis title: Automated Gender Bias Identification in Textbooks by Sudeshna Das, PhD Thesis review, Computer Science and Engineering Deptt., IIT Kharagpur (2023).
3. Examiner, Thesis title: Applications of Ubiquitous and Interactive Systems in Smart Education by Pragma Kar, PhD Thesis review, Jadavpur University (2023).
4. MS Thesis Examiner, Thesis title: ANALYZING STUDENT BEHAVIOR ON VIDEO LECTURES: AN EYE TRACKING-BASED STUDY by Anisha Kumari Nehra, MS Thesis examiner, CSE, IIT Kharagpur (2023).
5. Invited Talk, Large Language Models: their benefits and limitations, Birth Centenary Celebration of Professor A. K Choudhury, Dept. of Computer Science and Engineering, University of Calcutta (2024).

YOGESHWARAN DHANDAPANI, SMU, Bangalore

1. CNRS Visiting Fellowship, Euclidean combinatorial optimization, CNRS Visiting Fellowship, University Paris Cite (2023).
2. Conference, Theoretical Computer Science, FSTTCS, IIIT Hyderabad (2023).
3. Talk to Students, Hyperuniformity, Colloquium, SSSIHL, Puttaparthi (2023).

6.5 Visiting Scientists

The following Visiting Scientists, Post-doctoral and Faculty Fellows were associated with the various Divisions in the Institute during 2023-24

Applied Statistics Division (ASD)

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
1	Saparya Suresh	IIM Kozhikode	5-10 February 2024.	ASU, Chennai	We have initiated some work on semi-variance and categorical Gini correlation. The work is available in the archive and available at the links https://arxiv.org/abs/2401.09816 and https://arxiv.org/abs/2402.18105
2	Debjoy Thakur	IIT Tirupati	April 01 – August 09, 2023	ISRU, Kolkata	
3	Banasri Basu	ISI Kolkata	May 10, 2023 - March 31, 2024	ISRU, Kolkata	
4	Rakesh Ranjan	Banaras Hindu University	September 01 – November 30, 2023	ISRU, Kolkata	

Biological Sciences Division (BSD)

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
1	Sayani Majumder	Indian Statistical Institute	Oct 01, 2023 - Mar 31, 2024	HGU, Kolkata	Mazumder S, Basu B, Ray JG and Chatterjee R. (2023). MiRNAs as non-invasive biomarkers in the serum of Oral Squamous Cell Carcinoma (OSCC) and Oral Potentially Malignant Disorder (OPMD) patients. Archives of Oral Biology; 147: 105627

Computer and Communications Sciences Division (CCSD)

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
1	Sumit Roy	Professor, Dept. of Elect. & Comp. Eng. Fundamental of Networking Lab, University of Washington, Seattle.	03/01/2023	ACMU, Kolkata	
2	Subhadip Bandyopadhyay	Principal Data Scientist Ericsson R&D (GAIA)	04/05/2023	ACMU, Kolkata	
3	Dipayan Chakraborty	Universite Clermont-Auvergne, France	10/01/2024	ACMU, Kolkata	
4	Aduri Pavankumar	Iowa State University	11/03/2024	ACMU, Kolkata	
5	Debabrata Basu	INRIA, France	11/07/2023	ACMU, Kolkata	
6	Kuldeep Meel	Professor, National University of Singapore.	12/06/2023	ACMU, Kolkata	
7	Rathish Das	Assistant Professor, University of Liverpool.	16/05/2023	ACMU, Kolkata	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
8	Rineke Verbrugge	Senior Professor, Logic and Cognition, University of Groningen, Netherlands	17/10/2023	ACMU, Kolkata	
9	Swaroop Ghosh	B.E. from IIT, Roorkee and Ph.D. from Purdue.	20.11.2023	ACMU, Kolkata	
10	Aniket Basu Roy	Postdoc at Aarhus, Denmark	21/08/2023	ACMU, Kolkata	
11	Shibashis Guha	Reader, Tata Institute of Fundamental Research, Mumbai	21/12/2023 and 22/12/2023	ACMU, Kolkata	
12	ABIRA SENGUPTA	Otago University, New Zealand	21st Feb - 31st March 2024	CVPRU, Kolkata	
13	Arpan Chattopadhyay	Assistant Professor, Electrical Engineering Department, IIT Delhi.	27/03/2023	ACMU, Kolkata	
14	N. V. Vinodchandran	Professor, The School of Computing, University of Nebraska-Lincoln.	30/06/2023	ACMU, Kolkata	
15	Sumathi S.M.	IIT, Chennai	April 2023 to Sept 2023	CSRU, Kolkata	
16	Satchidananda Dehuri	Fakir Mohan University	Dec 14, 2021 to Dec 13, 2024 as SERB TARE Fellow	MIU, Kolkata	Publications: Conference: A. K. Behera, S. Dehuri, and A. Ghosh, " Surrogate-Assisted Multi-objective Genetic Fuzzy Associative Classification by Multiple Granularity Measures ", In Proceedings of 2023 International Conference for Advancement in Technology (ICONAT) Goa, India, pp.1-9, 2023, Journal: H Dutta, S Bilgaiyan, BSP Mishra, S Dehuri, A Ghosh, " Genetically Optimized UFLANN for Uncovering Clusters", IEEE Access, vol.11, pp.95432-95442, 2023.
17	Anirban Ghatak	ISI, Kolkata	Dec 2022 to May 2023	CSRU, Kolkata	
18	Sumanta Ray	Ghani Khan Choudhury Institute of Engineering & Technology (GKCIET)	Dec 9, 2021 to Dec 8, 2024 as SERB TARE Fellow	MIU, Kolkata	Authored Book: Anirban Mukhopadhyay, Sumanta Ray, Ujjwal Maulik, Sanghamitra Bandyopadhyay, Multiobjective Optimization Algorithms for Bioinformatics, Springer Singapore, ISBN 978-981-97-1630-2 Published: 29 May 2024. Book Chapter: Saurav Guha, Alexander Petersen, Sumanta Ray, Saumyadipta Pyne,On Rao's Weighted Distributions for Modeling the Dynamics of Wildfires and Air Pollution, In book: Applied Linear Algebra, Probability and Statistics (pp.379-394) Chapter: 18Publisher: Springer, Singapore.

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
					Conference Proceedings: 1. Lutfunnesa Khatun, Sk Md Mosaddek Hossain, Sumanta Ray, Anirban Mukhopadhyay, An Autoencoder-based Deep Learning Approach for Classifying Colon and Rectum Adenocarcinoma, 2023 IEEE 14th International Conference on Computing Communication and Networking Technologies (ICCCNT) 2. Syed Alberuni, Sumanta Ray, An Autoencoder-based Deep Learning Approach for Classifying Colon and Rectum Adenocarcinoma, International Conference on Computational Intelligence in Communications and Business Analytics, 259-272, Publisher:Springer Nature Switzerland
19	Malvin Gattinger	University of Amsterdam	Feb 19-23, 2024	CSU, Chennai	
20	Anirudha Biswas	ISI, Kolkata	From Jan 2024 to March 2024	CSRU, Kolkata	
21	Susanta Samanta	ISI, Kolkata	From Jan 2024 to March 2024	CSRU, Kolkata	
22	Sk. Md. Mosaddek Hossain	Aliah University	Jan 10, 2024 to Jan 9, 2027 as SERB TARE Fellow	MIU, Kolkata	
23	Debamita Kumar	Heritage Institute of Technology	Jan 9, 2024 to Feb 20, 2024	MIU, Kolkata	Publication: D. Kumar and P. Maji, "Discriminative Deep Generalized Dependency Analysis for Multi-View Data," _IEEE Transactions on Artificial Intelligence_, vol. 5, no. 4, pp. 1857-1868, April 2024, doi: 10.1109/TAI.2023.3306739.
24	A. R. D. Prasad	Indian Statistical Institute, Bangalore	Jan – June 2024	DRTC, Bangalore	
25	Archana Mathur	Nitte Meenakshi Institute of Technology, Bangalore	Jan – June 2024	DRTC, Bangalore	
26	Saiful Amin	Semantic Consulting Services Pvt. Ltd.	Jan – June 2024	DRTC, Bangalore	
27	Subhash Reddy	PES University	July - Dec 2023	DRTC, Bangalore	
28	M P Satija	Guru Nanak Dev University, Amritsar	July - Dec 2023	DRTC, Bangalore	
29	Ashok Y Asundi	Bangalore University	July - Dec 2023	DRTC, Bangalore	
30	Khaiser Jahan Begum	University of Mysore	July - Dec 2023	DRTC, Bangalore	
31	Biswajit Chakraborty	ISI, Kolkata	July 2023 to Sept 2023	CSRU, Kolkata	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
32	Nandish Chattopadhyay	NTU, Singapore	March 2023 to June 2023	CSRU, Kolkata	
33	Soumak Biswas	IIT Roorkee	Nov 2022 to June 2023	CSRU, Kolkata	
34	Pritam Chattapadhyay	NTU, Singapore	Nov 2023 to Jan 2024	CSRU, Kolkata	
35	Sanjib Ghosh	Beijing Academy of Quantum Information Sciences, China	October 17, 2023	ACMU, Kolkata	
36	Subhadip Singha	ISI, Kolkata	Sept 2023 to Oct 2023	CSRU, Kolkata	
37	Samir Kundu	ISI, Kolkata	Sept 2023 to Oct 2023	CSRU, Kolkata	

Physics and Earth Sciences Division (PESD)

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/ Publications of Visiting Scientists
1	Sanjukta Chakravorti	Natural History Museum at Stuttgart, Germany	Feb 01 – 31 May 31,2024	GSU, Kolkata	
2	Roland Sookias	Museum fürNaturkunde - Leibniz Institute for Research on Evolution and Biodiversity, Germany	Feb 27-Mar 02,2024	GSU, Kolkata	
3	Sayantan Nag Chowdhury	Constructor University, Bremen, Germany	Jan 02 - Mar 31, 2024	PAMU, Kolkata	
4	Paramita Mahapatra	National Institute of Technology Durgapur	Jan 3 - Mar 31, 2024	PAMU, Kolkata	
5	Rainer Schoch	Natural History Museum at Stuttgart, Germany	Mar 11-Mar 23,2024	GSU, Kolkata	
6	Eudald Mujal Grané	Natural History Museum at Stuttgart, Germany	Mar 11-Mar 23,2024	GSU, Kolkata	
7	Lukasz czepinski	Polish Academy of Science, Poland	Mar 22-Apr 03,2023	GSU, Kolkata	
8	Samantha Rigby	University College London, UK	Oct 30 –Nov 10,2023	GSU, Kolkata	
9	Anuja Kumari	Central University of Himachal Pradesh, India	Sep 22, 2023 - Mar 31, 2024	PAMU, Kolkata	
10	Sayan Kumar Pal	Tezpur University, India	Sep 25, 2023 - Mar 31, 2024	PAMU, Kolkata	

Social Sciences Division (SSD)

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/ Publications of Visiting Scientists
1	Kaushik Roy	Dept. of Computer Science, West Bengal State University, Barasat	12 January 2024	LRU, Kolkata	
2	Lakshmi Venkatesh	Sri Ramachandra University, Chennai, Tamil Nadu, India,	19-22 July 2023	LRU, Kolkata	
3	Avanthi Paplikar	Dr. S.R. Chandrasekhar Institute of Speech and Hearing, Bengaluru, Karnataka, India,	19-22 July 2023	LRU, Kolkata	
4	Sunila John	Manipal Academy of Higher Education, Manipal, Mangalore, Karnataka, India	19-22 July 2023	LRU, Kolkata	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/ Publications of Visiting Scientists
5	Maya Leela	Speech Language Pathologist and linguist. Thiruvananthapuram, Kerala, India	19-22 July 2023	LRU, Kolkata	
6	Manpreet Kaur	Speech Language Pathologist at Pauranik Neuro Center, Indore, India,	19-22 July 2023	LRU, Kolkata	
7	Manaswita Dutta	Rush University, Chicago, USA,	19-23 July 2023	LRU, Kolkata	
8	Arpita Bose	SPCLS, University of Reading UK,	19-25 July 2023	LRU, Kolkata	
9	Girish Nath Jha	Chairman, CSTT, Ministry of Education, Delhi	21-25 December 2023	LRU, Kolkata	
10	Amrita Bhattacharyya	Amity University, Salt Lake, Kolkata, India	7 November 2023	LRU, Kolkata	
11	Willima Wadhwa	ASER Centre	August 01, 2023 to October 31, 2023	EPU, Delhi	
12	Abhinash Borah	Ashoka University	August 01, 2023 to October 31, 2023	EPU, Delhi	
13	Siddharth Chatterjee	ISI, Delhi	August 03, 2023 to September 30, 2023	EPU, Delhi	
14	Bikas K. Chakraborty	Centre for Applied Mathematics & Computational Science, Saha Institute of Nuclear Physics, Kolkata	August 13, 2023 to July 12, 2024	ERU, Kolkata	
15	Mayuri Chaturvedi	Liverpool, United Kingdom	August 22, 2023 to September 07, 2023	EPU, Delhi	
16	Anand Murugesan	Department of Public Policy, CEU	August 27, 2023 to September 02, 2023	EPU, Delhi	
17	Digvijay Singh Negi	IGIDR, Mumbai	December 01, 2023 to December 31, 2023	EPU, Delhi	
18	Kuriath Sebastian James	Independent Researcher	December 04, 2023 to December 14, 2023	EPU, Delhi	
19	Utpal Kumar De	Department of Economic, North-Eastern Hill University, Shillong, Meghalya	December 20, 2023 to 18 January, 2024	ERU, Kolkata	
20	Arunava Sen	Ex. Professor ISI, Delhi	February 05, 2024 to August 04, 2024	EPU, Delhi	
21	HarshanT P	School ofSocial Science, TataInstitute of SocialSciences, Mumbai	February 1-May 31,2024	EAU, Bangalore	
22	Abhinandan Sinha	Ahmedabad University	February 19, 2024 to March 04, 2024	EPU, Delhi	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/ Publications of Visiting Scientists
23	Ankit Singh	ISI, Delhi	January 01, 2024 to March 31, 2024	EPU, Delhi	
24	Debapriya Sen	Department of Economics, Toronto Metropolitan University, Toronto, Canada	January 02, 2023 to 13 January, 2023	ERU, Kolkata	
25	Rahul Singh	Ahmedabad University	January 09, 2024 to February 08, 2024	EPU, Delhi	
26	Moumita Roy	Ahmedabad University	January 15, 2024 to February 14, 2024	EPU, Delhi	
27	Alok Johri	Independent Researcher	January 15, 2024 to March 14, 2024	EPU, Delhi	
28	Thirumulanathan D	Indian Institute of Technology, Kanpur	July 05, 2023 to July 14, 2023	EPU, Delhi	
29	Neha Bailwal	University of Gottingen	July 20, 2023 to October 19, 2023, November 04, 2023 to December 03, 2023	EPU, Delhi	
30	Anil K. Bera	Economics, University of Illinois, 225E David Kenley hall, 1407 W. Gregory Dr. Urbana, IL 61801, USA	July 30, 2023 to 10 August, 2023	ERU, Kolkata	
31	Satya Ranjan Chakravarty	SUN CITY, 105/1, Bidhan Nagar Road, Flat – 202, Block- D, Kolkata – 700067	June 01, 2022 to May 31, 2023	ERU, Kolkata	
32	Bhanu Gupta	Ashoka University	June 12, 2023 to August 31, 2023	EPU, Delhi	
33	Shrimoyee Ganguly	ISI, Kolkata	June 12, 2023 to June 23, 2023	EPU, Delhi	
34	Rittwik Chatterjee	Department of Economics, Gandhi Institute of Technology and Management, Bangalore	June 12, 2023 to June 25, 2023	ERU, Kolkata	
35	Sonal Yadav	Department of Economics, Umea University	June 27, 2023 to August 15, 2023	EPU, Delhi	
36	Aranya Chakraborty	Ahmedabad University	March 01, 2024 to March 15, 2024	EPU, Delhi	
37	Gautam Bose	UNSW, Sydney	March 01, 2024 to March 31, 2024	EPU, Delhi	
38	Kaushal Kishore	IISER, Bhopal	May 01, 2023 to July 31, 2023	EPU, Delhi	
39	Nirajana Mishra	Yale School of Management, Yale University	May 15, 2023 to June 14, 2023	EPU, Delhi	
40	Nishith Prakash	Northeastern University	May 15, 2023 to June 14, 2023	EPU, Delhi	
41	Sourav Bhattacharya	IIM Calcutta	May 28, 2023 to June 02, 2023	EPU, Delhi	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/ Publications of Visiting Scientists
42	Asad Islam	Director of the Centre for Development Economics and Sustainability (CDES) and a Professor at the Department of Economics, Monash University, Australia	November 06, 2023	ERU, Kolkata	
43	Sanket Patil	IIM Bangalore	November 16, 2023 to December 14, 2023	EPU, Delhi	
44	Wilima Wadwa	ASER Centre	November 16, 2023 to December 15, 2023	EPU, Delhi	
45	Abhinash Borah	Ashoka University	November 16, 2023 to December 15, 2023	EPU, Delhi	
46	Souvik Banerjee	Indian Institute of Technology, Bombay	November 28, 2023 to December 27, 2023	EPU, Delhi	
47	Arnab Bhattacharjee	Professor of Economics, Heriot-Watt University	Oct-Dec 2023	SOSU, Kolkata	
48	Prakarsh Singh	Plaksha University	October 04, 2023 to October 13, 2023	EPU, Delhi	
49	Mohammad Arshad Rahman	Indian Institute of Technology, Kanpur	October 29, 2023 to November 04, 2023	EPU, Delhi	
50	Ridhima Gupta	South Asian University New Delhi	September 01, 2023 to September 30, 2023	EPU, Delhi	
51	Priyanka Kothari	Tata Institute of Social Sciences	September 16, 2023 to September 25, 2023	EPU, Delhi	
52	Subrato Banerjee	Indian Institute of Technology, Mumbai	September 16, 2023 to September 25, 2023	EPU, Delhi	
53	Sofie Heintz	Department of Political Science, Zurich, Switcherland	September 18, 2023 to October 15, 2023	EPU, Delhi	
54	Jeevant Rampal	IIM Ahmedabad	September25, 2023 to October 24, 2023	EPU, Delhi	

Statistical Quality Control & Operations Research Division (SQC&OR)

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/ Publications of Visiting Scientists
1	Sonali Sharma	NIT, Jaipur	12 February, 2024 -03 May, 2024	SQCORU, Kolkata	
2	M. Seetharama Gowda	Department of Mathematics and Statistics, University of Maryland, Baltimore County, USA.	Aug 12-19, 2023	SQCORU, Chennai	

Theoretical Statistics and Mathematics Division (TSMD)

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
1	G V Krishna Teja, NBHM PDF	Harish Chandra Research Inst	01 April 2023 to 01 April 2024	SMU, Bangalore	Preprints: 1. G. Krishna Teja, Free-weights and Minkowski difference weight-formulas. G. Krishna Teja and Souvik Pal, Weights of Highest weight modules over Borcherds-Kac-Moody Lie Algebras
2	Sudeshna Basu	Loyala Univ USA	01 August 2023 to 26 August 2023	SMU, Bangalore	``Non-rough norms in operator spaces", S. Basu, B. Guerrero S. Seal and J. M. V. Yeguas, (To appear in Mediterranean Journal of Mathematics), 2023
3	Renjith T, NBHM PDF	IISc Bangalore	01 December 2023 to 01 December 2024	SMU, Bangalore	
4	Sangita Das, NPDF	SRM University	01 February 2024 to 01 February 2024	SMU, Bangalore	Orderings of extremes among dependent extended Weibull random variables, (2024) Probability in the Engineering and Informational Sciences, DOI: https://doi.org/10.1017/S02 Some new ordering results on stochastic comparisons of second largest order statistics from independent and interdependent heterogen eous distributions (2024), Stochastic Models in Probability and Statistics, 2024, (Accepted)
5	Shanola Smitha Sequeira	IIT Hyderabad	01 February 2024 to April 30 2024	SMU, Bangalore	Preprints: 1. R. Golla, H. Osaka, S. S. Sequeira, Denseness of a subclass of norm attaining operators, communicated
6	Abhishek Sarkar	IIT Kanpur	01 January 2023 to 31 July 2023	SMU, Bangalore	
7	Gobinda Sau	IISC Bangalore	01 January 2024 to 30 January 2024	SMU, Bangalore	Arxived an article" On harmonic maps from the complex plane to hyperbolic 3-space"
8	Mainak Ghosh, NBHM PDF	TIFR Mumbai	01 January 2024 to 31 March 2024	SMU, Bangalore	
9	Samir Kar, NBHM PDF	IIT Jammu	01 July 2021 to 30 June 2024	SMU, Bangalore	NBHM post doctoral fellowship, Jan-2021; ``Peripherally automorphic unital completely positive maps," Linear Algebra and its Applications, 678, 2023, 191–205 (with Prof. B. V. Rajarama Bhat and Dr. Bharat Talwar). ``Peripheral Poisson boundary"Communicated. arXiv: 2209.07731 (with Prof. B. V. Rajarama Bhat and Dr. Bharat Talwar).

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
10	Aryaman Sensarma	ISI BC	01 July 2023 to 30 September 2023	SMU, Bangalore	
11	Sudeep Podder	UM DAE CEBS	01 June - 04 August 2023 and 07-21 January 2024	SMU, Bangalore	Some observations on projective Stiefel manifolds.(Under preparation, jointly with Dr. Bikramjit Kundu)
12	Vivek Kumar, NBHM PDF	Kaust, Saudi Arabia	01 March 2022 to 01 March 2024	SMU, Bangalore	1.Stochastic fractional heat equation perturbed by general Gaussian and non-Gaussian noise.(https://doi.org/10.1016/j.spl.2022.109381). 2. Regularity and numerical approximation of fractional elliptic differential equations on compact metric graphs. (DOI: 10.1090/mcom/3929). 3. Well-posedness and uniform large deviation principle for stochastic Burgers-Huxley equation perturbed by a multiplicative noise.(https://arxiv.org/pdf/2302.06162.pdf).
13	Pankaj Dey	IISER, Thiruvananthapuram	01 March 2023 to 02 October 2023	SMU, Bangalore	
14	Sushant Pokhriyal	Shiv Nada Univ	01 March 2023 to 31 May 2023	SMU, Bangalore	
15	K. Arun Kumar	IISER Tirupathi	01 March 2024 to May 30 2024	SMU, Bangalore	
16	Devendra R	IIT Madras	01 Nov 2023 to 31 March 2024	SMU, Bangalore	
17	Ankita Jindal, NBHM PDF	IIT Delhi	01 November 2022 to 01 November 2024	SMU, Bangalore	Publications: 1. Ankita Jindal, Saranya G. Nair, T. N. Shorey, Extension of irreducibility results on Generalised Laguerre polynomials $L_{n}^{(-1-n-s)}(x)$, (2024) Publicationes Mathematicae Debrecen, to appear. 2. Ankita Jindal and Sudesh Kaur Khanduja, Discriminant and Integral Basis of Number Fields defined by Exponential Taylor Polynomials, Proceedings of the Edinburgh Mathematical Society (2024) pp. 1- 14. 3. Ankita Jindal and Nabin K. Meher, Arithmetic density and congruences of t-core partitions, Results In Mathematics, (2024) 79:4.
18	Sudip Ranjan Bhuia, NBHM PDF	IIT Hyderabad	01 November 2022 to 01 November 2024	SMU, Bangalore	Awards: 1. 2022, Selected for National Board of Higher Mathematics (NBHM) of Department of Atomic Energy (DAE) Post-Doctoral Fellowship. 2. 2022, Research Excellence Award for outstanding research performance in Ph.D in Mathematics, Department of Mathematics, IIT Hyderabad Publications of Visiting Scientists and NBHM PDF: 1. Sudip Ranjan Bhuia, Deepak Pradhan, and Jaydeb Sarkar, Characterizations of complex symmetric Toeplitz operators, https://arxiv.org/abs/2207.06192, (2022). 2. Sudip Ranjan Bhuia; Invariant subspaces of contraction with constant characteristic function. (Submitted for publication), (2023). 3. Sudip Ranjan Bhuia; Operators commuting with complex symmetric weighted composition operators on H^2, https://arxiv.org/abs/2310.09026, (2023). 4. Neeru Bala and Sudip Ranjan Bhuia; Norm attaining composition operators on Segal-Bargmann spaces, https://arxiv.org/abs/2402.15482, (2024) 5. Sudip Ranjan Bhuia; Factorization of anti-linear and C-normal operators, https://arxiv.org/abs/2403.02207, (2024).

