

# DR. SANCHAREE BASAK

Assistant Professor, Department of Statistics, Presidency University, Kolkata

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## CONTACT INFORMATION

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## QUALIFICATIONS

- Ph.D. in Statistics.
- M.Sc. in Statistics.
- B.Sc. (Hons.) in Statistics.

## WORK EXPERIENCE

### Assistant Professor

Apr 2026 - Present

Presidency University, Kolkata

- Working as an Assistant Professor in the Department of Statistics of the university.
- Teaching Statistical Inference (Testing of Hypotheses) to undergraduate students.

### Assistant Professor

Jul 2022 - Mar 2026

St. Xavier's College (Autonomous), Kolkata

- Worked as an Assistant Professor in the Department of Statistics (main charge) and in the Postgraduate Department of Data Science (additional charge) of the college.
- Taught Probability, Sampling Distributions, Linear Models, Design of Experiments, Demography, Large Sample Theory, R Programming and Minitab to undergraduate students.
- Taught Optimization Techniques, Non-Parametric Inference and Linear Models to postgraduate students.

### Assistant Professor (Grade-I)

Nov 2021 - Jun 2022

Sister Nivedita University, Kolkata

- Worked as an Assistant Professor in the Department of Statistics of the university.
- Taught Sampling Distribution, Statistical Inference, Probability and R Programming to both undergraduate and postgraduate students.

## EDUCATION

### Ph.D. in Statistics

Jul 2015 - Sep 2022

Indian Statistical Institute (ISI), Kolkata

- Completed my doctoral degree in Statistics under the supervision of Prof. Ayanendranath Basu of the Interdisciplinary Statistical Research Unit (ISRU) of the institute.
- The Ph.D. thesis topic was '**Robust Inference using the Extended Bregman Divergence and Optimal Tuning Parameter Selection**'.

### M.Sc. in Statistics

Aug 2013 - Jun 2015

University of Calcutta, Kolkata

- Secured second position in my batch in the University of Calcutta.
- Elective papers were Real Analysis II, Bayesian Analysis and Probability Theory.

- Had taken up Advanced Statistical Inference as Special paper.
- The Master's thesis topic was '**Partial sequential two sample test procedure for simultaneous inference on both location and scale parameters**'.

## B.Sc. (Hons.) in Statistics

Jul 2010 – Mar 2013

Lady Brabourne College, Kolkata

- Secured first position in college.
- Secured third position in my batch in the University of Calcutta.
- Pass papers comprised of Mathematics and Computer Science.

## Schooling

Apr 2005 – Mar 2010

Taki House Govt. Sponsd. Girls' High School, Kolkata

## PUBLISHED PAPERS

- Sancharee Basak, Ayanendranath Basu and M. C. Jones (2021): *On the 'optimal' density power divergence tuning parameter*, **Journal of Applied Statistics**, 48(3), 536-556, DOI: 10.1080/02664763.2020.1736524.
- Sancharee Basak and Ayanendranath Basu (2022): *The extended Bregman divergence and parametric estimation*, **Statistics**, 56(3), 699-718, DOI: 10.1080/02331888.2022.2070622.
- Sancharee Basak and Ayanendranath Basu (2024): *The extended Bregman divergence and parametric estimation in continuous models*, **Sankhya B**, 86, 333-365, DOI: 10.1007/s13571-024-00333-z.
- Sancharee Basak, Uttam Bandyopadhyay and Atanu Biswas (2025): *Partial sequential testing for comparing two univariate normal distributions*, **Sequential Analysis**, 44(1), 111-133, DOI: 10.1080/07474946.2024.2443405.
- Subhankar Chattopadhyay, Sancharee Basak and Atanu Biswas (2026): *On the robustness of maximum likelihood estimators for the Poisson INAR(1) model*, **Statistics & Probability Letters**, 233, 110659, DOI: 10.1016/j.spl.2026.110659.