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
19	Nilanjan Das, NBHM PDF	IIT kharagpur	01 November 2023 to 01 November 2024	SMU, Bangalore	
20	Arindam Sutradhar	Univ of Louisiana	02 February 2024 to 30 April 2024	SMU, Bangalore	
21	Oorna Mitra, NPDF	CMI CHENNAI	02 January 2023 to 31 May 2024	SMU, Bangalore	1. https://ems.press/journals/ggd/articles/14251106, INSPIRE Faculty Fellowship 2024, 2. NBHM Post Doc Fellowship 2024, 3. NBHM Travel Grant 2023 1. TA for MTTS Level 0 (2023), 2. TA for ATM School workshop on Groups and Computations (2023)
22	Sourav Sarkar	University of Cambridge	08 September 2023 to 11 September 2023	SMU, Bangalore	
23	Archita Mondal, NBHM PDF	SMU, ISI BC	1 November 2023 to 01 November 2024	SMU, Bangalore	one preprint: https://arxiv.org/abs/24.04.07500
24	Shankhadeep Mondal	IISER thiruva-nantapuram	10 February 2024 to 09 May 2024	SMU, Bangalore	
25	Chaitanya GK, INSPIRE FACULTY FELLOW	SMU, Bangalore, NBHM PDF	11 April 2023 to 11 April 2024	SMU, Bangalore	Publications: 1. B. V. Rajarama Bhat and Chaitanya Gopalakrishna, Iterative roots of malfunctions, Fundamenta Mathemacae, pp. 1-23. 2. Chaitanya Gopalakrishna, A note on convex solutions to an equation on open intervals, Aequationes Math., pp. 1-9. Awards: 1. IMU-CDC Individual Travel Support Grant 2023, International Mathematical Union
26	Aparna Pradeep	Cochin Univ	12 June 2023 to 11 December 2023	SMU, Bangalore	
27	Rajeeb Ranjan Mohanta	NISER Bhu-baneswar	13 July 2023 to 12 October 2023	SMU, Bangalore	
28	Arijith Dey	IIT Madras	14 June 2023 to 16 June 2023	SMU, Bangalore	
29	Jyothsnaa S, INSPIRE FACULTY FELLOW	CMI CHENNAI	15 May 2023 to 29 February 2024	SMU, Bangalore	Explicit upper bounds on the average of Euler-Kronecker constants of narrow ray class fields, N. Kandhil, R. Lunia, J. Sivaraman, Research in Number Theory 9(2023), Paper no: 69.
30	Bikramjit Kundu	IIT Roorkee	16 Jan - 15 July 2023 and 07 Jan - 21 Jan 2024	SMU, Bangalore	"W-triviality of low dimensional Manifolds" - Accepted in the journal Manuscript Mathematica.
31	Chaman Kumar Sahu	IIT Kanpur	17 August 2023 to 16 December 2023	SMU, Bangalore	
32	Archita Mondal	IITB	18 September 2023 to 31 October 2023	SMU, Bangalore	
33	Kannappan Sampath	Univ of Michigan	19 February 2024 to 18 May 2024	SMU, Bangalore	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
34	Poonam Ramnath Pokale	IIT Bombay	20 Dec 2023 to 31 May 2024	SMU, Bangalore	
35	Ankush Kumar Garg	IISER, Thiruvananthapuram	20 January 2023 to 24 May 2023	SMU, Bangalore	
36	Shubham Rastogi	IISc Bangalore	21 August 2023 to 20 November 2023	SMU, Bangalore	
37	Mainak Ghosh	Harish -Chandra Research Institute, Prayagraj	26 August 2023 to 03 September 2023	SMU, Bangalore	
38	Gopinath Sahoo	TIFR Mumbai	26 June to 2023 to 25 July 2023	SMU, Bangalore	
39	Snehashis Mukherjee	Ramakrishna Mission Vivekananda Educational and Research Institute	26 March 2024 to 19 April 2024	SMU, Bangalore	
40	Sunil Pasupulati	IISER thiruvanantapuram	29 September 2023 to 28 December 2023	SMU, Bangalore	
41	Prajakta Satish Sahasrabuddhe	IITB	3 July 2023 to 03 July 2024	SMU, Bangalore	
42	Samarpita Ray, INSPIRE FACULTY FELLOW	IISER Pune	30 January 2023 to 30 January 2024	SMU, Bangalore	1. Oliver Lorscheid, Samarpita Ray, The topological shadow of F1-geometry: congruence spaces, Mathematische Zeitschrift, Vol.306, No. 2, 30 (2024). 2. Divya Ahuja, Abhishek Banerjee, Surjeet Kour, Samarpita Ray, A Gabber type result for representations in Eilenberg-Moore categories, arXiv:2307.13201 (in communication 2024).
43	Selvakumar A, NBHM PDF	IIT Madras	31 June 2023 to 31 June 2024	SMU, Bangalore	Publications: 1. Abhijeet Ghanwat, Suhas Pandit and Selvakumar A, Pseudo-trisection embeddings of 4-manifolds. (Preprint) 2. Abhijeet Ghanwat, Suhas Pandit and Selvakumar A, Trisection embeddings of non-orientable $4- $manifolds. (Preprint) 3. Selvakumar A., Manikandan S. and Murugan S. P., Domination and minimal domination polynomial of H-generalized join graphs. (Preprint
44	Sampa Dey	IIT Gandhinagar	Apr 01, 2023-Mar 31, 2024	SMU, Kolkata	
45	Rupam Karmakar	NISER Bhubaneswar	Apr 01, 2023-Mar 31, 2024	SMU, Kolkata	
46	Nilkantha Das	ISI Kolkata	Apr 01, 2023-Mar 31, 2024	SMU, Kolkata	
47	Shambhu Nath Maurya	IISER Bhopal	Apr 01, 2023-Mar 31, 2026	SMU, Kolkata	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
48	Sumit Roy	ISI Kolkata	Apr 03, 2023-Apr 02, 2028	SMU, Kolkata	
49	Sudesh Kaur Khanduja	IISER Mohali, India	April 03 - 07, 2023	SMU, Delhi	
50	Kalyan B. Sinha	JNCASR, Bengaluru, India	April 24 - 28, 2023	SMU, Delhi	
51	Rajib Sarkar	TIFR Mumbai	Aug 01, 2023-Jul 31, 2026	SMU, Kolkata	
52	Soumyadip Das	CMI	Aug 01-Dec 27, 2023	SMU, Kolkata	
53	Ludger Overbeck	University of Giessen in Germany	Aug 15-18, 2023	SMU, Kolkata	
54	Vidya Sagar	IIT Delhi,India	August 14,2023 – November 13,2023	SMU, Delhi	
55	Mainak Ghosh	TIFR Mumbai	August 2023 to 21 December 2023	SMU, Bangalore	
56	Gunjan Sapra	IIT	August 22 - September 24, 2023	SMU, Delhi	
57	Shubham Gupta	Harish-Chandra Research Institute,India	August 28 - November 27,2023	SMU, Delhi	
58	Devendra Tiwari	Bhaskaracharya Pratisthan Pune, India	August 28 -September 02,2023	SMU, Delhi	
59	Tejas Kalelkar	IISER Pune,India	August 28 – 29,2023	SMU, Delhi	
60	Esrafil Ali Molla	RKMVERI	Dec 01, 2023-May 31, 2024	SMU, Kolkata	
61	Rajarshi Mukherjee	Harvard University, USA	Dec 06, 2023-Jan 05, 2024	SMU, Kolkata	
62	Joel Spencer	New York University, USA	Dec 07, 2023	SMU, Kolkata	
63	Srivatsav Kunnawalkam Elayavalli	UC San Diego	Dec 12-14, 2023	SMU, Kolkata	
64	Brent Nelson	Michigan State University	Dec 12-14, 2024	SMU, Kolkata	
65	Nishant Chandgotia	TIFR--CAM, Bangalore	Dec 19, 2023	SMU, Kolkata	
66	Purnamrita Sarkar	University of Texas at Austin, USA	Dec 20, 2023	SMU, Kolkata	
67	Olivier Ramare	Aix-Marseille Université	Dec 29, 2023-Jan 21, 2024	SMU, Kolkata	
68	Amin Sofi	Kashmir University, Srinagar, India	December 25 – February 11, 2023	SMU, Delhi	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
69	Mohd Harun	IIT Kanpur	Feb 01-May31, 2024	SMU, Kolkata	
70	Sabyasachi Chatterjee	University of Illinois Urbana-Champaign, USA	Feb 12-Mar 08, 2024	SMU, Kolkata	
71	Maria Eulalia-Vares	Instituto de Matemática, Brazil	Frb 20-25, 2024	SMU, Kolkata	
72	Banhirup Sengupta	IISc, Bengaluru	Jan 01-Feb 29, 2024	SMU, Kolkata	
73	Atibur Rahaman	NISER-Bhubaneswar	Jan 02-Apr 30, 2023	SMU, Kolkata	
74	Frank den Hollander	Leiden University	Jan 20-27, 2024	SMU, Kolkata	
75	Walter van Suijlekom	University of Nijmegen, Netherlands	Jan 22-27, 2024	SMU, Kolkata	
76	Rajat Subhra Hazra	Mathematical Institute, Leiden University	Jan 23-28, 2024	SMU, Kolkata	
77	Aniruddha Samanta	NISER Bhubaneswar	Jul 01, 2023-Jun 30, 2026	SMU, Kolkata	
78	Gorekh Prasad	NISER, Bhubneswar	July 04 - October 03,2023	SMU, Delhi	
79	Didier Lesesvre	Universite de Lille	July 10-12, 2023	SMU, Kolkata	
80	Asim Patra	NIT Rourkela, India	July 17 – October 16, 2023	SMU, Delhi	
81	Partha Pratim Ghosh	Technische Universität Braunschweig, Braunschweig, GERMANY	July 31– August 04, 2023	SMU, Delhi	
82	Diptesh Kumar Saha	NISER Bhubaneswar	Jun 19-Nov 16, 2023	SMU, Kolkata	
83	Bipul Saurabh	IIT Gandhinagar	Jun 28- Jul 07, 2023	SMU, Kolkata	
84	Chinmay Tamhankar	IIT Madras, India	June 01 - 16, 2023	SMU, Delhi	
85	Sujoy Bhattacharya	IIT Kharagpur, India	June 01 - June 04, 2023	SMU, Delhi	
86	Moulinath Banerjee	University of Michigan	June 12-Aug 14, 2023	SMU, Kolkata	
87	Sagnik Nandy	Department of Statistics and Data Science, Warton School of Business, University of Pennsylvania, Philadelphia, PA, USA	June 16 - 20, 2023	SMU, Delhi	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
88	Kunjakanan Nath	University of Illinois Urbana-Champaign, USA	June 22- 23, 2023	SMU, Delhi	
89	Arghya Pramanik	IIT Bombay	Mar 10-May 31, 2023	SMU, Kolkata	
90	Gopal Maity	Max Planck Institute, Bonn	Mar 11-15, 2024	SMU, Kolkata	
91	Sreejith Siju	IIT Palakkad	Mar 20-Jun 30, 2023	SMU, Kolkata	
92	Kummari Mallesham	IIT Bombay	May 03-12, 2023	SMU, Kolkata	
93	Nishant Chandgotia	TIFR-CAM, Bangalore, India	May 10 - 12, 2023	SMU, Delhi	
94	Bhaswar B. Bhattacharya	University of Pennsylvania	May 15-Jul 31, 2023	SMU, Kolkata	
95	Ankit Mishra	IIT Bombay	May 16-Jul 24, 2024	SMU, Kolkata	
96	Suman Paul	IISER Bhopal	May 17 Nov 16, 2023	SMU, Kolkata	
97	Subhajit Gosmani	TIFR	May 21-June 04, 2023	SMU, Kolkata	
98	Ritabrata Sengupta	IISER Burhampur, India	May 22 - 27, 2023	SMU, Delhi	
99	Bikram Karmakar	University of Florida	May 22-23, 2023	SMU, Kolkata	
100	Sudipta Sarkar	IIT Indore	May 23-Nov 22, 2023	SMU, Kolkata	
101	Gourab Ray	University of Victoria	May 29-August 16, 2023	SMU, Kolkata	
102	Mithun Bhowmik	IISc, Bengaluru	Nov 01, 2022-May 31, 2023	SMU, Kolkata	
103	Md Amir Hossain	IISER Bhopal	Nov 06-10, 2023	SMU, Kolkata	
104	Kin Aun Tan	National University of Singapore	Nov 10-24, 2023	SMU, Kolkata	
105	Saurabh Kumar Singh	IIT Kanpur	Nov 13-24, 2023	SMU, Kolkata	
106	Sonika	IIT Delhi	November 01, 2023-January 31, 2024	SMU, Delhi	
107	Alan Togbe	Perdue University Northwest, USA	November 04 - 06, 2023	SMU, Delhi	
108	Monika Paul	Calcutta University	November 06, 2023-Feb 05,2024	SMU, Delhi	
109	S D Adhikari	RKMVERI, Belur, Howrah, India	November 13 - 14,2023	SMU, Delhi	

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached	Awards/Recognition/Publications of Visiting Scientists
110	T.N. Shorey	NIAS Bangalore,India	November 15 - 24, 2023	SMU, Delhi	
111	Daniel Katz	California State University, Northridge, USA	Novemeber 27 – December 03, 2023	SMU, Delhi	
112	Sartaj Ul Hasan	IIT Jammu, India	Novemeber 27 – December 03, 2023	SMU, Delhi	
113	Vignesh Subramaniam	University of Copenhagen, Denmark	Oct 03, 2023- Apr 02, 2024	SMU, Kolkata	
114	Koushik Brahma	IIT Madras	Oct 04, 2023- Jan 03, 2024	SMU, Kolkata	
115	Sugato Mukhopadhyay	IMPAN, Warsaw	Oct 06-30, 2023	SMU, Kolkata	
116	Subhajit Goswami	TIFR	Oct 16-Nov 03, 2023	SMU, Kolkata	
117	Naresh Garg	IIT Kanpu	October 13,2023 – January 12,2024	SMU, Delhi	
118	Chachawan Panraksh	Mahidol University, Thailand	October 23-25, 2023	SMU, Delhi	
119	Soumitra Daptari	NISER Bhubaneswar	Sep 01, 2024- Feb 29, 2024	SMU, Kolkata	
120	Rachita Guria	IISER Kolkata	Sep 08, 2023- Mar 07, 2024	SMU, Kolkata	
121	K B Sinha	Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)	Sep 10-12, 2023	SMU, Kolkata	
122	Akhilesh P	Kerala School of Mathematics, India	September 09 - 16,2023	SMU, Delhi	
123	Ramdin Mawia	ISI Bangalore,India	September 09 – 24, 2023	SMU, Delhi	
124	Moumanti Poddar	IISER,Pune, India	September 16 - 28, 2023	SMU, Delhi	
125	Soma Das	IIT Guwahati	September 2023 to 10 October 2023	SMU, Bangalore	
126	Malay Mandal	CMI, Tamilnadu, India	September 23 - October 20, 2023	SMU, Delhi	

Academic Centres

R. C. Bose Centre for Cryptology & Security (RCBCCS), Kolkata

Sl. No.	Name of the Visiting Scientist	Affiliation	Duration	Unit Attached
1	Sumathi S.M.	IIT, Chennai	April 2023 to Sept 2023	RCBCCS, Kolkata
2	Anirban Ghatak	ISI, Kolkata	Dec 2022 to May 2023	RCBCCS, Kolkata
3	Anirudha Biswas	ISI, Kolkata	From Jan 2024 to March 2024	RCBCCS, Kolkata
4	Susanta Samanta	ISI, Kolkata	From Jan 2024 to March 2024	RCBCCS, Kolkata
5	Biswajit Chakraborty	ISI, Kolkata	July 2023 to Sept 2023	RCBCCS, Kolkata
6	Nandish Chattopadhyay	NTU, Singapore	March 2023 to June 2023	RCBCCS, Kolkata
7	Soumak Biswas	IIT Roorkee	Nov 2022 to June 2023	RCBCCS, Kolkata
8	Pritam Chattapadhyay	ISI, Kolkata	Nov 2023 to Jan 2024	RCBCCS, Kolkata
9	Subhadip Singha	ISI, Kolkata	Sept 2023 to Oct 2023	RCBCCS, Kolkata
10	Samir Kundu	ISI, Kolkata	Sept 2023 to Oct 2023	RCBCCS, Kolkata

6.6 Research Associates

Biological Sciences Division (BSD)

Sl. No.	Name of the Research Associates	Duration	Unit Attached	Awards/Recognition/Publications of Research Associates
1	Simran Sinsinwar	Aug 14, 2023 to Mar 31, 2024	HGU, Kolkata	

Computer and Communications Sciences Division (CCSD)

Sl. No.	Name of the Research Associates	Duration	Unit Attached	Awards/Recognition/Publications of Research Associates
1	Mrittika Chakraborty (Project Linked Junior Research Fellow)	Feb 01, 2023 to Mar 31, 2025	MIU, Kolkata	Publication: Chakraborty, M., Pal, W., Bandyopadhyay, S., & Maulik, U. (2023). A Survey on Multi-Objective Based Parameter Optimization for Deep Learning. Computer Science, 24(3). https://doi.org/10.7494/csci.2023.24.3.5479
2	Thahseena Muhseena	Jul 01, 2024 to Mar 31, 2025	DRTC, Bangalore	
3	Ashmita Dey	Sep 29, 2023 to Sep 28, 2024	MIU, Kolkata	Awards: Best Team Presentation award (Japan Society for the Promotion of Science) Recognition: Selected among top 9 Indian research scientist to attend 14th HOPE meeting with Nobel laureates by DST.

Statistical Quality Control & Operations Research Division (SQC&OR)

Sl. No.	Name of the Research Associates	Duration	Unit Attached	Awards/Recognition/Publications of Research Associates
1	Monalisa Masanta	Jul 06, 2022 -Jun 30, 2024	SQCORU, Kolkata	02 publications
2	Joyanta Kumar Majhi	Jul 18, 2023 - till data	SQCORU, Kolkata	
3	Sushil Kumar Dey	Jul 21, 2023 - till data	SQCORU, Kolkata	

Theoretical Statistics and Mathematics Division (TSMD)

Sl. No.	Name of the Research Associates	Duration	Unit Attached	Awards/Recognition/Publications of Research Associates
1	Sumit Roy	Dec 02, 2022-Apr 02, 2023	SMU, Kolkata	
2	Bidwan Chakraborty	Dec 12, 2022- Dec 11, 2024	SMU, Kolkata	
3	Subhankar Sau	Dec 19, 2022-Dec 18, 2024	SMU, Kolkata	
4	Gobinda Sau	Feb 08, 2024 to Feb 08, 2025	SMU, Bangalore	
5	Priyanka Majumdar	Nov 18, 2023 to Nov 18, 2024	SMU, Bangalore	
6	Soma Das	Oct 10, 2023 to Oct 10, 2024	SMU, Bangalore	NBHM PDF
7	Karthick Babu C G	Sep 05, 2022 to Sep 05, 2024	SMU, Bangalore	C. G. Karthick Babu, Anirban Mukhopadhyay, G. K. Viswanadham, Discrepancy estimates for some linear generalized monomials at prime arguments, Ramanujan Journal 63, 431–449, (2024).

Chapter

7

Events

P.C. Mahalanobis delivering Annual Review at the Second Convocation.
L-R: B.P. Adhikari, S. Chaudhuri, C.R. Rao, A. Linder, S.N. Bose

Photo by Reprography and Photography Unit, Library, ISI Kolkata

118
No. of Conferences, Symposia, Workshops & Training Programmes Organised

283
No. of Lectures

20
No. of Outreach Activities

7.1 Convocation

1. Indian Statistical Institute







The 58th Convocation of the Indian Statistical Institute was held on 19th December, 2023, at 11:00 am. It started with a Vedic Hymn by the ISI Club, followed by welcome address delivered by Dr. Sankar Kumar Pal, President, ISI and annual review by Prof. Sanghamitra Bandyopadhyay, Director, ISI. Convocation Address was delivered by Professor Trevor John Hastie, John A. Overdeck Professor of Mathematical Sciences, Professor of Statistics and Professor of Biomedical Data Science, Stanford University, USA as a Chief Guest of the Convocation. Degrees and Diplomas were awarded to scholars and students by Dr. Sankar Kumar Pal, President of the Institute. Prizes and Gold Medals were given to students by Professor Trevor John Hastie, John A. Overdeck Professor of Mathematical Sciences, Professor of Statistics and Professor of Biomedical Data Science, Stanford University, USA, the Chief Guest of this convocation. A vote of thanks was given by Prof. Gopal Krishna Basak, Dean of Studies, ISI. The 58th Convocation was closed by Dr. Sankar Kumar Pal, president of the Institute, followed by the National Anthem by the ISI Club.












The outgoing batch of students of all degree and diploma programmes were next felicitated. The meritorious students were awarded their medals and prizes for outstanding performance in the programmes, after which the students were individually presented with their degrees and diplomas.

2. International Statistical Education Centre

The Convoction for the 74th batch of the Regular Course entitled Statistical Theory and Applications was held on August 29, 2023. Thirteen trainees were awarded the Diploma on their successful completion of the course, while one was awarded in absentia. These fourteen trainees were from four different countries; with a dozens of them being females.

This batch consisted of fourteen trainees from the following four countries namely, Myanmar, Mongolia, Liberia and Tajikistan

7.2 Conferences, Symposia, Workshops & Training Programs

1. Conference, Symposia, Workshops

Sl.	Exact Date/ Duration	Title of the Workshop/Conference/ Symposia conducted	Collaborator (If any)	Name of the Organizing Unit	Venue
1	Mar 04, 2023 to Mar 10, 2024	DST SERB High-end Workshop (Karyashala) on Application of Statistics and Machine Learning in Environmental Research		TASU, Tezpur	ISE North-East Centre
2	Apr 10, 2023	Bangalore Probability Seminar	Siva Athreya (ICTS) and Nishant Chandgotia (TIFR-CAM)	SMU, Bangalore	SMU, Bangalore
3	Apr 24, 2023	Bangalore Probability Seminar	Nishant Chandgotia (TIFR-CAM)	SMU, Bangalore	SMU, Bangalore
4	May 08, 2023 to May 12, 2023	5-Day Expert Advisory Committee Meeting cum Workshop for the preparation of "Fundamental Glossary of Mathematics (English-Hindi-Bengali)"	Commission for Scientific and Technical Terminology, Department of Higher Education, Ministry of Education, Govt of India,	LRU, Kolkata	ISI Guest House Conference Hall
5	May 22, 2023 to May 27, 2023	Workshop on Devolopment of Statistics for Tea Garden workers	Assam Agricultural University,Jorhat	SOSU, Kolkata	Chinamara Tea Estate,Jorhat, Assam
6	May 27, 2023	Research Methodologies in Social Sciences [A Statistical Approach]		ASU, Kolkata	ASU Kolkata
7	Jun 03, 2023	Panel Title: Continuity and Change in Land Tenure System of South Asia (Online/Recorded Session 4C) in the World Applied Anthropology Conference (WAAC)	Dr. Ajit Kumar Behura IIT-ISM, Dhanbad, Jharkhand, India.	SRU, Kolkata	online
8	Aug 08, 2023 to Aug 09, 2023	Two Random Matrix Days		SMU, Kolkata	L-infinity Seminar Room, Stat-Math Unit, ISI Kolkata
9	Aug 21, 2023 to Aug 24, 2023	Workshop On Quantitative Palaeontology 2023		GSU, Kolkata	HGU Seminar Room, ISI Kolkata
10	Sep 13, 2023 to Sep 14, 2023	Recent trends and techniques in the study of brittle deformation: implications in upper crustal fluid flow		GSU, Kolkata	HGU Seminar Room, ISI Kolkata
11	Sep 25, 2023 to Oct 06, 2023	Condensed Matter meets Quantum Information		PAMU, Kolkata	ICTS, Bangalore
12	Oct 01, 2023 to Sep 22, 2023	Workshop on Business Analytics for MBAS students	Assam University, Silchar	SQCORU, Kolkata	Assam University, Silchar
13	Oct 04, 2023	PDF-RS Annual Symposium 2023		SMU, Bangalore	SMU, Bangalore
14	Oct 09, 2023	Bangalore Probability Seminar	Nishant Chandgotia (TIFR-CAM)	SMU, Bangalore	SMU, Bangalore

Sl.	Exact Date/ Duration	Title of the Workshop/Conference/ Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
15	Nov 06, 2023 to Nov 07, 2023	"Livelihood challenges and opportunities during and post Covid-19 pandemic"		SRU, Kolkata	ISI Giridih
16	Nov 08, 2023 to Nov 10, 2023	Three-Day Workshop on Data Science and Artificial Intelligence using Python.		TASU, Tezpur	ISE North-East Centre
17	Nov 08, 2023 to Nov 10, 2023	An Interdisciplinary Workshop on Machine Learning for Cryptology (ML4Crypto 2023)	DRDO	CAIML, Kolkata	CVPRU Seminar Room
18	Nov 20, 2023 to Nov 25, 2023	Statistical Methods and Exploratory Data Analysis for Social Scientists: A Hands-On R Workshop	North Eastern Hill University (NEHU), Tura Campus, Meghalaya.	AERU, Kolkata	NEHU, Tura Campus, Meghalaya
19	Nov 20, 2023 to Dec 01, 2023	Statistical Learning and Bayesian Analysis with R		ISRU, Kolkata	ISRU, ISI, Kolkata
20	Nov 22, 2023 to Nov 23, 2023	In-house workshop on FMEA at the Soujanya Color Pvt. Limited		SQCORU, Mumbai	Soujanya Color Pvt. Limited, Mumbai
21	Dec 10, 2023 to Dec 13, 2023	IEEE India Geoscience and Remote Sensing Symposium (InGARSS 2023)	IEEE Bangalore Section GRSS Chapter, IIIT Bangalore	SSIU, Bangalore	Hybrid
22	Dec 12, 2023 to Dec 15, 2023	10th International Conference on Pattern Recognition and Machine Intelligence		MIU, Kolkata	ISI Kolkata
23	Dec 12, 2023 to Dec 15, 2023	Workshop on Statistical Process Control		SQCORU, Mumbai	Hindalco Mahan
24	Dec 18, 2023 to Dec 20, 2023	18th Annual Conference on Economic Growth and Development		EPU, Delhi	ISI, Delhi
25	Dec 18, 2023 to Dec 20, 2023	Workshop at Agartala organized by DES,Tripura under SSS Scheme	DES,Tripura	SOSU, Kolkata	DES,Tripura
26	Dec 19, 2023 to Dec 23, 2023	Statistical Methods in Finance	Chennai Mathematical Institute	ASU, Bangalore	Chennai Mathematical Institute
27	Dec 19, 2023 to Dec 20, 2023	Machine Learning in Finance	Chennai Mathematical Institute	ASU, Bangalore	Chennai Mathematical Institute
28	Dec 21, 2023 to Dec 22, 2023	2-Day National Seminar on Scientific and Technical Terms in Social Sciences	Commission for Scientific and Technical Terminology, Department of Higher Education, Ministry of Education, Govt of India.	LRU, Kolkata	ISI Auditorium
29	Dec 27, 2023 to Dec 29, 2023	ISI-ISM-ISSAS		ISRU, Kolkata	ISI, Kolkata

Sl.	Exact Date/ Duration	Title of the Workshop/Conference/ Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
30	Jan 04, 2024 to Jan 05, 2024	Scientific Meet on Recent Trends in Applied Sciences		PAMU, Kolkata	ISI, Kolkata
31	Jan 08, 2024 to Jan 12, 2024	Discussion Meeting in Analytic Number Theory		SMU, Kolkata	NAB-1, A. N. Kolmogorov Bhavan, ISI, 203 B.T. Road, Kolkata - 700108
32	Jan 08, 2024 to Jan 12, 2024	7th Winter School in Mathematics for Postgraduate Students of North-East Region		TASU, Tezpur	ISE North-East Centre
33	Jan 11, 2024 to Jan 12, 2024	Computing Devices VLSI and Beyond		ACMU, Kolkata	PJA Auditorium, 1st floor of PJA Building.
34	Jan 25, 2024 to Jan 27, 2024	7th International Conference on Complex Dynamical Systems and Applications		PAMU, Kolkata	Digha Science Centre & National Science Camp
35	Jan 30, 2024	Recent Socioeconomic issues on agrarian and livelihood transformation in India"		SRU, Kolkata	SRU-PRU Seminar Hall, ISI Kolkata
36	Feb 02, 2024	Workshop on Data Handling : Participants: West Bengal Revenue Service (WBRS) Officers	NSATI	SOSU, Kolkata	Sampling & Official Statistics Unit(SOSU)
37	Feb 12, 2024 to Feb 16, 2024	Workshop on Understanding Supply Chain: Concepts, Modelling & Optimization, and Practices with Analytics		SQCORU, Kolkata	ISI, Kolkata
38	Feb 16, 2024 to Feb 17, 2024	DNA methylation and gene expression analysis		HGU, Kolkata	HGU, Kolkata
39	Feb 16, 2024 to Feb 18, 2024	Workshop on Statistical Techniques for Business Forecasting		SQCORU, Mumbai	ISI Mumbai
40	Feb 19, 2024 to Feb 23, 2024	Official Statistics and Data Science Essentials: Sampling, Visualization, Reporting	Depts. of Electronics & Communication Engineering and Information Technology, Sikkim Manipal Institute of Technology, Sikkim	SOSU, Kolkata	Sikkim Manipal Institute of Technology, Sikkim
41	Feb 22, 2024	Recent Trends in Logic and Verification		CSU, Chennai	ISI Chennai
42	Feb 26, 2024 to Mar 01, 2024	Deep Learning & Applications	National Institute of Technology, Meghalaya (NITM)	CVPRU, Kolkata	National Institute of Technology, Meghalaya (NITM)
43	Feb 26, 2024 to Mar 02, 2024	Young Mathematicians in Operator Algebras		SMU, Delhi	Auditorium, ISI Delhi
44	Feb 26, 2024 to Mar 01, 2024	Deep Learning and Applications	National Institute of Technology, Meghalaya (NITM)	CVPRU, Kolkata	National Institute of Technology, Meghalaya (NITM)
45	Mar 04, 2024 to Mar 05, 2024	5th Annual Research Symposium		AERU, Kolkata	ISI Giridih, Jharkhand

Sl.	Exact Date/ Duration	Title of the Workshop/Conference/ Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
46	Mar 14, 2024 to Mar 18, 2024	Photography and Digital Technique (WPDT-2024)		Library, Kolkata	Reprography & Photography Unit
47	Mar 14, 2024	11th Digital Pictorial Photography		RPU, Kolkata	Repro & Photo Unit
48	Mar 18, 2024 to Mar 19, 2024	International Conference on Game Theory and Optimization (in Honor of late Professor T. Parthasarathy).	Chennai Mathematical Institute	SQCORU, Chennai	CMI, Siruseri, Channai
49	Mar 21, 2024	MIU Annual Workshop on Machine Intelligence and Applications 2024		MIU, Kolkata	ISI Kolkata
50	Mar 22, 2024 to Mar 24, 2024	Workshop on Design Of Experiment		SQCORU, Mumbai	ISI Mumbai
51	Mar 25, 2024	Bangalore Probability Seminar	Nishant Chandgotia (TIFR-CAM)	SMU, Bangalore	SMU, Bangalore
52	May 18, 2024	Co-producing Well-being Policies with Children: A South Asian Perspective	Manchester Metropolitan University, UK	ERU, Kolkata	Indian Statistical Institute,Economic Research Unit, Kolkata -700108
53	Dec 12, 2024 to Dec 14, 2024	Minicourse on von Neumann algebras		SMU, Kolkata	L-infinity Seminar Room, Stat-Math Unit, ISI Kolkata










2. Training Program

Sl.	Exact Date/ Duration	Title of the Workshop/ Conference/Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
1	Apr 08, 2023; Apr 22-23, May 06-07, May 20-21, Jun 03-04, Jun 17-18, Jul 01-02, Jul 15-16, Jul 29-30, 2023	Comprehensive course on Business Analytics and Data Mining		SQCORU, Mumbai	Jamshedpur Management Association
2	Apr 14, 2023 to Apr 16, 2023; Apr 28-30, 2023	Training and Certification on Six Sigma Green Belt Methodology - 53rd Batch		SQCORU, Mumbai	ISI Mumbai
3	May 02, 2023 to May 19, 2023	SQC Practices and Data Analytics	NAI, Gun and Shell Factory, Cossipore	SQCORU, Kolkata	Gun and Shell Factory, Cossipore
4	May 05, 2023 to May 07, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	Stride Pharma
5	May 05, 2023 to May 07, 2023	Lean Six Sigma Green Belt Certification Program		SQCORU, Bangalore	Strides Pharma Science Ltd.
6	May 17, 2023 to May 20, 2023; Nov 14-17, 2023; Dec 19-22, 2023	Training on Advanced and Multivariate Statistical Tools		SQCORU, Mumbai	Coromandel International Ltd.
7	May 18, 2023; Jun 02, 13-14, 2023	Training Program on Statistical Process Control and Related Fields		SQCORU, Bangalore	Reetam HR, Bangalore
8	May 22, 2023 to May 26, 2023	Six Sigma Green Belt Certification Program (GB-61 _Online)		SQCORU, Bangalore	Online
9	May 31, 2023 to Jul 14, 2023	Eighth Summer School on Computer Vision, Image Processing and Machine Learning	Scholars and Faculty Members of ECSU	ECSU, Kolkata	Seminar Room, Electronics and Communication Sciences Unit Indian Statistical Institute, Kolkata
10	May 31, 2023 to Jun 01, 2023; Jul 05-07, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	HAL Management Academy
11	Jun 05, 2023 to Jun 09, 2023	Six Sigma Green Belt (S M Subhani)		SQCORU, Hyderabad	Seminar Hall, ISI, Hdyerabad
12	Jun 19, 2023 to Jun 23, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	Defence Institute of Quality Assurance (DIQA)
13	Jun 26, 2023 to Jun 28, 2023	Root Cause Analysis Program		SQCORU, Bangalore	Defence Institute of Quality Assurance (DIQA)
14	Jul 04, 2023 to Jul 06, 2023	Six Sigma Green Belt Training and Guidance towards Business Excellence (A L N Murthy)		SQCORU, Hyderabad	ITC Limited, Paper Boards and Specialty Papers Division, Unit: KOVAI
15	Jul 10, 2023 to Jul 18, 2023	SQC Practices and Data Analytics	NAI, Gun and Shell Factory, Cossipore	SQCORU, Kolkata	Gun and Shell Factory, Cossipore
16	Jul 10, 2023 to Jul 15, 2023; Aug 07-12, 21-26, Sep 11-16, 2023	On-Line Six Sigma Black Belt Training and Certification Program (Evening session)-Batch-27		SQCORU, Mumbai	ISI Mumbai

Sl.	Exact Date/ Duration	Title of the Workshop/ Conference/Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
17	Jul 17, 2023 to Jul 22, 2023; Aug 07-12, 2023	Online certification program on Six Sigma Black Belt (BB-39 Batch)		SQCORU, Bangalore	Online
18	Jul 22, 2023 to Jul 23, 2023; Aug 05-06, 2023	Online Course on Business Forecasting using Python (BF-07)		SQCORU, Bangalore	Online
19	Jul 24, 2023 to Jul 27, 2023	SPC Training		SQCORU, Mumbai	UPL
20	Jul 31, 2023 to Aug 05, 2023	Statistical Quality Control	Birla Jute Mills	SQCORU, Kolkata	Birla Jute Mills
21	Aug 04, 2023	EBSCO (Econlit with Full Text) Onsite Training		Library, Kolkata	Conference Room, 4th Floor, ISI Library, Kolkata
22	Aug 04, 2023	CEIC Database Onsite Training		Library, Kolkata	Conference Room, 4th Floor, ISI Library, Kolkata
23	Aug 14, 2023	EPWRF India Time Series (EPWRF ITS) Database	EPW Research Foundation (EPWRF)	Library, Kolkata	Conference Room, 4th Floor, ISI Library, Kolkata
24	Aug 21, 2023 to Aug 26, 2023	Six Sigma Green Belt Certification Program (GB-62 _Online)		SQCORU, Bangalore	Online
25	Aug 26, 2023 to Aug 27, 2023; Sep 09-10, 2023	Problem Solving using Design of Experiments (DoE-08)		SQCORU, Bangalore	Online
26	Sep 03, 2023 to Sep 06, 2023	Training of officers of DES, Chhattisgarh for SSS programme.	DES, Chhattisgarh	SOSU, Kolkata	DES, Chhattisgarh
27	Sep 04, 2023 to Sep 08, 2023	Training at BNP Paribas Securities		SQCORU, Mumbai	BNP Paribas Securities
28	Sep 04, 2023 to Sep 09, 2023	Design For Six Sigma (DFSS) Certification Program		SQCORU, Bangalore	Bharat Electronics, Bangalore
29	Sep 11, 2023 to Sep 15, 2023; Nov 22-24, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	Hyundai Motors
30	Sep 21, 2023 to Sep 23, 2023	Basic Course on Data Analytics		SQCORU, Bangalore	Bharat Electronics, Bangalore
31	Sep 22, 2023 to Sep 24, 2023; Oct 06-08, 2023	Training and Certification on Six Sigma Green Belt Methodology - 54TH BATCH		SQCORU, Mumbai	ISI MUMBAI
32	Sep 25, 2023 to Sep 29, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	GE Healthcare
33	Oct 09, 2023 to Oct 20, 2023	Six Sigma Black Belt Certification Program		SQCORU, Bangalore	Bharat Electronics, Bangalore
34	Oct 30, 2023 to Nov 04, 2023; Nov 20-26, 2023	Six Sigma Master Black Belt Certification Program (MBB-36 _Online)		SQCORU, Bangalore	Online
35	Nov 06, 2023	Navigating the Wall Street Journal (WSJ)		Library, Kolkata	Conference Room, 4th Floor, ISI Library, Kolkata
36	Nov 06, 2023 to Nov 11, 2023	Advanced Course on Data Analytics using R		SQCORU, Bangalore	Bharat Electronics, Bangalore
37	Nov 06, 2023 to Nov 10, 2023; Dec 11-15, 2023; Feb 12-15, 2024	Six Sigma Black Belt Certification Program		SQCORU, Bangalore	Hyundai Motors

Sl.	Exact Date/ Duration	Title of the Workshop/ Conference/Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
38	Nov 15, 2023 to Dec 01, 2023	Statistical Practices and Data Analytics	CNAI, Vizag	SQCORU, Kolkata	CNAI, Vizag
39	Nov 15, 2023 to Nov 16, 2023	Program on Design of Experiments		SQCORU, Bangalore	Walvoil Fluid Power,
40	Nov 15, 2023 to Nov 16, 2023	Problem Solving using Design of Experiments		SQCORU, Bangalore	Walvoil Fluid Power
41	Nov 16, 2023 to Nov 18, 2023; Nov 28-29, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	HAL Management Academy
42	Nov 16, 2023 to Nov 29, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	HAL Management Academy
43	Nov 23, 2023 to Nov 25, 2023; Jan 09-11, 2024	Training and Certification on Six Sigma Green Belt Methodology		SQCORU, Mumbai	UPL
44	Nov 24, 2023 to Nov 26, 2023; Dec 08-10, 2023	Training and Certification on Six Sigma Green Belt Methodology-55th Batch		SQCORU, Mumbai	ISI Mumbai
45	Nov 27, 2023 to Dec 02, 2023	Six Sigma Green Belt Certification Program (GB-63 _Online)		SQCORU, Bangalore	Online
46	Nov 27, 2023 to Dec 01, 2023	Six Sigma Green Belt Certification Program		SQCORU, Bangalore	BEML
47	Dec 10, 2023 to Jan 14, 2024	Optimization Tools for Business Analytics (Dr. GSR Murthy)		SQCORU, Hyderabad	Online
48	Dec 12, 2023 to Dec 13, 2023	Program on Statistical Process Control		SQCORU, Bangalore	Kirloskar Toyota Textile Machinery Pvt Ltd.
49	Dec 12, 2023 to Dec 13, 2023	Training Program on Statistical Process Control		SQCORU, Bangalore	Kirloskar Toyota Textile Machinery Pvt Ltd
50	Jan 06, 2024 to Jan 07, 2024; Jan 26-28, 2024	Six Sigma Green Belt (S M Subhani)		SQCORU, Hyderabad	Online
51	Jan 08, 2024 to Jan 11, 2024; Jan 29, 2024-Feb 03, 2024; Feb 10-11, 2024	Online certification program on Lean Six Sigma Black Belt with R & Python (BB-40 Batch)		SQCORU, Bangalore	Online
52	Jan 29, 2024 to Feb 01, 2024	Program on Statistical Process Control		SQCORU, Bangalore	Defence Institute of Quality Assurance (DIQA)
53	Feb 10, 2024 to Feb 11, 2024; Feb 24-25, 2024; Mar 09-10, 23-24, 2024	Online Course on Machine Learning using Python and R (ML-05)		SQCORU, Bangalore	Online
54	Mar 02, 2024 to Mar 03, 2024; Mar 09-10, 16-17, 23-24, 30-31, 2024	Six Sigma Black Belt with Business Analytics (G Murali Rao)		SQCORU, Hyderabad	Online
55	Mar 04, 2024 to Apr 26, 2024	SURVEY METHODOLOGY AND DATA ANALYTICS	NSSTA(MoSPI)	SOSU, Kolkata	Sampling & Official Statistics Unit(SOSU)
56	Mar 04, 2024	Subject Indexing	Prof. K S Raghavan	DRTC, Bangalore	DRTC Classroom
57	Mar 05, 2024	Semantic Relations	Prof. K S Raghavan	DRTC, Bangalore	DRTC Classroom

Sl.	Exact Date/ Duration	Title of the Workshop/ Conference/Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
58	Mar 06, 2024 to Mar 07, 2024	Indexing Models	Prof. K S Raghavan	DRTC, Bangalore	DRTC Classroom
59	Mar 08, 2024	Controlled Vocabularies	Prof. K S Raghavan	DRTC, Bangalore	DRTC Classroom
60	Mar 18, 2024 to Mar 27, 2024	7th Training Programme on Multimedia for School Students		RPU, Kolkata	Repro & Photo Unit
61	Mar 18, 2024 to Mar 27, 2024	Multimedia for School Students		Library, Kolkata	Reprography & Photography Unit
62	Mar 29, 2024	Effective Use of Library e-Resources through J-Gate: Gateway to largest e-Journal Literature		Library, Kolkata	Conference Room, 4th Floor, ISI Library, Kolkata
63	Apr 05, 2024 to Apr 07, 2024; Apr 12-14, 2024	Training and Certification on Six Sigma Green Belt Methodology-56th Batch		SQCORU, Mumbai	ISI Mumbai

3. International Training Program

Sl.	Exact Date/ Duration	Title of the Workshop/Conference/ Symposia conducted	Collaborator (if any)	Name of the Organizing Unit	Venue
1	Jul 20, 2023 to Jul 21, 2023	2-Day British Academy International Training Workshop on Aphasia in South Asian Languages (ASAL-2023)	School of Psychology & Clinical Language Sciences, University of Reading, Reading, UK	LRU, Kolkata	LRU, ISI
2	Jan 12, 2024 to Mar 10, 2024	Third Winter School on Deep Learning (WSDL) GenAI, LLMs and Beyond : A Fusion of Frontiers	International Speakers	ECSU, Kolkata	Online