## CONFERENCE PROCEEDINGS, ARTICLE REVIEWS AND PREPRINT PAPERS

- Sancharee Basak: *On the 'optimal' density power divergence tuning parameter*, **Proceedings of the International Scientific Conference 'Statistics and its applications - 2022'**, organized by the Namangan Institute of Engineering and Technology, Namangan, Uzbekistan.
- Peer-reviewed a paper titled '*A new robust approach for the polytomous logistic regression model based on Rényi's pseudodistances*' which was published in **Biometrics (Publication Office - Oxford University Press)** in October 2024, DOI: 10.1093/biomtc/ujael25.
- Peer-reviewed a paper titled '*Robust Inference for Non-Linear Regression Models with Applications in Enzyme Kinetics*' which is pending for publication in **Journal of Applied Statistics (Publication Office - Taylor & Francis)**.
- Sancharee Basak and Ayanendranath Basu: *Hypothesis testing using the extended Bregman divergence* (undergoing modification for publication in a reputed international journal).

## PAPER PRESENTATIONS

- Participated and presented a talk in the **Ninth International Conference on Recent Trends in Statistical Theory and Applications 2024 (WSTA 2024)**, organized by the Department of Statistics, School of Physical & Mathematical Sciences, University of Kerala jointly with International Statistics Fraternity (ISF), Kerala Statistical Association (KSA) and Statistics Fraternity Kerala (SFK) in June 2024.
- Participated and presented a talk in the **Ninth International Conference on Statistics for Twenty-First Century 2023 (ICSTC 2023)**, organized by the International Statistics Fraternity (ISF), School of Physical and Mathematical Sciences and the Department of Statistics, University of Kerala, Trivandrum in December 2023.
- Participated and presented a talk in the **International Conference on Statistical Theory and its Applications (ICSTA 2023)**, organized by the Department of Statistics, Bharathiar University, Coimbatore

in September 2023.

- Participated and presented a talk in the **Eighth International Conference on Statistics for Twenty-First Century 2022 (ICSTC 2022)**, organized by the International Statistics Fraternity (ISF), School of Physical and Mathematical Sciences and the Department of Statistics, University of Kerala, Trivandrum in December 2022.
- Participated and presented a talk in the **VI International Scientific and Practical Conference 'Statistics and its applications'**, organized by the Namangan Institute of Engineering and Technology, Namangan, Uzbekistan in October 2022.
- Participated and presented a talk at the **Stat Quest (2018)**, organized by the Department of Statistics, University of Calcutta, Kolkata.

## OTHER ACADEMIC RELATED EVENTS

- Participated in the Capacity Building Program on AI **Brainstorming with AI: Your new Teaching Assistant** under the **Malaviya Mission Teacher Training Programme (MMTTP)** of the **University Grants Commission (UGC)**, organized by the **Indian Institute of Technology, Ropar** from 13th October 2025 to 17th October 2025.
- Participated as a resource person in a **3-day workshop on Data-Driven Decision-Making in Research**, organized by the **Department of Statistics in collaboration with the Postgraduate Department of Sociology, St. Xavier's College (Autonomous), Kolkata** in July 2024.
- Participated in the **One Week National Level Online Faculty Development Program on Outcome Based Education and Application of Generative AI in Teaching and Research**, organized by the **Internal Quality Assurance Cell (IQAC) of Gauhati University, Assam** in association with **ipsr solutions limited** from 17th April 2024 to 24th April 2024.
- Cleared the **CSIR UGC NET (Lectureship)** examination in 2019.
- Participated and got certified for securing **third** position in the national level seminar **Application of Statistical Tools and Techniques in Multidisciplinary Fields (2011)**, sponsored by the UGC, the CSA and the Ministry of Statistics and Programme Implementation, Government of India and organized by the Department of Statistics, Lady Brabourne College, Kolkata.
- Awarded the **Central Sector Scheme of Scholarship for College and University Students (2010)** by the Ministry of Human Resource Development, Government of India.

## RESEARCH INTERESTS

- Classical parametric inference.
- Minimum distance inference.
- Robust inference.
- Bayesian inference.
- Functional data analysis.

## COMPUTER SKILLS

R Programming Language and Minitab.