7.3 Lectures

Applied Statistics Division (ASD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	Apr 20, 2023	Design and Analysis of Lightweight Authenticated Encryption with Associated Data	Bishwajit Chakraborty	ISI Kolkata	ASU, Kolkata
2	Apr 27, 2023	Design and Analysis of Authenticated Encryption Modes	Arghya Bhattacharjee	ISI Kolkata	ASU, Kolkata
3	May 02, 2023	A Bayesian joint model for multivariate longitudinal and time-to-event data with application to ALL maintenance studies	Damitri Kundu	ISI Kolkata	ASU, Kolkata
4	May 09, 2023	HulC: a computationally-efficient, assumption-lean statistical inference methodology	Arun Kumar Kuchibhotla	Carnegie Mellon University	ASU, Kolkata
5	May 16, 2023	IoT and AI driven screening for Chronic Cardiac Diseases	Arpan Pal	Tata Consultancy Services	ASU, Kolkata
6	May 25, 2023	Studies in Boolean Function Analysis	Aniruddha Biswas	ISI Kolkata	ASU, Kolkata
7	May 26, 2023	Instance-dependent Reinforcement Learning	Kaulik Khamaru	Assistant Professor, Department Of Statistics, Rutgers.	ISRU, Kolkata
8	Jun 06, 2023	Causal Inference for Treatment Effects from Observational Data: An Overview	Abhishek Chakrabortty	Texas A&M University	ASU, Kolkata
9	Jun 08, 2023	Leveraging Blockchain for Secure, Fair and Efficient Data Trading, Storage and Exchange	Prabal Banerjee	ISI Kolkata	ASU, Kolkata
10	Jun 09, 2023	Sequential Estimation for the Multiple Linear Regression Models with Balanced Loss Functions	Raghu Nandan Sengupta	Professor, Department of Industrial & Management Engineering, IIT Kanpur	ISRU, Kolkata
11	Jun 13, 2023	A General Framework for Treatment Effect Estimation in Semi-supervised and High Dimensional Settings	Abhishek Chakrabortty	Texas A&M University	ASU, Kolkata
12	Jun 19, 2023	Design and Analysis of MDS and Near-MDS Matrices and Their Application to Lightweight Cryptography	Susanta Samanta	ISI Kolkata	ASU, Kolkata
13	Jun 20, 2023	High Dimensional Logistic Regression Under Network Dependence	Somabha Mukherjee	National University of Singapore	ASU, Kolkata
14	Jun 27, 2023	Higher-Order Graphon Theory: Fluctuations, Inference, and Degeneracies	Anirban Chatterjee	University of Pennsylvania	ASU, Kolkata
15	Jun 30, 2023	Clustering sequence data with mixture Markov chains with covariates using multiple simplex constrained optimization routine	Priyam Das	Assistant Professor Department of Biostatistics Virginia Commonwealth Universit	ISRU, Kolkata
16	Jul 05, 2023	Indifferentiability and Other Related Security Notions	Anik Raychaudhuri	ISI Kolkata	ASU, Kolkata
17	Jul 06, 2023	Evolutionary Journey of Deep Generative Models	Amritendu Mukherjee	NeuroPixel.AI Labs	ASU, Kolkata
18	Jul 07, 2023	Tight Security of PMAC-type and CBC-type MACs	Soumya Chattopadhyay	ISI Kolkata	ASU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
19	Jul 11, 2023	On Combinatorial Constructions of Mutually Unbiased Bases (MUBs) with Approximations	Ajeet Kumar	ISI Kolkata	ASU, Kolkata
20	Jul 25, 2023	Some statistical techniques for inland fisheries assessment—data cruising to model-based inferences	Malay Naskar	Central Inland Fisheries Research Institute	ASU, Kolkata
21	Jul 28, 2023	Recent advancements in Empirical Bayes estimation	Soham Jana	Postdoctoral Fellow Princeton	ISRU, Kolkata
22	Aug 01, 2023	Geometric Methods for Distribution-Free Nonparametric Inference	Bhaswar Bikram Bhattacharya,	University of Pennsylvania	ASU, Kolkata
23	Aug 22, 2023	Different estimators of mean in finite population	Anurag Dey	ISI Kolkata	ASU, Kolkata
24	Aug 29, 2023	New lattice basis reduction algorithms - a greedy approach	Sanjay Bhattacherjee	University of Kent	ASU, Kolkata
25	Sep 19, 2023	Relationship between ice accumulation rate and temperature based on Antarctic ice core data	Radhendushka Srivastava	IIT Bombay	ASU, Kolkata
26	Oct 03, 2023	Robust Estimation of Multivariate Location and Scale via Divergence Minimization and its Applications in Machine Learning	Soumya Chakraborty	Bethune College	ASU, Kolkata
27	Oct 10, 2023	Robust inference by minimizing density power divergence with application to skewed data	Amarnath Nandy	ISI Kolkata	ASU, Kolkata
28	Oct 17, 2023	Sample Sizes required to estimate the protective efficacy of a vaccine when there is an unequal allocation of individuals across the vaccine and placebo groups	Meghna Bose	ISI Kolkata	ASU, Kolkata
29	Nov 03, 2023	Design and Analysis of Symmetric Key Schemes for Encryption and Authentication	Samir Kundu	ISI Kolkata	ASU, Kolkata
30	Nov 21, 2023	Early childhood factors and health pathways to disability and death in mid-ages — a multi-state time-to-event life history model.	Lakshmi Raut	University of Chicago	ASU, Kolkata
31	Nov 28, 2023	Large-scale Adaptive Multiple Testing for Sequential Data Controlling False Discovery and Non-discovery Rates.	Rahul Roy	St. Xaviers College	ASU, Kolkata
32	Dec 07, 2023	Reliable Estimation Algorithms when Likelihood Evaluations are Expensive	Vivak Patel	Assistant Professor of Statistics University of Wisconsin -- Madison	ISRU, Kolkata
33	Dec 12, 2023	Clustering Sequence Data with Mixture Markov Chains with Covariates Using Multiple Simplex Constrained Optimization Routine (MSiCOR)	Priyam Das	Virginia Commonwealth University	ASU, Kolkata
34	Jan 02, 2024	Likelihood Free Learning of Spatiotemporal Hawkes Processes.	Moulinath Banerjee	University of Michigan, Ann Arbor	ASU, Kolkata
35	Jan 09, 2024	Trade-off Between Dependence and Complexity in Nonparametric Learning Rates: an Empirical Process approach.	Nabarun Deb	University of Chicago	ASU, Kolkata
36	Jan 16, 2024	tatistical methods in absolute risk prediction with applications in cancer.	Parichoy Pal Choudhury	American Cancer Society	ASU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
37	Jan 17, 2024	Homomorphic encryption and its acceleration	Sujoy Sinha Roy, professor	IAIK	ASU, Kolkata
38	Jan 22, 2024	Rajesh Dikshit	Genome Wide Association studies and its role in identifying genetic susceptibility in cancer causation: A brief overview of Global and Indian status.	Tata Memorial Centre, Mumbai	ASU, Kolkata
39	Jan 30, 2024	Consistent Group Selection Using Global-Local Shrinkage Priors in High-Dimensional Situation.	Sayantan Paul	ISI Kolkata	ASU, Kolkata
40	Feb 13, 2024	Limiting Behaviors of Multiple Testing Procedures under Dependence.	Monitirtha Dey	ISI Kolkata	ASU, Kolkata
41	Feb 22, 2024	Generalized Variable Selection Algorithms for Gaussian Process Models by LASSO-like Penalty	Dipak K. Dey	University of Connecticut, Storrs, CT 06269	ISRU, Kolkata
42	Feb 29, 2024	Core-periphery inference in networks	Srijan Sengupta	Associate Professor, Statistics, North Carolina State University	ISRU, Kolkata
43	Mar 12, 2024	Design and Analysis of Authenticated Encryption Modes.	Arghya Bhattacharjee	ISI Kolkata	ASU, Kolkata
44	Mar 19, 2024	Ladies in the family of the gentleman.	Probal Chaudhuri	ISI Kolkata	ASU, Kolkata
45	Mar 28, 2024	Multivariate Dependence beyond Correlation: Nonparametric Copulas	Sujit K Ghosh	Department of Statistics NC State University, Raleigh, USA	ISRU, Kolkata

Biological Sciences Division (BSD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	Nov 06, 2023	Microbe-Microbe Interactions and Keystone Taxa	Samiran Banerjee	North Dakota State University	AERU, Kolkata

Computer and Communications Sciences Division (CCSD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	May 04, 2023	Remote Electrical Tilt Prediction though ML	Subhadip Bandyopad-hyay	Principal Data Scientist Ericsson R&D (GAIA)	ACMU, Kolkata
2	May 16, 2023	Algorithmic Foundation of Parallel Paging and Linear Stencil Computation	Rathish Das	Assistant Professor, University of Liverpool.	ACMU, Kolkata
3	Jun 01, 2023	Optimality and strategy proofness in voting	Sanjukta Roy	Pennsylvania State University	CSU, Chennai
4	Jun 05, 2023	Forbidden induced subgraph characterization of hereditary graph classes	Vaidy Sivaraman	Mississippi State University	CSU, Chennai
5	Jun 12, 2023	Model Counting Meets FO Estimation	Kuldeep Meel	Presidential Young Professorship in the School of Computing, National University of Singapore.	ACMU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
6	Jun 30, 2023	Geometric Partitions and Reproducible Computations	N.V. Vinod-chandran	Professor, School of Computing, University of Nebraska Lincoln.	ACMU, Kolkata
7	Jul 11, 2023	From Noisy Fixed-Point Iterations to Unified Theory of Private Optimization for Centralised and Federated Learning	Debabrota Basu	INRIA, France	ACMU, Kolkata
8	Jul 14, 2023	Computational Methods for Image Filtering and Brain Data Analysis	Sanjay Ghosh	Postdoctoral Scholar, Radiology School of Medicine, University of California, San Francisco	ECSU, Kolkata
9	Aug 21, 2023	On Range Summary Queries	Aniket Basu Roy	Aarhus University, Denmark	ACMU, Kolkata
10	Oct 09, 2023	Special Lecture Series: Lec1 – Data Carpentry for Library Services	Parthasarathi Mukhopad-hyay	Dept. of Library and Information Science, University of Kalyani	DRTC, Bangalore
11	Oct 09, 2023	Special Lecture Series: Lec2 – AI/ML Application in Knowledge Organization	Parthasarathi Mukhopad-hyay	Dept. of Library and Information Science, University of Kalyani	DRTC, Bangalore
12	Oct 10, 2023	51st Five Laws Lecture (Online) – LIS Education in the backdrop of NEP 2020	Durga Sankar Rath	Dept. of Library and Information Science, Vidyasagar University	DRTC, Bangalore
13	Oct 17, 2023	On the zero-one laws	Rineke Verbrugee	Professor, Logic and Cognition, University of Groningen, Netherlands	ACMU, Kolkata
14	Nov 20, 2023	Security of Quantum Computers-a new Frontier in Cybersecurity Research	Swaroop Ghosh	IIT, Roorkee	ACMU, Kolkata
15	Dec 21, 2023	Logical Characterizations of Regular Languages	Shibashis Guha	Reader, Tata Institute of Fundamental Research, Mumbai	ACMU, Kolkata
16	Dec 22, 2023	Strategy Synthesis for Global Window Probabilistic Computation Tree Logic	Shibashis Guha	Reader, Tata Institute of Fundamental Research, Mumbai	ACMU, Kolkata
17	Jan 10, 2024	Identification Problems in Graphs	Dipayan Chakraborty	Universite Clermont-Auvergne, France.	ACMU, Kolkata
18	Jan 19, 2024	Multimodal Integration in the Age of Million Cells and Billion Parameters	Himel Mallick	Cornell University	MIU, Kolkata
19	Jan 24, 2024	METASUB: AN INITIATIVE TO CHARACTERIZE THE GLOBAL MICROBIOME AND ESTABLISH PLANETARY-SCALE METAGENOMIC SURVEILLANCE & MICROBE DIRECTORY	Krista A. Ryon and Maria A. Sierra	Weill Cornell Medicine and Rockefeller University	MIU, Kolkata
20	Feb 21, 2024	Visual Analysis and Representations of Type-2 Fuzzy Membership Functions	Frank Chung-Hoon Rhee	School of Electrical Engineering and Computer Science, Hanyang University, Ansan, South Korea	MIU, Kolkata
21	Mar 11, 2024	Space Complexity of Adaptive Massively Parallel Computations	Aduri Pavankumar	Iowa State University	ACMU, Kolkata
22	Mar 18, 2024	Special Lecture: A Review of Trends in Academic Libraries and the Key Competencies Shaping the Library Professionals	Rama Patnaik	Dept. of Library and Information Science, Indian Institute of Management Bangalore	DRTC, Bangalore
23	Mar 27, 2024	Inverse Extended Kalman Filter	Arpan Chatto-padhyay	University of Southern California at Los Angeles.	ACMU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
24	Mar 29, 2024	Special Lecture (Online, Theme – Intellectual Property Rights): Fundamentals of IP for Information Professionals	Sabuj Kumar Chaudhuri	Dept. of Library and Information Science, University of Calcutta	DRTC, Bangalore

Library Documentation and Information Sciences Division (LDISD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	Apr 25, 2023	Future of Libraries	Laxmax Rao Nagubandi	President, Telangana Library Association, Hyedrabad	Library, Kolkata
2	Jun 22, 2023	Leader Within You: Think, Solve, Communicate, Collaborate	Raj Kumar Bhardwaj	Librarian, St. Stephen's College, Delhi.	Library, Kolkata
3	Jan 30, 2024	Organising and Disseminating Information in Today's Internet Driven Era	M. Krishnamurthy	Fulbright Scholar at University of Illinois, USA and Associate Professor at Documentation Research and Training Center, ISI Banglore	Library, Kolkata

Physics and Earth Sciences Division (PESD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	Apr 12, 2023	Triplet Fermions as the Possible Source of Dark Matter, Neutrino Mass and Baryon Asymmetry of the Universe	Sarif Khan	Goettingen University, Germany	PAMU, Kolkata
2	May 11, 2023	Linear Optics Based Local Discrimination of Quantum States	Sibasish Ghosh	The Institute of Mathematical Sciences, Chennai	PAMU, Kolkata
3	Jun 14, 2023	Simultaneous Inference of Cosmology and Population of Binary Neutron Stars from Gravitational-Waves	Soumendra Kishore Roy	SUNY at Stony Brook, USA	PAMU, Kolkata
4	Jul 12, 2023	Non-Local and Quantum Advantages in Network Coding for Multiple Access Channels	Ashutosh Rai	Korea Advanced Institute of Science & Technology (KAIST)	PAMU, Kolkata
5	Jul 26, 2023	How good is quantum communication?	Tamal Guha	Department of Computer Science, University of Hong Kong	PAMU, Kolkata
6	Aug 24, 2023	Tighter and Stronger Quantum Speed Limits for General Quantum States	Shrobona Bagchi	Korea Institute of Science and Technology, South Korea	PAMU, Kolkata
7	Nov 03, 2023	The evolution and emergence of the latitudinal biodiversity gradient in South America	Phil Mannion	University College London, UK	GSU, Kolkata
8	Nov 03, 2023	Abiotic and biotic controls on the rise and early evolution of sauropod dinosaurs	Paul Upchurch	University College London, UK	GSU, Kolkata
9	Nov 03, 2023	A sauropod with gut contents and skin from the Cretaceous of Australia	Stefan Poropat	Curtin University, Australia	GSU, Kolkata
10	Nov 06, 2023	Tipping in an ecological system under external forcing	Syamal K. Dana	Jadavpur University, India	PAMU, Kolkata
11	Nov 06, 2023	Mathematical modelling of spiking neural networks accompanied by astrocytes	Susanna Yu. Gordleeva	Lobachevsky State University of Nizhny Novgorod, Russia	PAMU, Kolkata
12	Nov 06, 2023	Diagnostics and study of mental disorders based on the analysis of fMRI-derived functional brain networks	Semen A. Kurkin	Immanuel Kant Baltic Federal University, Russia	PAMU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
13	Nov 06, 2023	Reservoir computing approach for analysis and prediction of complex network dynamics	Andrey V. Andreev	Immanuel Kant Baltic Federal University, Russia	PAMU, Kolkata
14	Nov 17, 2023	If fossils could speak: glimpses from the Late Triassic world	Sanghamitra Ray	Indian Institute of Technology, Kharagpur	GSU, Kolkata
15	Nov 28, 2023	Physics of accretion and ejections around black holes: An overview	Indranil Chattopadhayay	Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital	PAMU, Kolkata
16	Jan 02, 2024	Varying Newton's constant, dark matter, and gravity at short distances	Saurya Das	University of Lethbridge, Canada	PAMU, Kolkata
17	Jan 05, 2024	An industrial view of big-data analytics and computing	V. P. Ramesh	Central University of Tamil Nadu, Thiruvarur	TASU, Tezpur
18	Jan 18, 2024	Quantum Enhanced Impulse Measurements with Mechanical Sensors in the Search for Dark Matter	Sohitri Ghosh	Fermilab, Batavia, Illinois, USA	PAMU, Kolkata
19	Jan 23, 2024	A journey in the zoo of Turing patterns	Timoteo Carletti	University of Namur, Belgium	PAMU, Kolkata
20	Jan 23, 2024	Consensus Formation Among Mobile Agents in Networks of Heterogeneous Interaction Venues	Sayantan Nag Chowdhury	University of California, USA	PAMU, Kolkata
21	Jan 23, 2024	Transient chaos causes high vulnerability of networked systems	Ulrike Feudel	Carl von Ossietzky University Oldenburg, Germany	PAMU, Kolkata
22	Jan 31, 2024	Windows to the early universe: PBH and GW	Sukannya Bhattacharya	Padua University, Italy	PAMU, Kolkata
23	Feb 07, 2024	Entanglement or Complexity? The Chauffeur of Faster Battery	Sibasish Ghosh	The Institute of Mathematical Sciences, Chennai	PAMU, Kolkata
24	Feb 08, 2024	Marine Giants: Exploring the ecology of ancient Jurassic crocodiles	Michela Johnson	Natural History Museum at Stuttgart, Germany	GSU, Kolkata
25	Feb 13, 2024	Machine Learning Techniques for Inverse Heat Transfer Problems: Opportunities and Challenges	Prashanta Dutta	Washington State University	PAMU, Kolkata
26	Feb 15, 2024	Harnessing the Unresolved Lenses: Detecting Strong Lenses and Measuring Time-Delays from Unresolved Light Curves	Satadru Bag	Technische Universität München and Max Planck Institute for Astrophysics, Germany	PAMU, Kolkata
27	Feb 21, 2024	Relativistic Spherical Shocks in Expanding Media	Ishika Palit	National Tsing Hua University, Taiwan	PAMU, Kolkata
28	Feb 22, 2024	Public Good Geosciences	Arindam Dutta	Geological Survey of India	GSU, Kolkata
29	Feb 22, 2024	Tuning into 'cosmic hum': The first hints of a stochastic gravitational wave background	Pratik Tarafdar	IMSc Chennai	PAMU, Kolkata
30	Feb 23, 2024	New Advances in Non-Lorentzian Physics	Rabin Banerjee	S.N. Bose National Center for Basic Sciences, Kolkata	PAMU, Kolkata
31	Feb 23, 2024	On the power of geometrically-local classical and quantum circuits	Kishor Bharti	IHPC, A*STAR, Singapore	PAMU, Kolkata
32	Mar 06, 2024	Interacting dark energy and the H0 tension	Supriya Pan	Presidency University, Kolkata	PAMU, Kolkata
33	Mar 12, 2024	Graph theory introduction and flow problems	Soumyajit Mukherjee	Department of Earth Sciences, Geodynamics Lab, Indian Institute of Technology, Bombay	GSU, Kolkata
34	Mar 21, 2024	Himalayan tectonics, hazards, and climate	Mary Hubbard	Montana State University, Bozeman, Montana, U.S.A.	GSU, Kolkata

Social Sciences Division (SSD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	Apr 21, 2023	A Division of Laborers: Identity and Efficiency in India	Daniel Keniston	Lousiana State University	EPU, Delhi
2	Apr 28, 2023	Forest clearing and fatal human elephant conflict in India	Sumeet Gulati	University of British Columbia	EPU, Delhi
3	May 12, 2023	A well-targeted interest rate policy	Gurbachan Singh	Ashoka University	EPU, Delhi
4	May 18, 2023	South Asian Research Network for Childhood and Youth Studies (SARNCYS): A Brief Overview	Haridhan Goswami	Coordinator, SARNCYS, Faculty of Arts and Humanities, Manchester Metropolitan University, UK	ERU, Kolkata
5	May 18, 2023	Co-producing Well-being Policies with Children: Context, Concepts, Methods & Challenges	Sarmila Banerjee	University of Calcutta	ERU, Kolkata
6	May 18, 2023	Debating School Education in India: Through the Regional Prism of South Asia	Manabi Majumdar and Sabir Ahamed	Pratichi Institute, Kolkata	ERU, Kolkata
7	May 18, 2023	Re-victimization and the Long Shadow of Witnessing Parental Violence as a Child, Evidence from National Family Health Survey	Zakir Hussain	Economics Department, Presidency University, Kolkata	ERU, Kolkata
8	May 18, 2023	Environment, Society, Education, Health and Well-being – Few Words	Swaha Bhattacharya	Department of Applied Psychology, University of Calcutta	ERU, Kolkata
9	May 18, 2023	Coproducing Well-being Policies with Children: A South Asian perspective: Case study: Bangladesh.	Gour Gobinda Goswami	Dept. of Economics, North South University, Dhaka, Bangladesh and Dr Md. Ibrahim Khalil, Dept. Of Sociology, Govt. B.M College, Barishal, Bangladesh	ERU, Kolkata
10	May 18, 2023	Coproducing Wellbeing Policies with Children: A South Asian Perspective: Case study: Sri Lanka	Subhashinie Wijesundera	Department of Education, Faculty of Arts, University of Peradeniya, Sri Lanka	ERU, Kolkata
11	May 18, 2023	Coproducing Wellbeing Policies with Children: A South Asian perspective, Case study: Nepal	Arbinda Lal Bhomi	(Retired Professor of Education, Tribhuvan University), Vice-President, Foundation for Educational Change, Nepal	ERU, Kolkata
12	May 18, 2023	Understanding Children's Experiences During the Covid-19 Pandemic: Stressors, Resilience, Support and Adaptation: A Collaborative Research Between The School of Human Ecology, Tata Institute of Social Sciences (TISS) and Child Rights and YOU-CRY	Trina Chakroborty	CRY, Kolkata	ERU, Kolkata
13	Jul 04, 2023	The Dynamics of Inequality in Democratic Public Good Provision	Dyotona Dasgupta	O.P. Jindal Global University	EPU, Delhi
14	Jul 14, 2023	Locked-in Dirty Fuels: An ethnographic study on cooking fuel transition in Nusa Tenggara Timur, Indonesia	Komali Yenneti	University of Wolverhampton	EPU, Delhi
15	Jul 20, 2023	Aphasia in South Asian countries	Arpita Bose	SPCLS, University of Reading UK,	LRU, Kolkata
16	Jul 20, 2023	Agrammatism in Tamil aphasic patients	Lakshmi Venkatesh	Sri Ramachandra University, Chennai, Tamil Nadu, India,	LRU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
17	Jul 20, 2023	Complexities in the process of detection of Agrammatism in Indian patients	Manpreet Kaur	Speech Language Pathologist at Pauranik Neuro Center, Indore, India,	LRU, Kolkata
18	Jul 20, 2023	Use of technology in the detection of agrammatism	Manaswita Dutta	Rush University, Chicago, USA	LRU, Kolkata
19	Jul 21, 2023	Doubt: Insights from a cross-cultural experiment	Subrato Banerjee	IIT Bombay	EPU, Delhi
20	Jul 21, 2023	Dealing with agrammatic people in India	Avanthi Paplikar	Dr. S.R. Chandrasekhar Institute of Speech and Hearing, Bengaluru, Karnataka, India,	LRU, Kolkata
21	Jul 21, 2023	Treatment for aphasic patients	Sunila John	Manipal Academy of Higher Education, Manipal, Mangalore,	LRU, Kolkata
22	Jul 21, 2023	Detection of aphasia in aging Malayalam people	Maya Leela	Speech Language Pathologist and linguist. Thiruvananthapuram, Kerala, India,	LRU, Kolkata
23	Jul 26, 2023	Inferring trade-offs in University Admissions: Evidence from Cambridge	Debopam Bhattacharya	Department of Economics, Trinity College and University of Cambridge, UK	ERU, Kolkata
24	Aug 02, 2023	Revisiting Anselin et al. (1996): The Last Word on Spatial Testing	Anil K. Bera	Department of Economics, University of Illinois, Urbana Champaign, USA	ERU, Kolkata
25	Aug 04, 2023	Follow the Crowd: But Who Follows, Who Counteracts, and Which Crowd?	Moses Shayo	Hebrew University of Jerusalem	EPU, Delhi
26	Aug 07, 2023	Repeated Trading: Transparency and Market Structure	Santanu Roy	Southern Methodist University	EPU, Delhi
27	Aug 16, 2023	Institutional Origin of Market Power and International Trade	Joy Das	Lecturer at the Jeb E. Brooks School of Public Policy and Dyson School of Applied Economics and Management, Cornell University, USA	ERU, Kolkata
28	Aug 23, 2023	Can Awareness Reduce (and Reverse) Identity- driven Bias in Judgement? Evidence from International Cricket	Subhasish M. Chowdhury	Department of Economics, University of Sheffield, UK	ERU, Kolkata
29	Aug 25, 2023	Firm presence, environmental quality, and economic activity	Namrata Kala	MIT	EPU, Delhi
30	Sep 01, 2023	The (soft) power to tax: compliance and tax morale as imperial legacy	Anand Murugesan	Central European University	EPU, Delhi
31	Sep 29, 2023	On efficiency with heterogenous forecasts	Shurojit Chatterji	Singapore Management University	EPU, Delhi
32	Oct 13, 2023	Knowing your lemon before you dump it	Alessandro Pavan	Northwestern University	EPU, Delhi
33	Oct 23, 2023	Opponent's foresight and optimal choices	Jeevant Rampal	Indian Institute of Management, Ahmedabad	EPU, Delhi
34	Nov 03, 2023	Flexible Bayesian Quantile Analysis of Residential Rental Rates	Arshad Rahman	Indian Institute of Technology, Kanpur	EPU, Delhi
35	Nov 07, 2023	The role of culture in the documentation of Indigenous languages	Amrita Bhattacharya	Amity University, Salt Lake, Kolkata	LRU, Kolkata
36	Nov 17, 2023	Deadweight Losses or Gains from In-kind Transfers: Experimental Evidence	Gaurav Datt	Monash University	EPU, Delhi

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
37	Nov 24, 2023	Persistence in physicians locations: Long-run evidence from decentralised loan repayment programs	Anomita Ghosh	University of Illinois, Urbana-Champaign	EPU, Delhi
38	Nov 29, 2023	Putting all Eggs in One Basket: Insights from a Correlation Inequality	Siddhartha Sahi	Rutgers University	EPU, Delhi
39	Dec 18, 2023	NiReMS: A regional model at household level combining spatial econometrics with dynamic microsimulation	Arnab Bhattacharjee	Edinburgh Business School, Heriot-Watt University	SOSU, Kolkata
40	Dec 21, 2023	Translation of Scientific and Technical Terms in Indian Languages	Girish Nath Jha	Chairman, CSTT, Ministry of Education, Delhi, India	LRU, Kolkata
41	Dec 21, 2023	Political Economy of Sanitation in India	Anurag Banerjee	Business School, Durham University, UK	ERU, Kolkata
42	Jan 05, 2024	Air, Water and Health in India: Emerging Gender Issues	Aparajita Chattopadhyay	International Institute for Population Sciences, Mumbai	ERU, Kolkata
43	Jan 09, 2024	Improving Street Food Safety: Is Better Infrastructure and Training Sufficient?	Denni Tommasi	Department of Economics, University of Bologna, Italy	ERU, Kolkata
44	Jan 12, 2024	Major Issues in Speech Processing	Kaushik Roy	Dept. of Computer Science, West Bengal State University, Barasat, West Bengal, India	LRU, Kolkata
45	Jan 29, 2024	Measuring Surplus Labour	Niladri Shekhar Dhar	Associate Professor, Bihar Institute of Public Finance and Policy	EAU, Bangalore
46	Feb 09, 2024	Timing of the tie-breaker	Amit Goyal	ISI, Delhi	EPU, Delhi
47	Feb 13, 2024	Incontestable Mechanisms	Inacio Bo	University of Macau	EPU, Delhi
48	Feb 16, 2024	Similarity of Information in Games	Aditya Kuvalekar	University of Essex	EPU, Delhi
49	Feb 29, 2024	Sovereign Spreads and the Political Leaning of Nations	Alok Johri	McMaster University	EPU, Delhi
50	Mar 01, 2024	Heterogeneous Noise and Stable Miscoordination	Srinivas Arigapudi	IIT, Kanpur	EPU, Delhi
51	Mar 08, 2024	Seemingly informative matching mechanisms	Dinko Dimitrov	Saarland University	EPU, Delhi
52	Mar 15, 2024	Global Food Prices, Local Frictions and Air Pollution IGIDR	Digvijay Singh Negi	IGIDR	EPU, Delhi
53	Mar 18, 2024	Econometric modelling of carbon dioxide emissions and concentrations, ambient temperatures and ocean deoxygenation	Alok Bhargava	University of Maryland	EPU, Delhi
54	Mar 20, 2024	Do Risk and Time Preference Explain Household's Demand for Microinsurance? A Lab in the Field Approach.	Anustup Kundu	UNU-WIDER, Katajanokanlaituri 6 B, Helsinki, Finland 00160	ERU, Kolkata
55	Mar 22, 2024	Adapting to Flood Risk: Evidence from a Global Panel of Cities	Vaidehi Tandel	University of Manchester	EPU, Delhi
56	Mar 22, 2024	The 2018 Extreme Rainfall Event in Kerala: A comprehensive Analysis of its causes, responses,and recovery	HarshanT P	School of Social Science, Tata Institute of Social Sciences, Mumbai	EAU, Bangalore

Statistical Quality Control and Operations Research Division (SQCORD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	Aug 16, 2023	'Completely Mixed Games corresponding to Z transformations over Self Dual Cones'	M. Seetharama Gowda	Department of Mathematics and Statistics, University of Maryland, Baltimore County, USA.	SQCORU, Chennai
2	Oct 26, 2023	Application of Envy Free Pricing in Networks	Aaditya Bhardwaj	Lancaster University, UK	SQCORU, Bangalore
3	Oct 27, 2023	Fully Distributed Algorithms for Densely Coupled Optimization Problems in Sparse Optimization and Transportation Applications	Eswar Kumar H K	Walmart Global Tech, New Jersey, USA	SQCORU, Bangalore
4	Oct 28, 2023	Epicasting: Forecasting Epidemics with EWNet	Tanujit Chakraborty	Sorbonne University, Abu Dhabi	SQCORU, Bangalore
5	Oct 29, 2023	Advancing Reward Design and Alignment in Reinforcement Learning through Human Feedback: The Success Story of ChatGPT	Souradip Chakraborty	University of Maryland, USA	SQCORU, Bangalore
6	Oct 30, 2023	Deep neural networks for large-scale complex spatial and spatio-temporal processes	Pratilk Nag	King Abdullah University of Science and Technology, Saudi Arabia	SQCORU, Bangalore
7	Mar 28, 2024	Application of AI/ML in Banking	Sri Mukundan	Wells Fargo India Solutions	SQCORU, Bangalore

Theoretical Statistics and Mathematics Division (TSMD)

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	Apr 05, 2023	When is $mathbb Z[heta]$ the ring of integers?	Sudesh Kaur Khanduja	IISER Mohali	SMU, Delhi
2	Apr 24, 2023	Bangalore Probability Seminar on the recent developments of nonlocal ergodiccontrol problems	Anup Biswas	IISER Pune	SMU, Bangalore
3	Apr 26, 2023	Decision Theory in Quantum Probability, Sufficient Statistic and Rao-Blackwell Theorem	KB Sinha	JNCASR	SMU, Delhi
4	May 03, 2023	On inductive approach to the representation theory	Ashish Mishra	UFPA Brazil	SMU, Delhi
5	May 10, 2023	The Dimer Model in 3 dimensions	Nishant Chandgotia	TIFR CAM	SMU, Delhi
6	May 22, 2023	Inferring the Effect of a Confounded Treatment by Calibrating Resistant Population's Variance	Bikram Karmakar	Department of Statistics, University of Florida	SMU, Kolkata
7	May 29, 2023	Chirality in images of word maps	Amit Kulshrestha	IISER Mohali	SMU, Delhi
8	May 30, 2023	Geometry of the trace of random walk on torus and random interlacements	Subhajit Goswami	TIFR Mumbai	SMU, Kolkata
9	May 31, 2023	Nonstandard mathematicalthinking	Irfan Alam	University of Pennsylvania, Philadelphia	SMU, Bangalore
10	Jun 01, 2023	Some recent applications of nonstandard analysis in Probability Theory	Irfan Alam	University of Pennsylvania, Philadelphia	SMU, Bangalore
11	Jun 12, 2023	S-ADIC Diophantine Approximation and Fractal Measures	Shreyasi Datta	University of Michigan, Ann Arbor	SMU, Kolkata
12	Jun 12, 2023	Reciprocity, non-vanishing and subconvexity of central L-values	Subhajit Jana	Queen Mary University of London	SMU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
13	Jun 14, 2023	On manifolds homeomorphic to the n-sphere	Somnath Basu	IISER Kolkata	SMU, Kolkata
14	Jun 19, 2023	Orchestrated Approximate Message Passing: A New Way of Information Integration from Multimodal Data	Sagnik Nandy	University of Pennsylvania	SMU, Delhi
15	Jun 19, 2023	Parameter Estimation in p-Spin Ising Models	Somabha Mukherjee	Department of Statistics and Data Science National University of Singapore	SMU, Kolkata
16	Jul 06, 2023	Gaussian and Poisson behaviour of small quadratic non-residues	Kunjakanan Nath	University of Illinois at Urbana-Champaign, USA	SMU, Kolkata
17	Jul 10, 2023	Introduction toArithmetic Teichmuller Spaces	Kirti Joshi	University of Arizona, Tucson	SMU, Bangalore
18	Jul 10, 2023	The Weyl law with uniform power savings	Didier Lesesvre	Universite de Lille	SMU, Kolkata
19	Jul 12, 2023	(Equivariant) lifting problem for completely positive maps	Suvrajit Bhattacharjee	Dept. of Mathematics, University of Oslo, Norway	SMU, Kolkata
20	Jul 13, 2023	Birkhoff-James orthogonality in spaces of operators	TSSRK Rao	Shiv Nadar Univ	SMU, Bangalore
21	Jul 17, 2023	A p-adicJacquet-Langlands correspondence in weight 1	Kannappan Sampat	University of Michigan	SMU, Bangalore
22	Jul 17, 2023	Recurrence and Transience of Rademacher Series	Satyaki Bhattacharya	Lund University	SMU, Kolkata
23	Jul 17, 2023	Quasigeodesic Anosov Flows in Dimension Three	Anindya Chanda	Florida State University	SMU, Kolkata
24	Jul 18, 2023	Atiyah Real Adams Conjecture	Prasit Bhattacharya	New Mexico State University	SMU, Kolkata
25	Jul 19, 2023	Anyonic quantum symmetries of finite spaces	Sutanu Roy	NISER Bhubaneswar	SMU, Kolkata
26	Jul 19, 2023	Attributed preferential attachment: local weak limits, Page-rank and sampling	Sayan Banerjee	University of North Carolina at Chapel Hill	SMU, Kolkata
27	Jul 20, 2023	Compactly generated tensor t-structures on the derived categories of schemes	Gopinath Sahoo	HRI PRAYAGRAJ	SMU, Bangalore
28	Jul 21, 2023	A quantum = classical result on f-divergences and some applications	Tiju Cherian John	University of Arizona	SMU, Bangalore
29	Jul 27, 2023	p-numerical semigroups and their fundamental properties	Takao Komatsu	Zhejiang Sci-Tech University, Hangzhou, China.	SMU, Bangalore
30	Jul 28, 2023	q-generalized (r,s)-Stirling transforms and q-multiple zeta values	Takao Komatsu	Zhejiang Sci-Tech University, Hangzhou, China.	SMU, Bangalore
31	Aug 02, 2023	Characterizations of amenability through stochastic domination and finitary codings	Gourab Roy	University of Victoria	SMU, Kolkata
32	Aug 03, 2023	Various test vectors and moments of L-functions	Subhajit Jana	Queen Mary University, London, UK	SMU, Kolkata
33	Aug 03, 2023	On values of quadraticforms	Manoj Choudhari	IITRM, Ahmedabad	SMU, Bangalore
34	Aug 07, 2023	Looking back at the stochastic approximation method: asymptotics of Robbins-Monroe and a connection to multistage nonparametric estimation	Moulinath Banerjee	University of Michigan, Ann Arbor	SMU, Kolkata
35	Aug 10, 2023	Deligne's line bundle and generalizations	Niranjan Ramachandran	University of Maryland, College Park	SMU, Bangalore
36	Aug 11, 2023	Continuous-time digital search tree and a border aggregation model	Debleena Thacker	Durham University	SMU, Kolkata

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37	Aug 14, 2023	Looking back at the stochastic approximation method: asymptotics of Robbins-Monroe and a connection to multistage nonparametric estimation	Moulinath Banerjee	University of Michigan, Ann Arbor	SMU, Kolkata
38	Aug 21, 2023	Multivariate Symmetry: Distribution-Free Testing via Optimal Transport	Bodhisattva Sen	Columbia University	SMU, Kolkata
39	Aug 24, 2023	Westfälische Wilhelms-Universität Münster	Anusha M. Krishnan	Univ. Muenster	SMU, Bangalore
40	Sep 01, 2023	Triangle Groups and Generalised Fermat Equation: x^p + y^q = z^r.	Devendra Tiwari	Bhaskaracharya Pratisthan	SMU, Delhi
41	Sep 06, 2023	Cheng's conjecture and Bergman-Einstein metrics on two-dimensional Stein spaces	Soumya Ganguly	UCSD	SMU, Delhi
42	Sep 07, 2023	Stability theorems for projective modules over positively graded domain	Sourjya Bannerjee	IISER Kolkata	SMU, Bangalore
43	Sep 11, 2023	Traces in Operator Theory	K B Sinha	JNCASR, Bangalore	SMU, Kolkata
44	Sep 12, 2023	Factorization of the Shift Semigroup or the Continuous version of the B-C-L theorem or Operator Mobius Transformation	K B Sinha	JNCASR, Bangalore	SMU, Kolkata
45	Sep 13, 2023	Bruhat-Tits theory over a higher dimensional base	Yashonidhi Pandey	IISER Mohali	SMU, Delhi
46	Sep 27, 2023	Fixed points via tilting	Vignesh Subramanian	University of Copenhagen	SMU, Bangalore
47	Oct 11, 2023	Reversibility in affine groups	K. Gangopadhyay	IISER Mohali	SMU, Delhi
48	Oct 23, 2023	Exploring Divisibility in Lucas and Elliptic Sequence	Chachawan Panraksha	Mahidol University	SMU, Delhi
49	Nov 06, 2023	KMS states on the C*-algebra of a Fell bundle over an etale groupoid	Md Amir Hossain	IISER Bhopal	SMU, Kolkata
50	Nov 06, 2023	On some Diophantine equations involving sequences and factorial	Alain Togbe	Purdue University Northwest	SMU, Delhi
51	Nov 09, 2023	Tight contact structures on Seifert fibered 3-manifolds	Tanushree Shah	Alfred Renyi Inst., Hungary	SMU, Bangalore
52	Nov 23, 2023	Ordinary and braided quantum symmetries of finite graphs	Sutanu Roy	NISER, Bhubaneswar	SMU, Bangalore
53	Nov 23, 2023	On compact quantum groups and their Gaussian parts	Uwe Franz	Université de Franche-Comté, Besançon	SMU, Bangalore
54	Nov 24, 2023	Geometric Exploratory Data Analysis for Random Objects	Paromita Dubey	University of Southern California	SMU, Kolkata
55	Nov 24, 2023	Community Detection with Censoring	Souvik Dhara	Purdue University	SMU, Kolkata
56	Nov 30, 2023	Sizes of Saito-Kurokawa lifts and norm relations: level aspect	Soumya Das	IISc, Bengaluru	SMU, Kolkata
57	Dec 06, 2023	Estimation of the number of communities for sparse networks	Sharmodeep Bhattacharyya	Oregon State University	SMU, Kolkata
58	Dec 07, 2023	Random Gems	Joel Spencer	New York University, USA	SMU, Kolkata
59	Dec 07, 2023	Cubulating hyperbolic mapping tori.	Suraj Krishna M S	Technion	SMU, Bangalore
60	Dec 13, 2023	Global Testing Against Sparse Alternatives under Ising Models	Rajarshi Mukherjee	Department of Biostatistics, Harvard University	SMU, Kolkata

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
61	Dec 15, 2023	Critical phenomena of the Blume-Capel model	Trishen Gunaratnam	University of Geneva	SMU, Delhi
62	Dec 18, 2023	Precision Matrix Estimation under the Horseshoe-like Prior–Penalty Dual	Sayantan Banerjee	IIM Indore	SMU, Kolkata
63	Dec 18, 2023	Load Balancing under Data Locality: Extending Mean-Field Framework to Constrained Large-Scale Systems	Debankur Mukherjee	School of Industrial and Systems Engineering, Georgia Tech, USA	SMU, Kolkata
64	Dec 19, 2023	The Dimer Model in 3 dimensions	Nishant Chandgotia	TIFR--CAM, Bangalore	SMU, Kolkata
65	Dec 20, 2023	Keep or toss? A nonparametric score to evaluate solutions for noisy ICA	Purnamrita Sarkar	University of Texas at Austin, USA	SMU, Kolkata
66	Dec 20, 2023	Homological algebra in functional analytic settings	Devarshi Mukherjee	University of Buenos Aires	SMU, Bangalore
67	Dec 21, 2023	Locally Adaptive Nonparametric Regression with Pointwise Estimation Error Bounds	Sabyasachi Chatterjee	University of Illinois Urbana-Champaign, USA	SMU, Kolkata
68	Jan 04, 2024	Seiberg-Witten equations in all dimensions	Partha Sarathi Ghosh	University of Brussels	SMU, Kolkata
69	Jan 11, 2024	Introduction to Floer theoretic invariants in symplectic and contact topology	Soham Chanda	Rutgers University	SMU, Kolkata
70	Jan 11, 2024	Augmentation Varieties and Disk Potential	Soham Chanda	Rutgers University	SMU, Kolkata
71	Jan 11, 2024	Chui's conjecture nd rational approximation	Evgeny Abakumov	Univ. Gustave Eiffel, France	SMU, Bangalore
72	Jan 15, 2024	From Zero Detection to Large Values of Dirichlet polynomials	Olivier Ramaré	CNRS/Aix Marseille Université, France	SMU, Kolkata
73	Jan 16, 2024	A Modern Look into Pseudodifferential Calculus	Satwata Hans	Eberly College of Science, The Pennsylvania State University, USA	SMU, Kolkata
74	Jan 17, 2024	From Zero Detection to Large Values of Dirichlet polynomials	Olivier Ramaré	CNRS/Aix Marseille Université, France	SMU, Kolkata
75	Jan 19, 2024	From Zero Detection to Large Values of Dirichlet polynomials	Olivier Ramaré	CNRS/Aix Marseille Université, France	SMU, Kolkata
76	Jan 19, 2024	L-functions and automorphic forms	Aritra Ghosh	Alfred Renyi Institute of Mathematics, Hungary	SMU, Kolkata
77	Jan 22, 2024	Central Limit Theorem in High Dimension	Debraj Das	IIT Bombay	SMU, Kolkata
78	Jan 23, 2024	The spectral approach to geometry: spectral triples	Walter van Suijlekom	Radboud University, Nijmegen, The Netherlands	SMU, Kolkata
79	Jan 23, 2024	Algebra Seminar on Trace methods and the Atiyah-Segal completion theorem	Vladimir Sosnilo	University of Regensburg	SMU, Bangalore
80	Jan 24, 2024	L-functions and automorphic forms	Aritra Ghosh	Alfred Renyi Institute of Mathematics, Hungary	SMU, Kolkata
81	Jan 24, 2024	The Moran model with random resampling rates	Frank den Hollander	Leiden University, The Netherlands	SMU, Kolkata
82	Jan 24, 2024	Inner fluctuations of geometry: Morita equivalence and connections	Walter van Suijlekom	Radboud University, Nijmegen, The Netherlands	SMU, Kolkata
83	Jan 25, 2024	Second quantization of spectral geometry: entropy and the spectral action	Walter van Suijlekom	Radboud University, Nijmegen, The Netherlands	SMU, Kolkata
84	Jan 25, 2024	Polymath14: Groups with norms	Apoorva Khare	IISc & Analysis & Probability Research Group	SMU, Delhi

Sl.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
85	Jan 26, 2024	Geometric spaces at finite resolution: operator systems	Walter van Suijlekom	Radboud University, Nijmegen, The Netherlands	SMU, Kolkata
86	Jan 30, 2024	On diffeomorphisms of 4-manifolds	Anubhav Mukherjee	Princeton University, USA	SMU, Kolkata
87	Jan 31, 2024	L-functions and automorphic forms	Aritra Ghosh	Alfred Renyi Institute of Mathematics, Hungary	SMU, Kolkata
88	Feb 05, 2024	Quantum Statistical Inference	Samriddha Lahiry	Harvard University, USA	SMU, Kolkata
89	Feb 13, 2024	Nice Error Basis, Quantum Channel and Semigroups of Various Positive Maps	Purbayan Chakraborty	Universite de Franche-Comte, Besanson, France	SMU, Kolkata
90	Feb 13, 2024	Distributing quantum workload to enhance circuit fidelity	Ritajit Majumdar	IBM Quantum	SMU, Bangalore
91	Feb 15, 2024	Ising and percolation under highly anisotropic scaling limits	Maria Eulalia-Vares	Inst. Matematica, Brazil	SMU, Bangalore
92	Feb 21, 2024	Metastability for a class of stochastic dynamics	Maria Eulalia-Vares	Instituto de Matemática, Brazil	SMU, Kolkata
93	Feb 22, 2024	Critical scaling for anisotropic percolation system on Z^2	Maria Eulalia-Vares	Instituto de Matemática, Brazil	SMU, Kolkata
94	Feb 23, 2024	Law of iterated logarithm in Last passage percolation	Manjunath Krishnapur	IISc Bangalore	SMU, Bangalore
95	Feb 23, 2024	Graph homomorphisms, some cohomology and the word problem	Nishant Chandgotia	TIFR CAM	SMU, Bangalore
96	Feb 27, 2024	Linear congruence relations for exponents of Borcherds products	Badri Vishal Pandey	Univ. Cologne	SMU, Bangalore
97	Mar 12, 2024	Hardy-Littlewood-Riesz type equivalent criteria for the Riemann hypothesis.	Bibekananda Maji	IIT Indore	SMU, Bangalore
98	Mar 13, 2024	Large values of quadratic Dirichlet L-functions	Gopal Maiti	Max Planck Institute of Mathematics, Bonn, Germany	SMU, Kolkata
99	Mar 25, 2024	Tractable Machine Learning	Chiranjib Bhattacharya	IISc Bangalore	SMU, Bangalore
100	Mar 26, 2024	Weiner's Lemma and its applications to plane projective curves over finite fields	Bhaskar Bagchi	Retd. Prof. SMU, ISI, Bangalore	SMU, Bangalore
101	Mar 28, 2024	Hermitian varieties over finite fields and codes	Mrinmoy Datta	IIT Hyderabad	SMU, Bangalore

Academic Centres

The Centre for Research on the Economics of Climate, Food, Energy and Environment (CECFEE), Delhi

Sl. No.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1	April 28, 2023	Forest clearing and fatal human elephant conflict in India	Sumeet Gulati	University of British Columbia	Virtual
2	July 14, 2023	Locked-in Dirty Fuels: An ethnographic study on cooking fuel transition in Nusa Tenggara Timur, Indonesia	Komali Yenneti	University of Wolverhampton	ISI, Delhi
3	Aug 25, 2023	Firm presence, environmental quality, and economic activity	Namrata Kala	MIT	ISI, Delhi
4	Mar 15, 2024	Global Food Prices, Local Frictions and Air Pollution	Digvijay Singh Negi	Indira Gandhi Institute of Development Research (IGIDR)	ISI, Delhi
5	Mar 18, 2024	Econometric modelling of carbon dioxide emissions and concentrations, ambient temperatures and ocean deoxygenation	Alok Bhargava	University of Maryland	ISI, Delhi
6	Mar 20, 2024	Optimal emissions pricing in LMICs accounting for household emissions from traditional cooking	Raavi Aggarwal	CECFEE	EfD webinar series
7	Mar 28, 2024	Public lecture - "Land or Sea? How Geography Shaped the Emergence of Colonialism in Asia and Africa"	Tirthankar Roy	Dept. of Economic History – London School of Economics	ISI, Delhi

The Center for Soft Computing Research (CSCR), Kolkata

Sl. No.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1.	December 19, 2023	Structure preserving finite volume schemes for aggregation-diffusion equations	Mainak Mandal	Institute for Scientific Computing, Techincal University of Dresden	CSCR, Kolkata
2.	January 02, 2024	Advances in few-shot learning	Aniket Roy	John Hopkins University, USA	CSCR, Kolkata
3.	January 15, 2024	Foundational models for complex situation understanding and reasoning	Anirban Roy	Information and Computing Science Division, SRI International	CSCR, Kolkata

Technology Innovation Hub (TIH), Kolkata

Sl. No.	Date	Title of the Lecture	Name of the Speaker	Affiliation of the Speaker	Name of the Organizing Unit
1.	22-06-2023	Intellectual Properties and their protection	Prof. Pinaki Ghosh	IPR Chair Professor, West Bengal National University of Juridical Sciences (NUJS)	IDEAS-TIH
2.	31-10-2023	Incentivizing Healthy Food Choices Using Add-on Bundling: A Field Experiment: Prof Saibal Ray, McGill University	Prof. Saibal Ray	James McGill Professor of Operations Management and Vice Dean (Faculty), Desautels Faculty of Management, McGill University, Montreal, Canada	IDEAS-TIH

7.4 Outreach Activities

Sl.	Exact Date/ Duration	Title of the Outreach Activities conducted	Number of Participants	Name of the Target Audience	Purpose/ Objective	Organizing Unit
1	Apr 28, 2023	Pattern Recognition Models with Application to Remote Sensing Imagery	130(M: 80, F:50)	Research Scholar, B. Tech and M. Tech Students, Faculties	Reaching out to the interested participants in the area of Machine Learning and its Applications	SSIU and VIT Vellore
2	Jul 17, 2023	Financial Stability Report	24(M: 15, F:9)	PG Students & Researcher works in Finance & related areas.	Reaching out Students & Researcher works in Finance & related areas.	Sampling & Official Statistics Unit,Kolkata in collaboration with RBI
3	Aug 29, 2023	Domain Adaptation for Pattern Classification	100(M: 60, F:40)	Research Scholar, B. Tech and M. Tech Students, Faculties, Industrial personnel	2nd International Conference on Computing, Communication and Learning (COCOLE)-2024	SSIU and NIT Warangal
4	Sep 22, 2023	Interaction with the XII Class Commerce students of Jawahar Navodaya Vidyalaya, Gandey, Giridih	30(M: 16, F:14)	XII Class Commerce students of Jawahar Navodaya Vidyalaya, Gandey, Giridih	Briefed them about future prospects in rural entrepreneurship and role of MSME sector	ISI Giridih
5	Oct 09, 2023	A tutorial on Machine Learning and its applications	140(M: 80, F:60)	Research Scholar, B. Tech and M. Tech Students, Faculties	Faculty Development Program on Exploring the Technological trends in Machine Learning and Artificial Intelligence-Need of the Hour	SSIU and MVJ College of Engineering, Bangalore, India.
6	Oct 16, 2023	Generative AI with Variational Autoencoder	50(M: 30, F:20)	Research Scholar, B. Tech and M. Tech Students, Faculties, Industrial personnel	Faculty Development Programme on Generative AI and Blockchain for Digital Transformation	SSIU and Nitte Meenakshi Institute of Technology, Bangalore, India.
7	Nov 14, 2023	Machine Learning and Industrial IoT	30(M: 10, F:20)	Research Scholar, B. Tech and M. Tech Students, Faculties	Faculty Development Programme on Artificial Intelligence and Machine Learning for Industrial IoT	SSIU and Mepco Schlenk Engineering College Sivakasi, India.
8	Nov 22, 2023	Students' Visit from Vivekananda Kendriya Vidyalaya, Tezpur	58(M: 43, F:15)	High school students	Orientation of students towards higher studies in Mathematics and Statistics	TASU
9	Dec 01, 2023	Funding students of M.Tech (CrS) for Indocrypt 2023	10(M: 10, F:0)	M.Tech (CrS)	Attending Indocrypt 2023	CSRU/RCBCCS
10	Dec 01, 2023	Funding students of M.Tech (CrS) for Indocrypt 2023	10(M: 10, F:0)	M.Tech (CrS)	Attending Indocrypt 2023	CSRU/RCBCCS
11	Dec 11, 2023	Intelligent Decision-making architectures and applications	90(M: 60, F:30)	Research Scholar, B. Tech and M. Tech Students, Faculties	Faculty Development Programme on Human-AI collaboration: The way forward to Generative AI	SSIU and C. V. Raman Global University, Bhubaneswar, Odisha, India.
12	Dec 21, 2023	The Ubiquity of Statistics	15(M: 14, F:1)	Students of Department of Mathematics, Krishna Chandra College, Hetampur, Birbhum	Awareness about ISI, degree programs offered towards diverse usages of statistics	SQC & OR Unit, Kolkata

Sl.	Exact Date/ Duration	Title of the Outreach Activities conducted	Number of Participants	Name of the Target Audience	Purpose/ Objective	Organizing Unit
13	Feb 09, 2024	Transfer Learning Architecture for Pattern Recognition	85(M: 55, F:30)	Research Scholar, B. Tech and M. Tech Students, Faculties	4th IEEE International Conference on Emerging Systems and Intelligent Computing (ESIC- 2024)	SSIU and Kalinga Institute of Industrial Technology (KIIT) Deemed to be University, Bhubaneswar, India
14	Mar 01, 2024	Granular Computing for decision-making tasks	75(M: 40, F:35)	Research Scholar, B. Tech and M. Tech Students, Faculties, Industrial personnel	International Conference on Cognitive, Green and Ubiquitous Computing (IC-CGU)	SSIU and C. V. Raman Global University, Bhubaneswar, Odisha, India.
15	Mar 15, 2024	Domain Adaptation Approach for Pattern Recognition	125(M: 65, F:60)	Research Scholar, B. Tech and M. Tech Students, Faculties, Industrial personnel	International Conference on Computational Intelligence in Pattern Recognition (CIPR)	SSIU and Maharaja Sriram Chandra Bhanja Deo (MSCB) University, Baripada, Odisha
16	Mar 23, 2024	Art of Writing a research Paper	125(M: 60, F:65)	Research Scholar, B. Tech and M. Tech Students, Faculties	Keynote Lectures	SSIU and PES University, Banashankari, Bangalore
17	14-07-2023	Technology Innovation And Sustainability: Recent Trends	100 (57 Male & 43 Female)	Students of Elitte College of Engineering	Encourage students and teachers of Engineering colleges to work towards innovation and translational research	IDEAS-TIH
18	23-09-2023	Remote Sensing, GIS – A New Light of Hope in the Horizon for Thriving Your Career Opportunities	150 (88 Male & 62 Female)	Students of Baranagar Rameswar High School and other schools nearby	Career choice for students in Remote Sensing and GIS	IDEAS-TIH
19	January 07-01-2024 (12 noon to 3.00 p.m.)	Madhava Mathematics Competition	Total 114 (Male- 90 and Female-24)students enrolled and 83 (Male- 68, Female-15) students appeared for the exam		The competition is meant for the second year B. Sc. students with Mathematics as one of the subjects However, interested first year and third year B. Sc. students also may appear for the competition	Regional co-ordinator: Dr. Jaydeb Sarkar, SMU, Bangalore
20	October 14, 2023	Simon Marais Mathematics Competition	63 registered participants (50 individuals and 13 teams) (Individuals - Male-38, Female-1) (Teams Male-15 Female-7)		This is an Undergraduate Mathematics Competition organized by UNSW, Australia	Dr. Ramesh Sreekantan had conducted

Chapter

8

Administration

330
No. of Scientific and Technical Workers

♂ 281 Male

♀ 49 Female

324
No. of Non-Scientific Workers

♂ 275 Male

♀ 49 Female

♂ **556**
No. of Male Workers

♀ **98**
No. of Female Workers

General Administration

8.1 Administrative Services Division

The Administrative Services Division at the Headquarters caters to the various needs of the Scientific Workers in all the Scientific Units of the Institute engaged in various scientific, research and academic activities and provides them with necessary infrastructural facilities in their pursuit of excellence. The Centres at Delhi, Bangalore, Chennai and Tezpur, each having a number of scientific units, by and large are getting administrative support from the administrative units/sections there. The Administrative Services Divisions of the Institute has the following units at the Headquarters in Kolkata:

Sl. No.	Name of the Unit	Sl. No.	Name of the Unit
1.	Accounts Section	17.	Internal Audit Cell
2.	Audio-Visual Unit	18.	Legal Cell
3.	Canteen	19.	Medical Expenses Reimbursement Unit
4.	Cash Unit	20.	Medical Welfare Unit
5.	CE (A & F)'s Office	21.	Official Language Cell
6.	Central Despatch Unit	22.	Personnel Unit
7.	Council Section	23.	Provident Fund Unit
8.	Director's Office	24.	Public Relations Unit
9.	Electrical Maintenance Unit	25.	Printing and Publication Unit
10.	Engineering Unit	26.	Retirement Benefit Cell
11.	Estate Office	27.	RTI, Grievance, Complaints and Vigilance Cell
12.	Guest House	28.	SC / ST / OBC Liaison Cell
13.	Hostels	29.	Security Unit
14	House Building Advance Cell	30.	Stores and Purchase Unit
15.	Human Resource Development Unit	31.	Telephone Unit
16.	Import & Travel Cell	32.	Transport Unit

Apart from the above mentioned Units, there are few cells dealing with Budget, and other issues to take care of the specific needs of the Institute. The Administrative Services Division also looks after the running of Hostels for Students, Research Scholars and International Statistical Education Centre (ISEC) Trainees and also the running of Canteens for the workers and students of the Institute. The other outlying Units are controlled directly by the Headquarters at Kolkata. The Administrative Services Division takes the responsibility for all new constructional activities of the Institute at its Headquarters and also at outlying Centres/ branches. A brief report on the construction and other activities during the year is narrated in the subsequent paragraphs.

The Administrative activities in the four Centres, namely Delhi, Bangalore, Chennai and North East Centre at Tezpur and in other outlying branch of the Institute and Giridih Office are more or less similar to the Headquarters but on a much smaller scale.

8.2 Office Bearers of the Institute Administration during the Year:

Director	Professor Sanghamitra Bandyopadhyay	
Professors-in-Charge	Applied Statistics Division	Professor Smarajit Bose
	Biological Sciences Division	Dr. Abhishek Mukherjee
	Computer and Communication Sciences Division	Professor Rajat Kumar De
	Physics & Earth Sciences Division	Professor Parthasarathi Ghosh
	Social Sciences Division	Professor Niladri Sekhar Dash
	Theoretical Statistics and Mathematics Division	Professor Pradipta Bandyopadhyay
Head, Statistical Quality Control and Operations Research Division	Professor Biswabrata Pradhan	
Head, Delhi Centre	Professor Antar Bandyopadhyay	
Head, Bangalore Centre	Professor B.S. Daya Sagar	
Head, Chennai Centre	Professor G. Ravindran	
Head, North-East Centre	Professor B. Ramakrishnan	
Dean of Studies	Professor Gopal Krishna Basak	

8.3 List of workers joined/ retired/ voluntarily retired/ resigned/ terminated/ died during the year

A. Appointments

(i) Scientific / Technical Workers

Sl. No.	Name
1.	Dr. Moutushi Chatterjee
2.	Dr. Debashis Paul
3.	Shri Sabyasachi Majee
4.	Shri Abhideep Mitra
5.	Sm. Keya Das
6.	Shri Arindam Chakraborty
7.	Sm. Baishakhi Banerjee
8.	Sm. Dipankana Banerjee
9.	Shri Rishab Sinha
10.	Shri Arghya Mandal
11.	Shri Sourav Chakraborty
12.	Shri Ravinder D
13.	Dr. Shreya Karmakar
14.	Sm. Sanchari Ghosh
15.	Dr. Mriganka Mandal
16.	Shri Umesh Chandra Garai

(ii) Non-Scientific Workers

Sl. No.	Name
1.	Shri Ravinder Kumar
2.	Shri Pankaj Kumar Meena
3.	Shri Subash K
4.	Shri Anoop Rajan
5.	Shri Sanjay Karmakar
6.	Sk. Samidul Ali
7.	Shri Akshaya Kumar Ghosh
8.	Shri Santosh Kumar Nayak
9.	Shri Santu Mondal
10.	Sm. Oishrila Basu
11.	Shri Debojoti Ghosh
12.	Shri Rupesh Kumar S

B. Retirement/Voluntary Retirement:

(i) Scientific & Technical Workers

Sl. No.	Name
1.	Shri Chitta Ranjan Bhandary
2.	Dr. Sushama M. Bendre
3.	Dr. Mausumi Bose
4.	Shri Amitava Bandyopadhyay
5.	Dr. Molly Chattopadhyay
6.	Shri U. Haridas Acharya
7.	Dr. Tridib Kr. Dutta
8.	Dr. Pathik Kr. Mandal
9.	Shri Kaushik Bhattacharya
10.	Dr. Tapan Kumar Sasmal
11.	Dr. Arunava Sen
12.	Dr. Tarun Kabiraj
13.	Shri Subhasish Kumar Pal
14.	Dr. Samir Kr. Neogy
15.	Shri V. Eswara Rao
16.	Shri Kamal Kr. Ghosh
17.	Dr. Bimal Kr. Roy
18.	Dr. Arup Bose
19.	Dr. Nikhil Ranjan Pal
20.	Dr. Ashis Kr. Chakraborty
21.	Dr. Partha De

(ii) Non-Scientific Workers

Sl. No.	Name
1.	Sm. Lakshmidevi Kewat
2.	Shri Dipak Sarkar
3.	Shri Gouri Sankar Acharya
4.	Shri Biplab De Sarkar
5.	Shri Abhijit Sengupta
6.	Shri Biswajit Roy
7.	Shri Subrata Dey
8.	Shri Jayanta Barua
9.	Shri Palash Chandra Karan
10.	Shri Krittibas Majee
11.	Shri Sounak Chakraborty
12.	Shri Rajesh Kr. Hela
13.	Dr. Jadab Kumar Pal
14.	Shri Sekhar Sarkar
15.	Shri M. Venkataravanappa
16.	Shri Ashok Kr. Paul
17.	Shri Mahabir Yadav
18.	Shri Amitabha Sinha
19.	Shri Ranjan Chowdhury

C. Resignation

(i) Scientific Worker

Sl. No.	Name
1.	Dr. Goutam Mukherjee
2.	Shri Suraj Kumar
3.	Shri Neeraj Kumar
4.	Dr. Indranil Mukhopadhyay

(ii) Non - Scientific Worker

Sl. No.	Name
1.	Shri Raghu Thota
2.	Shri Vikrant Kumar
3.	Shri Yogesh Kumar

D. Deputation/ Lien

(i) Scientific Worker

Sr. No.	Name
1.	Shri Ashis Kumar Singh (Lien)
2.	Dr. Subho Roy (Deputation)

E. Death

(i) Scientific Worker

Sr. No.	Name
1.	Sm. Barnali Das

(ii) Non - Scientific Worker

Sr. No.	Name
1.	Shri Ramjan Ali

8.4 Manpower by Gender, Social Category and Disability Group

A. Number of workers in the Institute as on 31st March 2024

Scientific and Technical Workers

♂ Male	♀ Female	Σ Total
281	49	330

Non-Scientific Workers

♂ Male	♀ Female	Σ Total
275	49	324

Total	♂	♀	Σ
	556	98	654

B. Breakup of manpower by Gender, Social Category and Disability group as on 31st March 2024

Persons with Disabilities (PwD)	Scheduled Caste (SC)	Scheduled Tribe (ST)	Other Backward Classes (OBC)	Minorities
Male : 08	Male : 90	Male : 23	Male : 78	Male : 24
Female : 02	Female : 12	Female : 02	Female : 09	Female : 01
Total : 10	Total : 102	Total : 25	Total : 87	Total : 25

8.5 Annual Return on Cases of Sexual Harassment

1.	Number of complaints of sexual harassment received in the year	**Bangalore Centre** – 1
2.	Number of complaints disposed off during the year	**Bangalore Centre** – 1
3.	Number of cases pending for more than 90 days	Nil
4.	Number of workshops on awareness programmers against sexual harassment conducted during the year	**Bangalore Centre** - 3 sessions - part of orientation programme; **Delhi** - 4 **Kolkata** – 1 **North-East Centre, Tezpur** – 1 & **Pune** - 1
5.	Nature of action	**Bangalore Centre:** 1. General warning message to all the students not to pass any demeaning comments to any group or any person on Whatsapp Group, else will have to face the serious consequences **North-East Centre, Tezpur:** Closed on 07.06.2024

8.6 Applications received and action taken by the Institute under RTI Act, 2005

	Sl. No.	Location	Name & Designation
Name of the Appellate Authority	1	Kolkata	Prof. Sanghamitra Bandyopadhyay, Director
	2	Kolkata	Shri Ravinder Kumar, C.E. (Admn. and Finance)
	3	Kolkata	Dean of Studies
	4	Delhi	Head, Delhi Centre
	5	Bangalore	Head, Bangalore Centre
	6	Tezpur	Head, North-East Centre
	7	Chennai	Head, Chennai Centre
Name of Central Public Information Officer	8	Delhi Centre	Shri Samapan Padhi, Dy. CE (Admn.)
	9	Kolkata	Shri Durgam Giri, Sr. AO
	10	Kolkata	Shri Raj Narayan Mukherjee, AO
	11	Bangalore Centre	Ms. Ashwini Ganesh Tambe, Dy. CE(Admn.)
	12	North-East Centre	Subash K, A.O.
	13	Chennai Centre	Shri Biju Mathew, Sr. AO

The summary statement in this regard is given below:

No. of Applications received	No. of cases accepted	Decisions where requests were fully or partially rejected		No. of decisions from Appellate Authority	C I C decision			Amount collected (Rs.)		
		Fully rejected	Partially rejected		No. of decisions received	Penalty imposed	Disciplinary action, if any	Fee	Other Charges	Penalty amount
149	149	0	0	11	4	0	0	1864	144	0

8.7 Major Constructions / Repair works taken up by the Institute

8.7.1 Civil Work

A. Bangalore

	Sl. No.	Description of work	Total Amount (Rs.)
Work in progress	1.	Construction of New Academic Building	1,75,80,508.00
Work Completed	1.	Renovation of Bituminous Road (Part B)	17,54,576.00
	2.	Replacement of expired and supply & installation of New Fire Extinguisher	9,53,609.00
	3.	Renovation of C-02 Quarters	87,008.00
	4.	Renovation of D-2 & D-9 Quarters	86,904.00

B. Delhi

Work in progress	1	Rehabilitation of Platinum Jubille Hostel at ISI, Campus Delhi Centre	2,48,86,500/-
	2	Renovation of Toilets of Faculty and Admin Block at ISI Campus Delhi Centre New Delhi-110016	40,49,700.00/-
	3	Renovation of PPRU Lab of ISI Campus Delhi Centre New Delhi-110016	49,45,913.00/-
Work Completed	1	Repair and water proofing work in (i) Faculty Block (ii) A-Block and (iii) Teaching Block at ISI Delhi Centre, New Delhi-110016	48,10,000/-

C. Kolkata

	Sl. No.	Description of work	Total Amount (Rs.)
Work in progress	1	R. C. Bose Centre for Cryptology and Security	Nil
	2	Construction of New Academic Building (G+5)	5,48,60,000.00
	3	Consultancy services for preparation of DPR for Amrapali building repair / renovation and upgradation of museum.	Nil
	4	Augmentation of Overall External Electrical System within the premises/ Campus of ISI Kokata	44,36,000.00
	5	Boundary Wall at lower farm house at Giridih, ISI	9,36,740.00
Work Completed	1	Repair / Renovation of S. N. Bose Bhavan and R A Fisher Bhavan	1,17,15,774.00
	2	Repairing of Over Head Reservoir at 205 B.T. Road, ISI Campus	Nil
	3	Repair & Renovation works of Niels Bohr Hall (ISEC & RS Hostel) at 205 B.T. Road ISI Campus, Kolkata- 700108	61,89,333.00

D. North-East Centre, Tezpur

	Sl. No.	Description of work	Total Amount (Rs.)
Work in progress	1	Construction is under progress.	NIL

8.7.2 Electrical Work

A. Bangalore:

Work Completed	1.	Renovation of Street Light works	12,57,927.00

B. Kolkata

Work Completed	1	Electrical arrangement for installation of small individual room ac machines with modification of existing distribution panel	8,59,000.00
	2	Electrical arrangement for installation of small ac machines along with modification of existing distribution panel	5,73,500.00

C. North-East Centre, Tezpur

	Sl. No.	Description of work	Total Amount (Rs.)
Work in progress	1	Construction of the new campus by NBCC is under progress.	NIL

8.8 Specific Achievements

8.8.1 Society Type Activities

A. Membership: (as on 31st March 2024)

Membership Type	Number of New Members		Number of Existing Members	
	Male	Female	Male	Female
Ordinary	08	04	137	43
Life	11	04	826	186
Institutional	01		06	
Total (Except Institutional)	19	08	963	229

B. Finance Committee Meetings:

Sl. No.	Date	Venue
1	12.07.2023	Kolkata (Offline)
2	10.11.2023	Kolkata (Offline)
3	30.01.2024	Kolkata (Offline)

C. Council Meetings:

Sl. No.	Date	Venue
1	18.07.2023	Kolkata (Hybrid)
2	01.09.2023	Delhi (Hybrid)
3	03.11.2023	Kolkata (Hybrid)
4	16.11.2024	Delhi (Hybrid)
5	05.02.2024	Kolkata (Hybrid)

D. Annual General Meeting:

Sl. No.	Date	Venue
1	05.12.2023	Kolkata (Offline)






8.8.2 Activities of Medical Welfare Unit

Kolkata

Medical Welfare Unit caters to the health care need of the students, research scholars, retired workers and their spouses, faculty members and non-faculty members and their dependent family members of Indian Statistical Institute, Kolkata.

- Two (02) Resident Medical Officers (RMO) Dr Himajit Debnath and Dr Arpita Konar Basak perform regular OPD services as well as emergency medical services.
- Specialist clinic of Ophthalmology (Eye) is held two (02) days a week by Dr Swarup Pathak.
- Specialist Clinic of ENT is held two (02) days a week by Dr Sumit Chattopadhyay.
- Specialist Clinic of Psychiatry is held (02) days a week by Dr S Goswami (upto December 2023) and Dr Anirban Basu (from January 2024 till date)
- Psychological counseling sessions were held two (02) days a week by Mr Mohit Ranadip and Ms Swati Mitra (upto December 2024)
- Psychological counseling sessions are held three (03) days a week by clinical psychologist Ms Sarmistha Basu (from January 2024 till date).
- Retired Staff and their spouses are provided medical care at OPD.
- Essential medicines are dispensed by the pharmacists of MWU.
- All Workers, both temporary and permanent, and students of ISI undergo medical fitness test in MWU by the Resident Medical Officers during joining the Institute and after availing commuted (sick) leave.
- Doctors of MWU provide Medical support to all beneficiaries of the Institute both by physical consultation and by telephonic consultation.
- The Nursing staffs of MWU are actively engaged in providing first aid, stitching of wounds and wound dressing. In 2023-24 approximately 500 patients were attended for dressing. They administered vaccines to approximately 450 patients.
- The paramedical staff of MWU help the patients to get admitted in hospital in case of emergency.
- House visit for seriously ill & bed ridden patients were done.
- Doctors and paramedical staffs of MWU try to spread awareness about general health and hygiene, healthy dietary practices, prevention of Malaria, Dengue and other communicable diseases, prevention of dog bite etc. among the students.
- Doctors of MWU look after the hygiene and sanitation measures at the ISI campus, with special attention to the hostels.
- In the year 2023-24 approximately 10000 patients were treated at MWU.
- Team of doctors, nurses and pharmacists attended all important programmes of the Institute like Statistics Day, Convocation, Sports Day etc with emergency care facility at the venue of the event.

Awareness programme

A. Delhi:

The Medical Welfare Unit organizes various awareness programmes for the benefit of workers and students. A large number of workers and students participated in the following seminars and sensitization programmes held during (2023-24)

Sl.No.	Speaker	Topic	Date	Venue
1	Medeor Hospital	Health Check Up Camp	27.04. 2023	Community Hall, ISI Delhi Centre
2	Dr. Pankaj Pahwal	Cleanliness and the Diseases caused by not Adopting Cleanliness	15.07.2023	Administrative Block, ISI, Delhi Centre

B. Kolkata:

The Medical Welfare Unit organizes various awareness programmes for the benefit of the students and workers.

An awareness program for "Stress management and awareness about substance abuse" was held in association with Dean's office in the Orientation programme for new students at Platinum Jubilee Auditorium. Dr Arpita Konar Basak, Ms Swati Mitra and Mr Mohit Ranadip were the speakers.

Stress management workshops were held in batches in collaboration with Dean's Office before mid-semester exam and end semester exam by the Psychiatrist and Psychological Counselor of the Institute.

8.9 Administrative Training programmes

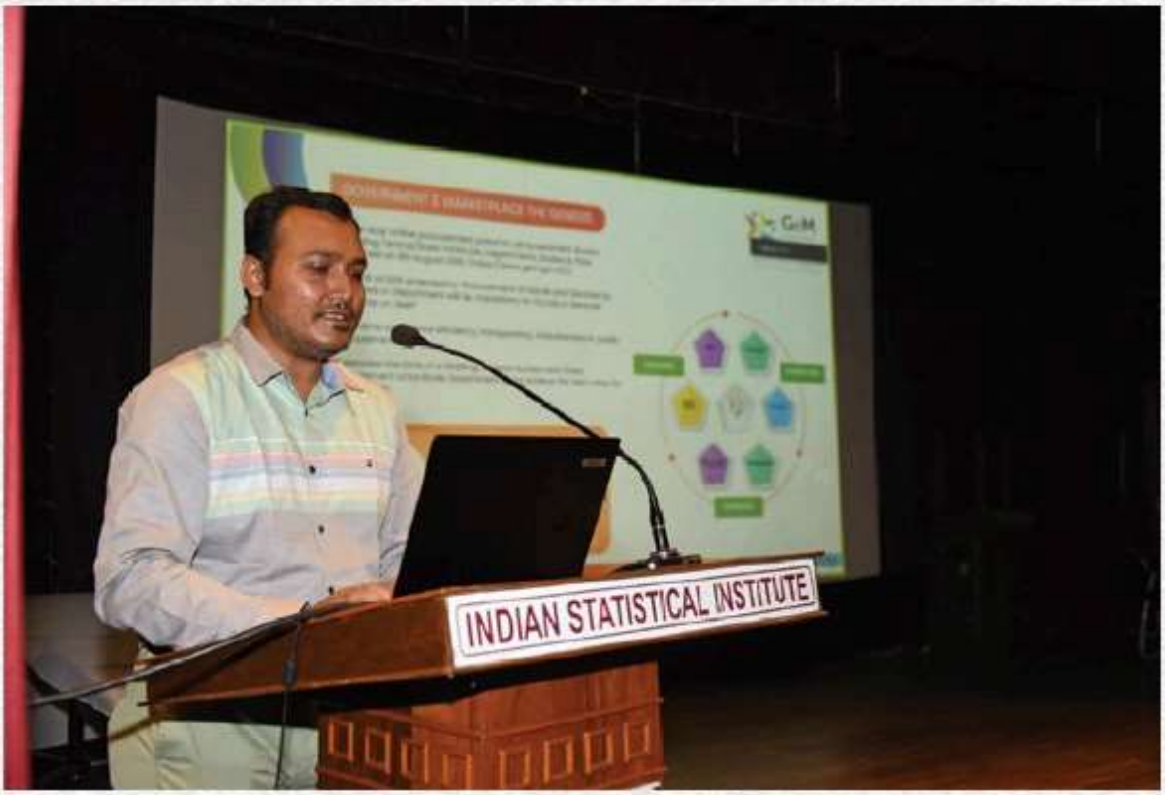
The details of the training programs organized by the H.R.D. Unit are furnished below:

A. Bangalore:

Sl. No.	Date	Subject	No of participants		Speaker/ Organizer
			Male	Female	
1.	11-04-2023	Basic: Gem Training	07	10	Gem Facilitator, Karnataka
2.	22-07-2023	An awareness Program for All contractual workers of ISI BC: "Prevention, Prohibition and Redressal of the Sexual Harassment of Women at Work Place (POSH law)"	53	20	M/s. VLegal Govt. of India empaneled Resource Institution.

B. Kolkata:

Sl. No.	Course Title	Online/ Offline	Venue	Duration	No. of Participants	Male Participants	Female Participants
1	Public Procurement and GeM	Offline	INGAF, Kolkata	One (01) Day, 16.05.2023	Five (05)	Five (05)	—
2	PFMS: e-Bill Module	Offline	INGAF, Kolkata	One (01) Day, 26.06.2023	One (01)	One (01)	—
3	CGHS & CS (MA) Rules	Offline	INGAF, Chennai	Two (02) Days, 08.06.2023-09.06.2023	One (01)	---	One (01)
4	FRSR	Offline	INGAF, Chennai	Two (02) Days, 22-23.06.2023	One (01)	---	One (01)
5	Disciplinary Proceedings & Vigilance Matters	Offline	INGAF, Kolkata	One (01) Day, 01.08.2023	One (01)	One (01)	—
6	Public Procurement and GeM	Offline	INGAF, Kolkata	One (01) Day, 16.08.2023	Four (04)	Three (03)	One (01)
7	Workshop on GeM	Offline	ISI, Kolkata	One (01) Day, 01.09.2023	Fifty-Nine (59)	Fifty-Two (52)	Seven (07)
8	Workshop On GeM	Offline	ISI, Kolkata	One (01) Day, 03.10.2023	Twenty-Nine (29)	Twenty-Eight (28)	One (01)
9	Income Tax Rules, Calculation & E-Filing and GST-TDS	Offline	INGAF, Kolkata	One (01) Day, 16.01.2024	One (01)	One (01)	—
10	RTI ACT-2005	Offline	INGAF, Kolkata	One (01) Day, 18.01.2024	One (01)	---	One (01)
11	Public Procurement and GeM	Offline	INGAF, Kolkata	One (01) Day, 25.01.2024	One (01)	One (01)	—
12	CCS (Pension) Rules, 2021	Offline	INGAF, Kolkata	One (01) Day, 20.02.2024	Two (02)	Two (02)	—
13	NPS An Overview and latest Development	Offline	INGAF, Kolkata	One (01) Day, 22.02.2024	One (01)	---	One (01)
14	Network Administration and Linux System Administration	Offline	NIELIT, Kolkata	Six (06) Days, 29.01.2024-03.02.2024	Five (05)	Three (03)	Two (02)



8.10 Brief description of specific achievements and functions related to the implementation of the Official Language Policy by the Official Language Cell of the Institute

I) Delhi:

A. Official Language Implementation Committee Members: ISI, Delhi Centre

Sl. No.	Name	Designation
1	Antar Bandhopadhyay	Chairperson
2	Samapan Padhi	Member
3	S.A. Srinivas	Member
4	Simmi Marwah	Member
5	Lalan Kumar Singh	Member
6	Praveen Pandey	Member
7	Amardeep	Member-Convener

B. Official Language Implementation Meeting:

Sl. No.	Date	Agenda
1	13.07.2023 (For April-June Quarter)	1. Discussion on the quarterly report for April-June, 2023. 2. There is a discussion on the fact that Hindi officer has not been recruited yet. 3. Discussion on Hindi fortnight to be held in the month of September. 4. If there is any other topic/suggestion, it can be discussed with the permission of the Chairman.
2	20.10.2023 (For July-September Quarter)	1. Discussion on the quarterly report July-September, 2023. 2. There is a discussion on the fact that Hindi officer has not been recruited yet. 3. Discussion on the successful Hindi Fortnight-2023. 4. If there is any other topic/suggestion, it can be discussed with the permission of the Chairman.
3	09.01.2023 (For October-December Quarter)	1. Discussion on the quarterly report for October-December, 2023. 2. Discussion on organising a short Hindi fortnight in the coming quarter (January-March,) under the promotion and incentive scheme of Hindi in the institute. 3. If there is any other topic/suggestion, it can be discussed with the permission of the Chairman.
4	29.04.2024 (For January-March Quarter)	1. Discussion on the quarterly report for January-March, 2023. 2. Discussion on changes in the Official Language Implementation Committee with the permission of the Chairman. 3. If there is any other topic/suggestion, it can be discussed with the permission of the Chairman.

C. Hindi Workshop:

Sl. No.	Date	Subject	No of participants		Speakers
			Male	Female	
1	27.06.2023	How to do official work on computer in Hindi?	12	02	Sh. Karan Singh
2	05.09.2023	Use of Official Language Hindi E- tools.	15	03	Sh. Heerawalabh Sharma
3	04.01.2024	Noting & Drafting.	13	03	Sh. Karan Singh
4	11.03.2024	How to fill the Hindi quarterly report properly?	13	03	Sh. Karan Singh

D. Hindi Pakhwara:

Sl. No.	Date	Name of the Competition	No of participants	
			Male	Female
1	05.09.2023 to 22.09.2023	1. Hindi Essay Writing 2. Hindi Kavita Vachan 3. Hindi Ashubhashan 4. Hindi Tippan/Praroop & Anuvad pratiyogita 5. Computer par Hindi Typing 6. Quiz Competition 7. Laghu Natika	09	02

II) Kolkata:

A. Official Language Implementation Committee Members:

Sl. No.	Name	Designation
1.	Prof. Sanghamitra Bandyopadhyay, Director	Chairman
2.	Dr. Kishor Chandra Satpathy, Chief Librarian	Chairman (Acting)
3	Shri Ravinder Kumar, Chief Executive (A&F)	Member
4.	Prof. Amita Pal	Member
5.	Lieutenant Colonel Sandeep Pal, Dy. Chief Executive (Admin.)-B	Member
6.	Shri Amitabh Mukherjee, Deputy Chief Executive (Finance) – B	Member

Sl. No.	Name	Designation
7.	Dr. Jadab Kumar Pal, Dy. Chief Executive (General Administration)	Member
8.	Shri Pratyush Banerjee, Dy. Chief Executive (Establishment)	Member
9.	Shri Manoj Kumar Pandey, Senior Administrative Officer	Member
10.	Shri Durgam Giri, Senior Administrative Officer	Member
11.	Shri Sujan Dutta, Senior Accounts Officer	Member
12.	Shri Raj Narayan Mukherjee, Administrative Officer	Member
13.	Shri Jayanta Kundu, Associate Scientist B	Member
14.	Shri Sounak Chakraborty, Administrative Officer	Member
15.	Shri Partha Bhattacharya, Administrative Officer	Member
16.	Shri Prashant Tiwari, Hindi Officer	Member Convenor

B. Official Language Implementation Committee Meeting:

Sl. No.	Date	Agenda
1	02.08.2023	▪ Confirmation of the Minutes of the Last Meeting. ▪ Discussion on Hindi Quarterly Progress Report. ▪ Discussion on the Official Language Annual Program Year 2023-24. ▪ Discussion on extension of Hindi Language Training (Praveen, Pragya and Parangat). ▪ Discussion on nominating workers to participate in Hindi Intensive Workshops. ▪ Discussion regarding the organization of Hindi Diwas and Hindi Pakhwada Program. ▪ Discussion regarding participation by the Institute in the 3rd All India Official Language Conference, Pune, organized by the Department of Official Language, Ministry of Home Affairs, Government of India during 14-15 September, 2023. ▪ Discussion on Official Language Implementation related inspection in all the Departments/ Sections/Units of the Institute. ▪ Discussion on making the Logo of the Institute bilingual as per the assurances given to the Institute by the 3rd Sub-Committee of the Honorable Parliamentary Official Language Committee. ▪ Discussion on the purchase of Hindi Books for the institute's Library during the current financial year 2023-24. ▪ Discussion on Official Language Inspection of the Giridih branch of the Institute by the Headquarters. ▪ Discussion on any other subject with the permission of the Hon'ble Chairman.
2	11.10.2023	▪ Confirmation of the Minutes of the Last Meeting. ▪ Discussion on Hindi Quarterly Progress Report. ▪ Discussion on the Official Language Annual Program Year 2023-24. ▪ Discussion on nominating workers to participate in Hindi Intensive Workshops. ▪ Discussion for organizing Hindi Technical Workshop (for working in Hindi on computer) ▪ Discussion regarding creation of permanent Hindi Posts. ▪ Discussion regarding organizing Hindi Noting-Drafting Competition for the personnel during the current quarter in order to promote the Official Language in the Institute. ▪ Discussion on Official Language Implementation related inspection in all the Departments/ Sections/Units of the Institute. ▪ Discussion to be nominated for training in 05 Full Working Days Orientation Program. ▪ Discussion on any other subject with the permission of the Hon'ble Chairman.
3	17.01.2024	▪ Confirmation of the Minutes of the Last Meeting. ▪ Discussion on Hindi Quarterly Progress Report. ▪ Discussion on the Official Language Annual Program Year 2023-24. ▪ Discussion on extension of Hindi Language Training (Praveen, Pragya and Parangat). ▪ Nomination of workers to participate in online Hindi Intensive Workshops. ▪ Discussion regarding Creation of permanent Hindi Posts.

Sl. No.	Date	Agenda
		▪ Discussion regarding participation of the Institute in the East and Northeast Regional Official Language Award Conference, Siliguri to be organized by the Department of Official Language, Ministry of Home Affairs, Government of India on 08 March, 2024. ▪ Discussion on issuing Check Points regarding Implementation of Official Language in the Institute. ▪ Discussion regarding organizing Rajbhasha Implementation & Glossary Competition for the personnel during the current quarter in order to promote the Official Language in the Institute. ▪ Discussion on conducting Official Language Inspection of Delhi Centre by the Headquarters. Kolkata. ▪ Discussion regarding notification of the Delhi Centre of the Institute in the Gazette of India under Rule 10(4) of the Official Language Rules, 1976. ▪ Discussion on any other subject with the permission of the Hon'ble Chairman.
4	March, 2024	▪ Confirmation of the Minutes of the Last Meeting. ▪ Discussion on Hindi Quarterly Progress Report. ▪ Discussion on the Official Language Annual Program Year 2023-24. ▪ Discussion on nominating workers to participate in Hindi Intensive Workshops. ▪ Discussion regarding creation of permanent Hindi posts. ▪ Discussion on conducting Official Language Inspection of Delhi Centre & Bangalore Centre by the Headquarters. Kolkata. ▪ Discussion on publication of Rajbhasha In-House Magazine in order to promote the Official Language in the Institute. ▪ Discussion on making the website of the headquarters fully bilingual as per the assurances given to the Institute by the Third Sub-Committee of the Parliamentary Official Language Committee. ▪ Discussion on making the Logo of the Institute bilingual as per the assurances given to the Institute by the Third Sub-Committee of the Parliamentary Official Language Committee. ▪ Discussion regarding notification of the Delhi Centre of the Institute in the Gazette of India under Rule 10 (4) of the Official Language Rules, 1976 as per the assurances given to the Institute by the Third Sub-Committee of the Parliamentary Official Language Committee. ▪ Discussion regarding organizing Hindi Essay Writing Competition for the personnel during the current quarter in order to promote the Official Language in the Institute. ▪ Discussion on any other subject with the permission of the Hon'ble Chairman.

C. Hindi Workshop Details :

S. No.	Date	Subject	Number of participants		Speakers
			Male	Female	
1	19.06.2023	**First Session:** "The Long journey of Official Language Implementation Policy **Second Session:** Discussion on the Official anguage Policy and Implementation of the Government of India.	20	05	Chief Guest Speaker : **Shri Navin Kumar Prajapati,** Senior Consultant (Official Language) and In-charge, Kolkata Centre, Central Translation Bureau, Department of Official Language, Ministry of Home Affairs, Government of India.
2	18.09.2023	**First Session:** Idioms and Proverbs in the Official Language Hindi of the Office **Second Session:** Official Language General Knowledge : Our Responsibility	14	06	Chief Guest Speaker: **Shri Navin Kumar Prajapati,** Senior Consultant (Official Language) and In-charge, Kolkata Centre, Central Translation Bureau, Department of Official Language, Ministry of Home Affairs, Government of India
3	18.12.2023	**First Session:** Use of Advanced Technology in the Promotion of Official Language **Second Session:** How to use Indian languages on Computers	18	07	Chief Guest Speaker : **Shri Navin Kumar Prajapati,** Senior Consultant (Official Language) and In-charge, Kolkata Centre, Central Translation Bureau, Department of Official Language, Ministry of Home Affairs, Government of India Chief Guest Speaker : Shri Nirmal Kumar Dubey, Assistant Director (Implementation), Regional Implementation Office, Department of Official Language, Kolkata, Ministry of Home Affairs, Government of India.
4	**22.03.2024**	**First Session ;** "Hindi and our responsibility in Administration" **Second Session:** "General use of Official Language Hindi in Office	18	05	Chief Guest Speaker: **Shri Navin Kumar Prajapati,** Senior Consultant (Official Language)and In-charge, Kolkata Centre, Central Translation Bureau, Department of Official Language, Ministry of Home Affairs, Government of India Chief Guest Speaker: **Shri Satyaprakash Dubey,** Rajbhasha Consultant, Satyajit Ray Film and Television Institute, Kolkata

D. Hindi Pakhwada Celebration Details :

Sl. No.	Date	Name of the Competition	No of Participants	
			Male	Female
1	14.09.2023	Inauguration of Hindi Pakhwada	32	08
2	18.09.2023	Hindi Noting-Drafting and Glossary Competition	20	05
3	19.09.2023	Hindi Debate Competition	18	04
4	20.09.2023	Hindi Extempore Speech Competition	19	04
5	21.09.2023	Hindi Essay Writing Competition	19	07
6	22.09.2023	Official Language Knowledge and Translation Competition	23	06
7	29.10.2023	Hindi Pakhwada Closing and Prize Distribution Ceremony	40	10

E. Technical Workshop / Hindi Competitions Details :

Sl. No.	Date	Subject	No of Participants		Speakers/Organizers
			Male	Female	
1	19.06.2023	Crash Translation Training Program	20	05	Under the aegis of Central Translation Bureau, Kolkata
2	18.09.2023	Crash Translation Training Program	14	06	Under the aegis of Central Translation Bureau, Kolkata
3	22.03.2024	Technical Hindi Workshop	18	05	Under the aegis of Hindi Teaching Scheme, Kolkata
4	19.06.2023	Hindi Noting-Drafting & Glossary Competition	10	02	Official Language Cell, ISI Kolkata
5.	22.03.2024	Rajbhasha Implementation & Vocabulary Competition	17	04	Official Language Cell, ISI Kolkata

F. Any other Special Workshop/Training Programme:

S. No.	Date	Subject	Number of Participants	Speakers/Organizers
1	08.05.2023 – 12.05.2023	Five-days Intensive Hindi Workshop	01	Central Hindi Training Institute, Official Language department, Ministry of Home Affairs, Government of India, New Delhi.
2	17.07.2023 – 21.07.2023	Five-days Intensive Hindi Workshop	01	Central Hindi Training Institute, Official Language Department, Ministry of Home Affairs, Government of India, New Delhi.
3	18.09.2023 – 22.09.2023	Five-days Intensive Hindi Workshop	01	Central Hindi Training Institute, Official Language Department, Ministry of Home Affairs, Government of India, New Delhi.
4	09.10.2023 – 13.10.2023	Five-days Intensive Hindi Workshop	01	Central Hindi Training Institute, Official Language Department, Ministry of Home Affairs, Government of India, New Delhi.
5	20.11.2023 – 24.11.2023	Five-days Intensive Hindi Workshop	01	Central Hindi Training Institute, Official Language Department, Ministry of Home Affairs, Government of India, New Delhi.
6	06.11.2023– 10.11.2023	05 days Official Language Orientation Programme	01	Central Hindi Training Institute, Official Language Department, Ministry of Home Affairs, Government of India, New Delhi.
7	April 25, 2023	Meeting of Town Official Language Implementation Committee, Kolkata (02)	02	Town Official Language Implementation Committee, Department of Official Language, Ministry of Home Affairs, Government of India, Kolkata.
8	25 September, 2023	Meeting of Town Official Language Implementation Committee, Kolkata (02)	02	Town Official Language Implementation Committee, Department of Official Language, Ministry of Home Affairs, Government of India, Kolkata.
9	July, 2023- November 2023	Organizing Classes for Hindi Language Training (Praveen/Pragya/Parangat)	M- 18 F – 02 (Pragya/ Parangat)	Hindi Teaching Scheme, Department of Official Language, Ministry of Home Affairs, Government of India, Kolkata.
10	January, 2024- May, 2024	Organizing Classes for Hindi Language Training (Praveen/Pragya/Parangat)	M – 30 F – 06 (Praveen/ Parangat)	Hindi Teaching Scheme, Department of Official Language, Ministry of Home Affairs, Government of India, Kolkata.

G. Other Miscellaneous Works related to Implementation of Official Language:

S. No.	Date	Subject	Organizer
1	23.06.2023	Official Language Inspection of ISI Giridih Branch	Official Language Cell, ISI Kolkata
2	27.03.2024	Inspection –Cum-Exhibition of Hindi Books	Library & Official Language Cell, ISI Kolkata

H. Participation by the Institute in the Competitions of Official Language Hindi organized at NARAKAS Level:

S. No.	Date	Name of the Competition organized at NARAKAS Level	Names of the Participants
1	11 January, 2024	Participation in Hindi Essay Writing Competition under the aegis of Town Official Language Implementation Committee, Kolkata (Office-2), Official Language Department, Ministry of Home Affairs, Government of India, Kolkata	1. Shri Shivam Savita 2. Shri Satyanarayan Oraon 3. Shri Saumya Haldar
2	16 January, 2024	Participation in Official Language Implementation and Hindi-English Vocabulary Competition under the aegis of Town Official Language Implementation Committee, Kolkata (Office-2), Official Language Department, Ministry of Home Affairs, Government of India, Kolkata	1. Ms. Pamli Sengupta 2. Ms. Archana Kumari Shaw 3. Shri Dipak Kumar Das

S. No.	Date	Name of the Competition organized at NARAKAS Level	Names of the Participants
3	30 January, 2024	Participation in Hindi Debate Competition under the aegis of Town Official Language Implementation Committee, Kolkata (Office-2), Official Language Department, Ministry of Home Affairs, Government of India, Kolkata	1. Shri Manoj Kumar Pandey 2. Shri Nayan Chandra Majee 3. Shri Abhishek Roy
4	07 February, 2024	Participation in Hindi Extempore Speech competition under the aegis of Town Official Language Implementation Committee, Kolkata (Office-2), Official Language Department, Ministry of Home Affairs, Government of India, Kolkata	1. Shri Manoj Kumar Pandey 2. Shri Shivam Savita 3. Shri Nayan Chandra Majee
5	20 February, 2024	Participation in Short Story Reading Competition under the aegis of Town Official Language Implementation Committee, Kolkata (Office-2), Official Language Department, Ministry of Home Affairs, Government of India, Kolkata	1. Shri Amrita Roy 2. Shri Abhishek Roy 3. Shri Manoj Kumar Pandey
6	27 February, 2024	Participation in Hindi Poetry Recitation Competition under the auspices of Town Official Language Implementation Committee, Kolkata (Office-2), Official Language Department, Ministry of Home Affairs, Government of India, Kolkata	1. Shri Amrita Roy 2. Ms. Sreemoyee Bhowmick 3. Shri Manoj Kumar Pandey

Special Achievements:

Indian Statistical Institute Kolkata is an active member of the Town Official Language Implementation Committee Kolkata (Office-2). During this year total 06 competitions were organized under the aegis of Town Official Language Implementation Committee Kolkata (Office-2), in which our Institute participated enthusiastically and obtained highest 09 prizes amongst 60 participated organizations.

III) Tezpur:

A. Official Language Implementation Committee Members:

Sl. No.	Name	Designation
1	Prof. B Ramakrishnan, Head	Chairperson
2	Dr. Darpa Saurav Jyethi, Assistant Professor	Member
3	Ms. Rimlee Bardhan, Engineer (Civil) 'B'	Member
4	Mr. Subash K, Administrative Officer	Member
5	Mr. Niraj Bhuyan, Office Assistant 'B'	Member
6	Student Representative	Member
7	Mrs. Kakoli Gogoi, Scientific Assistant 'C'	Convener

B. Official Language Implementation Meeting:

Sl. No.	Date	Agenda
1	08.09.2023	Discussion regarding organising Hindi Diwas programme at N-E Centre, Tezpur

C. Hindi Workshop:

Sl. No.	Date	Subject	No of Participants		Speakers/Organizers
			Male	Female	
1	17.05.2023	Official Language Policy of Government of India and Its Implementation	7	3	Dr Kul. Pd. Upadhyay, Assistant Director (Rajbhasha)
2	26.09.2023	Use of Hindi in Government works	35	8	Sri Umesh Thapliyal, Commandant, SSB

D. Hindi Pakhwada:

Sl. No.	Date	Name of the Competition	No of Participants	
			Male	Female
1	14.09.2023-	Hindi Diwas Inauguration, Poem Recitation, Translation of Official Terminology	43	7
2	26.09.2023	Workshop, Quiz Competition	35	8

8.11 Reports on various activities of the Institute

A. Celebration of Independence Day

Bangalore:

The Bangalore Centre celebrated the Independence Day on 15th August 2023. Prof. B.S Daya Sagar, Head, Bangalore Centre hoisted the flag. Staff, students and campus residents attended the function.

Delhi:

The Indian Statistical Institute, Delhi Centre, had celebrated the 77th Independence Day on August 15, 2023. On Independence Day, the garlanding of the bust of Professor Prasanta Chandra Mahalanobis was done first, followed by the hoisting of the flag, singing of the National Anthem, and a speech by the Head of Delhi Centre. Sweets and chocolates were distributed to the kids, students, and staff members.

Kolkata:

The Indian Statistical Institute, Kolkata, celebrated the 76th year of Indian Independence on 15th August 2023. The event saw the active participation of faculty members, staff, research scholars, students, guests, and dignitaries, reflecting the unity and enthusiasm of the ISI community. Through this celebration, ISI reaffirmed its dedication to scientific research, innovation, and patriotism.

Tezpur:

The North-East Centre celebrated Independence day. Prof. B Ramakrishnan hoisted the national flag.

B. Celebration of Republic Day

Bangalore:

The Bangalore Centre celebrated the Republic day on 26th January 2024. Prof. Daya Sagar, Head Bangalore Centre hoisted the flag. Staff, students, and campus residents attended the function. Head, Bangalore centre inaugurated Students annual cricket tournament organised by ISI Sports Committee.

Delhi:

The 75th Republic Day was celebrated on January 26, 2024, at the Indian Statistical Institute, Delhi Centre. The event began with the garlanding of the bust of Professor Prasanta Chandra Mahalanobis, the unfurling of the flag, and the singing of the National Anthem. The Head of Delhi Centre delivered a speech. Cultural events, including patriotic songs, small plays, speeches on freedom fighters, musical performances, and other stage activities, were organized jointly by the Delhi Centre and ISI Club Delhi Centre. Children dressed up as their favorite freedom fighters and performed on stage. Sweets were distributed to the kids, students, and staff members.

Kolkata:

The Indian Statistical Institute, Kolkata, celebrated 75th Republic Day on 26th January 2024 with a series of events that highlighted patriotism and the institute's commitment to academic excellence. The celebrations began with a flag-hoisting ceremony conducted by the Chief Guest, Prof. Tarun Kabiraj, followed by the national anthem. The event concluded with a spirited Tug of War competition, fostering camaraderie among participants. The celebration was attended by a large number of faculty members, staff, research scholars, students, guests, and dignitaries, showcasing the unity and enthusiasm of the ISI community.

Tezpur:

The North-East Centre celebrated 75th Republic day. Prof. B Ramakrishnan hoisted the national flag.

C. Celebration of Birth Anniversary of Prof. P. C. Mahalanobis

Bangalore:

130th Birth Anniversary of PC Mahalanobis was celebrated on 29th June 2023 in our centre. Welcome addressed by Dr. B.S Daya Sagar, Centre Head, A Special lecture delivered by Prof. N.S Narasimha Sastry, Former Head, ISIBC. Workers and students were assembled in front of PCM Bust Ghief Guest and Centre Head garlanded to PCM Bust. Workers' Day program live telecast from ISI-Kolkata also arranged through VC.

Chennai:

The birth anniversary of our Founder Prof. Prasanta Chandra Mahalanobis was celebrated as World Statistics Day on 29.6.23. Dr. M.R. Srinivasan of the Chennai Mathematical Institute gave an Invited Talk on 'Mahalanobis Distance Based Methods in Detection of Multiple Outliers'. Photograph of Prof. Mahalanobis was garlanded and flowered upon by the Centre Head, the Invited Speaker and workers & students of the Centre.

Kolkata:

The Indian Statistical Institute, Kolkata, celebrated the 130th birthday of Prof. Prasanta Chandra Mahalanobis and 'Workers Day' and 'Statistics Day' on 29th June 2023. The theme of the celebration was "Alignment of State Indicator Framework with National Indicator Framework for Monitoring Sustainable Development Goals". The event began with the garlanding of Prof. Mahalanobis's bust, followed by the national anthem and a Vedic hymn.

The Director of ISI welcomed the guests, followed by addresses from Prof. Sankar Kumar Pal, President of ISI, Dr. Pronab Sen, Chairman of the ISI Council, and Shri Chandra Sekhar Bose, CEO of Bandhan Bank. The first part of the program concluded with the national anthem.

The celebration honored the legacy of Prof. Mahalanobis and celebrated the collective efforts of the ISI community in upholding the institute's values and mission.

Tezpur:

The North-East Centre celebrated the birth anniversary of Prof. P C Mahalanobis.

D. Celebration of International Yoga Day

Kolkata:

The Idian Statistical Institute, in association with the ISI Club, celebrated 'Common Yoga Protocol' as a prelude to International Yoga Day on 21st June 2023. The event saw enthusiastic participation from students, research scholars, and workers, making it a grand success.

Chennai:

International Day for Yoga was celebrated on 21.6.23 with active participation of the Centre Head and the workers of the Centre. Mr.Naveenkumar Arumugam who is a certified yoga master taught the basics of yoga to the workers of the Centre while Mr.R.Sridharan demonstrated various aasanas.

Tezpur:

The North-East Centre celebrated International Yoga Day and two yoga teachers from Tezpur University spoke a few words on importance of yoga in our daily life

E. Celebration of Foundation Day

Kolkata:

The Indian Statistical Institute, Kolkata, celebrated its 92nd Foundation Day on 15th December 2023 with a series of events. The Director, Prof. Sanghamitra Bandyopadhyay, delivered the welcome address, followed by speeches from Prof. Sankar Kumar Pal, President of ISI, and Prof. Shashi Mohan Srivastava, Chairman of the ISI Alumni Association (ISIAA).

The highlight was an invited lecture by Prof. Nilanjan Chatterjee from Johns Hopkins University, chaired by Prof. Srivastava. Prof. Chatterjee was felicitated, and several ISI faculty members who received national and international recognitions in 2023 were honored.

The cultural programme featured performances by ISI community members, including Rabindra Sangeet, Bharatanatyam, Kathak, instrumental music, recitations, and dance recitals. The event concluded with a duet performance and a dance recital by students.

F. Celebration of International Women's Day

Kolkata:

Indian Statistical Institute celebrated International Women's Day (IWD) 2024 in the evening of 8th March, 2024 at the Institute Campus. The theme of this year's event was 'Inspire Inclusion'.

The program opened with an address by the honourable Director who emphasised on the space a woman needs as a human being - the space where she can exercise her choices and be herself - neither be deified as a goddess nor be condemned as worthless. The keynote address was delivered by Prof Pushpa Misra, who had been the former President of the Indian Psychoanalytical Society and the former Principal of Bethune College, Kolkata. Prof. Abhirup Sarkar, renowned economist and former professor ISI, spoke on "Financial Empowerment through Self Help Groups", which was based on a primary survey of some Self Help Groups (SHGs) registered with Paschim Banga Grameen Bank. Dr Manoshi Mitra Das, who was with the Asian Development Bank, Manila, and has worked extensively in the gender and development sector, had joined virtually from New Delhi, and spoke on "Inspiring Inclusion: How do poor rural women inspire and get not just inclusion but equality?"

The last part of the event was a cultural program that showcased the plight of women - from infanticide to derogatory remarks about one's dark complexion, to stifling of women's ambitions solely because of her gender - through acting and excellent dance performances by ISI students from the Giridih Branch.

G. Birth Anniversary celebration of Dr. B.R. Ambedkar

Bangalore:

Birth Anniversary of Dr. B.R Ambedkar was celebrated on 14th April 2023. This function was jointly organised by the ISI Administration and SC/ST and OBC Council of the ISI BC. As part of 132nd Birth Anniversary of Dr. Ambedkar a special lecture was arranged on 2nd June 2023. Prof. Babu Mathew, National Law School of Indian University, delivered a special on "The Future of Constitutionalism in India.

Delhi:

Dr. Ambedkar Jayanti was celebrated on 13th April, 2023. On this occasion, IIT, Delhi's Associate Professor (Literature Philosophy), Divya Dwivedi was invited as the chief guest and she delivered her speech on "Dr. Ambedkar's contribution to women's rights". As part of the Dr. Ambedkar Jayanti program, a multiple choice competition was also held on April 11, 2023 on the topic "Dr. Ambedkar, Indian Constitution and Indian Polity". In this competition, the first, second and third winners were given cash prizes. In the same sequence, all the workers of the institute visited Dr. Ambedkar National Memorial, 26, Alipur Road Civil Lines Near Vidhan Sabha, New Delhi, Delhi 110054, by bus after lunch and returned to the institute by 7 pm after cherishing the memories related to Baba Saheb and in this way Dr. Ambedkar Jayanti was celebrated.

Kolkata:

The SC/ST/BC Employees' Co-ordination Council of Indian Statistical Institute, in collaboration with the ISI administration, celebrated the 132nd Birth Anniversary of Dr. B.R. Ambedkar on 14th April 2022. The event featured a garlanding ceremony to honor the memory of Dr. Ambedkar.

The celebration of Dr. B.R. Ambedkar's birth anniversary at ISI was a tribute to his remarkable contributions to the nation and a reaffirmation of the institute's commitment to his ideals of equality, justice, and social reform.

H. Observation of Vigilance Awareness Week

Bangalore:

Our centre observed Vigilance Awareness Week from 31stOctober to 5th November 2023. Most of the employees had taken "Integrity Pledge for Organizations" on 30thOctober 2023.

Delhi:

Vigilance Awareness Week was observed from October 30, 2023 to November 05, 2023 at ISI, Delhi Centre and Integrity pledge was taken on 31.10.2023.

Kolkata:

The Indian Statistical Institute, Kolkata, observed Vigilance Awareness Week from 30th October to 5th November 2023. This year's theme, "Say no to corruption; commit to the Nation," emphasized the importance of integrity and transparency.

The week commenced with the integrity pledge on 30th October at 11 am, where staff across all divisions, departments, sections, units, and outlying centers participated. The pledge underscored the commitment to uphold ethical values and combat corruption. Various activities were organized throughout the week to promote vigilance and integrity.

A key highlight was the essay competition organized by the Vigilance Committee chaired by Prof. Preeti Parashar, the CVO of ISI. Workers and students were invited to write essays on "How Corruption Affects Productivity?" in either English or Hindi. The Vigilance Awareness Week concluded with a ceremony on 6th November 2023.

The observance of Vigilance Awareness Week saw active participation from the ISI community, reinforcing the collective commitment to fostering an environment of integrity and transparency. The initiatives and activities organized during this week highlighted the significance of ethical conduct and the ongoing efforts to root out corruption in all its forms.

Tezpur:

The North-East Centre observed Vigilance Awareness Week on 30th October 2023 and the theme for the year was "Say no to corruption; commit to the nation". Vigilance awareness Week commenced with Integrity pledge by the Workers

I. Observation of Samvidhan Diwas (Constitution Day)

Kolkata:

Indian Statistical Institute celebrated the 75th Samvidhan Divas (Constitution Day) on 26th November 2023. Workers, research scholars, students of the Institute joined the event and took oath from the Preamble of the Constitution of India.

J. An Awareness Programme on "Sexual harassment of women at workplace"

Tezpur:

The North-East Centre conducted an awareness programme on 08th March, 2024. Dr. Madhurima Goswami, Associate Professor, Department of Cultural Studies and Chandraprabha Saikiani Centre for Women Studies, Tezpur University gave a special lecture on the topic.

K. Observance of Silence on 30th January (Martyrs' Day)

Kolkata:

In the memory of those who sacrificed their lives during struggle for India's freedom, Indian Statistical Institute observed 30th January 2024 as Martyrs' Day. The work and movement of the Institute had been stopped for two minutes at 11:00 A. M. in memory of the martyrs.

L. Karnataka Rajyotsava Samarambha:

Bangalore:

ISIWO and Administration jointly organized Karnataka Rajyotsava function on 30thNovember 2023. Prof. Karigowda, Chairman, Book Selection Committee, Govt. of Karnataka, Bangalore invited as a Chief Guest.

M. Other Activities of the Institute

Bangalore:

Special Campaign 3.0

In order to comply with the D.O LetterNo.2/3/2023-SBM-4 dated 26.9.23 issued by Joint Secretary & Mission Director Swachh Bharat Mission- Urban, ISI BC has conducted 1 hour shramadaan for swacchata on 1st October 2023 at 10 am as a "Swachhanjali" to our Father of Nation. Staff and Students participated and cleaned the places near the Hostel and staff quarters area.

During the Special Campaign 3.0 period From 2.10.2023 to 31.10.2023, the following activities performed:

In order to commemorate 154th Birth Anniversary of our Father of Nation, ISI Bangalore Centre has arranged a function in the campus on 2.10.23. The Centre Head, Staff, and students were tributed to Mahatma Gandhi's Photo. The Centre Head delivered a speech on the principles and ideas of Gandhi. Thereafter, Swachhata pledge was taken in Hindi, Kannada and English by the participants. Further Staff, students and contractual workers participated in the cleaning campaign and cleaned the Old Hostel area, Workers' Canteen, and staff quarters areas.

a) Identification of Cleanliness Campaign Sites:

   As part of Special Campaign 3.0 the places in and around of canteen, Hostel, Children's Park, and P.J Auditorium were identified for cleaning and cleaned identified areas.

b) Planning of space management and beautification of Offices & Identification of scrap and redundant items

   A committee has been formed by the Centre Head for the disposal of condemned assets/materials of ISI BC. The Committee in receipt of a detailed list of obsolete items for disposalof various units the items were collected and segregated. The items will be evaluated by the evaluator empaneled under MSTC. The disposal will be done through MSTC after obtaining the necessary approval from ISI HQ. (The report is enclosed)

3.12 Swachhata Pakhwada

Bangalore:

ISI Bangalore Centre conducted Swachhata Pakhwada and the following activities conducted during 1st – 15th July 2023:

1. Display of Banner regarding Swachhata Pakhwadea,
2. Cutting of grass/bushes on the campus
3. Spraying of Anti-Dengue oil & Bleaching power along the drains and buildings
4. Cleaning and checking the operation of water filters (Hostels, Guesthouse & workers' Canteen)
5. Special drive for cleaning toilets & Bathrooms (Hostels and Admin Building)

Delhi:

Swachhata Pkhwada was organised in the Delhi Centre during 1 – 15 July 2023 during which many activities were organised which also includes a workshop by the Doctor on the cleanliness and the diseases cause by not adopting cleanliness and essay writing competition in Hindi among workers and students on "Thoughts and recommendation on keeping the Campus Clean".

Kolkata:

The Swachhata Pakhwada-2023 was organized from 01 July 2023 to 15 July 2023 in the premises of Indian Statistical Institute, Kolkata as per the instructions given by our Nodal Ministry, Ministry of Statistics and Program Implementation. In this order the Swachhata Pakhwada was inaugurated on 01 July 2023. It was inaugurated with the lighting of the lamp by the Chief Executive (A&F) and thereafter, Shri Ravinder Kumar, Chief Executive (A&F) of the Institute, read the Swachhata Pakhwada Oath in the presence of all the personnel present in the auditorium and administered the Oath of cleanliness amongst all the personnel present there..

A workshop was also organized on 07 July, 2023 under the Pakhwada. In which the importance of cleanliness was highlighted and various speakers presented their views, such as Dr. Jadab Kumar Pal, Shri Manoj Kumar Pandey and Shri Prashant Tiwari.

A "SWACHHATA RALLY" was also organised on 10th July, 2023 in the Institute and workers of the Institute participated in the rally.

Under the aegis of Pakhwada, an Extempore Competition with topic"SWACHHATA" was also organized on 14th July, 2023. The topic of the Extempore Speech was related to cleanliness and it was divided into two categories. Hindi Speaking Category and Non-Hindi Speaking Category and the winners of First, Second and Third Prizes were announced in both the categories.

All the activities that were directed under the Pakhwada were followed by other Centers and Branches of the Institute like Delhi, Bengaluru, Hyderabad, Chennai, Giridih, Tezpur.

The Swachhata Pakhwada was concluded on 15th July, 2023 with address by the Shri Manoj Kumar Pandey, Nodal Officer and Mr. Prashant Tiwari, Assistant Nodal Officer of Swachhata Pakhwada.

The activities related to Swachhata pakhwada was complied in the form of Sovenir and a copy of it was submitted to the Nodal Ministry.


स्वच्छता कार्यशाला
Swachhata Workshop

Chapter

9

Annual Accounts

9.1 Balance Sheet as on 31st March 2024

(Amount in Rupees)

PARTICULARS	SCHEDULE	CURRENT YEAR (2023-24)	PREVIOUS YEAR (2022-23)
LIABILITIES			
CORPUS/CAPITAL FUND	1	2,43,45,54,745	2,29,02,80,005
EARMARKED FUNDS	3	1,47,68,80,644	1,36,75,05,342
ENDOWMENT FUNDS	3A	1,81,91,852	1,69,78,600
CURRENT LIABILITIES & PROVISION	7	33,16,31,350	29,09,88,591
LIABILITIES FOR FIXED ASSETS OF EXT. AIDED FUND		27,44,06,475	26,10,75,658
LIABILITIES FOR FIXED ASSETS OF ISEC FUND		11,67,659	11,67,659
LIABILITIES FOR FIXED ASSETS OF IGP PROJECT		76,86,123	76,86,123
TOTAL		**4,54,45,18,848**	**4,23,56,81,978**
ASSETS			
EARNMARKED FUNDS	3	18,14,996	63,98,220
FIXED ASSESTS	8	2,42,60,60,939	2,37,54,76,473
INVESTMENT / ASSETS FROM EARMARKED/			
EARMARKED/ENDOWMENT FUNDS	9	1,20,69,51,271	1,05,90,28,930
CURRENT ASSETS, LOANS AND ADVANCES	11	62,64,31,385	52,48,48,915
FIXED ASSETS OF EXT. AIDED FUND		27,44,06,475	26,10,75,658
FIXED ASSETS OF ISEC FUND		11,67,659	11,67,659
FIXED ASSETS OF IGP PROJECT		76,86,123	76,86,123
TOTAL		**4,54,45,18,848**	**4,23,56,81,978**
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT LIABILITIES & NOTES ON ACCOUNTS	25		

Signed in terms of our Report of even date.

Place: Kolkata

Date: 20.09.2024

Sd/-
A Mukherjee
Dy. Chief Executive (F)

Sd/-
Ravinder Kumar
Chief Executive (A&F)

Sd/-
Sanghamitra Bandyopadhyay
Director

For R. Kothari & Co LLP
Chartered Accountants
(Firm Registration No. 307069E/ E300266)

Sd/-
CA. Manoj Kumar Sethia
Partner
Membership No. 064308
ICAI UDIN: 24064308BKCFFP3873

9.2 Income & Expenditure Account for the Year ended on 31st March 2024

(Amount in Rupees)

PARTICULARS	SCHEDULE	CURRENT YEAR (2023-24)		PREVIOUS YEAR (2022-23)	
		GRANT SALARY	GRANT GENERAL	GRANT SALARY	GRANT GENERAL
INCOME					
MISCELLANEOUS RECEIPTS	12	124216082		32515396	34346931
GRANT IN AID FROM GOVT OF INDIA	13	2294436858	614724000	2162324489	581274939
TOTAL (A)		**2418652940**	**614724000**	**2194839885**	**615621870**
EXPENDITURE					
ESTABLISHMENT EXPENSES	20	2374761817		2266848027	
OTHER ADMINISTRATIVE EXPENSES	21		652873139		615621870
TOTAL(B)		**2374761817**	**652873139**	**2266848027**	**615621870**
BALANCE BEING SURPLUS / (DEFICIT) [A-B]		43891123	-38149139	-72008142	
CARRIED TO CORPUS/ CAPITAL			5741984	-72008142	
SIGNIFICANT ACCOUNTING POLICIES	24				
CONTINGENT LIABILITIES & NOTES ON ACCOUNTS	25				

Signed in terms of our Report of even date.

Place: Kolkata

Date: 20.09.2024

Sd/-
A Mukherjee
Dy. Chief Executive (F)

Sd/-
Ravinder Kumar
Chief Executive (A&F)

Sd/-
Sanghamitra Bandyopadhyay
Director

For R. Kothari & Co LLP
Chartered Accountants
(Firm Registration No. 307069E/ E300266)

Sd/-
CA. Manoj Kumar Sethia
Partner
Membership No. 064308
ICAI UDIN: 24064308BKCFFP3873

9.3 Capital Utilization Statement for the Year ended on 31st March 2024

Please update the particulars and provide data wherever applicable

(Amount in Rupees)

PARTICULARS	CURRENT YEAR (2023-24)	PREVIOUS YEAR (2022-23)
GRANT RECEIVED FOR CREATION OF CAPITAL ASSETS	134291795	197367884
(INCL C/F OF PREVIOUS YEAR)		
TOTAL(A)	**134291795**	**197367884**
EXPENDITURE ON CREATION OF CAPITAL ASSETS	151626702	209930340
TOTAL(B)	**151626702**	**209930340**
NET BALANCE(A-B)	**-17334907**	**-12562456**

Signed in terms of our Report of even date.

Place: Kolkata

Date: 20.09.2024

Sd/-
A Mukherjee
Dy. Chief Executive (F)

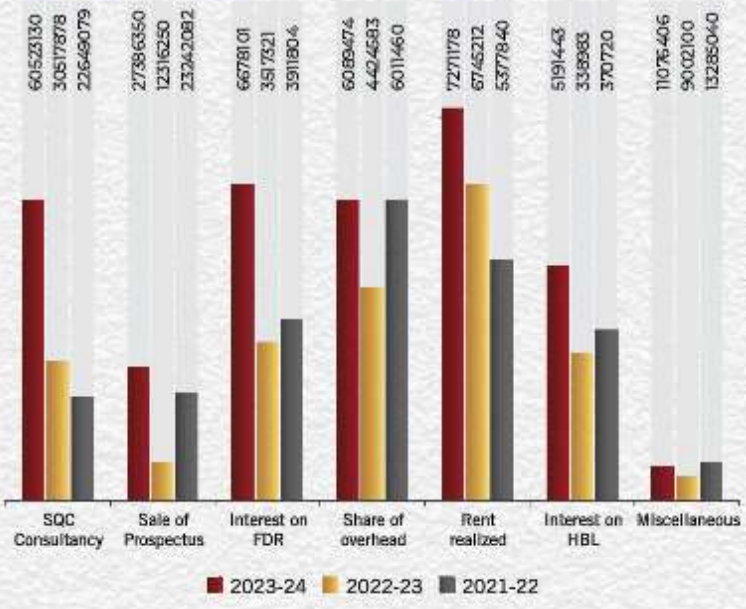
Sd/-
Ravinder Kumar
Chief Executive (A&F)

Sd/-
Sanghamitra Bandyopadhyay
Director

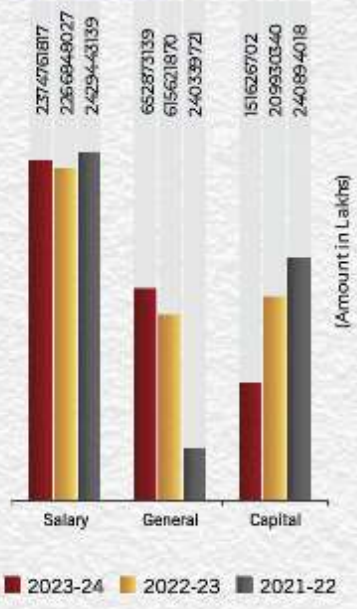
For R. Kothari & Co LLP
Chartered Accountants
(Firm Registration No. 307069E/ E300266)

Sd/-
CA. Manoj Kumar Sethia
Partner
Membership No. 064308
ICAI UDIN: 24064308BKCFFP3873

Internal Generation of Revenue



Expenditure



Notes

INDIAN STATISTICAL INSTITUTE

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