Rituparna Sen

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EDUCATION

09/99-07/04	PhD in Statistics	University of Chicago
07/96-05/98	Master of Statistics	Indian Statistical Institute
07/93-05/96	Bachelor of Statistics	Indian Statistical Institute

EXPERIENCE

06/26-Present	Professor, Indian Statistical Institute, India
09/23-06/24	Visiting Associate Professor, University of California, Santa Barbara
01/20-06/26	Associate Professor, Indian Statistical Institute, India
03/21-Present	Editor, Applied Stochastic Models in Business and Industry
09/11-12/19	Assistant Professor, Indian Statistical Institute, India
08/04-08/11	Assistant Professor, University of California at Davis, USA
01/10-06/12	Visiting Scientist, University of Augsburg, Germany
06/00-08/00	Summer Intern, Bell Labs, Lucent Technologies, NJ, USA
09/98-06/99	PhD student, Statistics, Stanford University, CA, USA

AWARDS and RECOGNITION

1. 2027-2031 Elected member of council of the International Statistical Institute
2. 2025 Speaker, Visitor Programme of Indian Women and Mathematics
3. 2019 Young Statistical Scientist Award in the Applications category awarded by the International Indian Statistical Association (IISA).
4. 2019 Asian Development Bank travel award for attending World Statistics Congress
5. 2019-2023 Member of Council, International Society for Business and Industrial Statistics
6. 2018 Elected Member, International Statistical Institute
7. 2014 Ambarnath Shanti Ghosh Travel Grant from Indian Statistical Institute
8. 2014 Travel award from International Statistical Institute from The World Bank Trust Fund for Statistical Capacity Building International Society for Business and Industrial Statistics
9. 2014 Plenary speaker in 8th Statistics Day Conference, The Reserve Bank of India, Mumbai
10. 2010 Summer Research Fellowship, UC Davis.
11. 2010 Faculty Development Award, UC Davis
12. 2009 Women in Mathematical Sciences Award, Technical University of Munich
13. 2004-2010 Annually, Faculty Research Travel Grant, UC Davis
14. 2001 Best Student Paper Award, ASA section on Statistical Computing
15. 2000 Bahadur Memorial Fellowship, University of Chicago
16. 1998 Abram's Award Fellowship, Stanford University
17. 1997 Gold medal for ranking 1st in B. Stat, Indian Statistical Institute

PUBLICATIONS

1. Ruggeri, F., Banks, D., Cleveland, W. S., Fisher, N. I., Escobar-Anel, M., Giudici, P., Raffinetti, E., Hoerl, R. W., Lin, D. K. J., Kenett, R. S., Li, W. K., Yu, P. L. H., Poggi, J., Reis, M. S., Saporta, G., Secchi, P., Sen, R., Steland, A., Zhang, Z., (2025) "Is There a Future for Stochastic Modeling in Business and Industry in the Era of Machine Learning and Artificial Intelligence?" *Applied Stochastic Models in Business and Industry*, 41(2), e70004.
2. Lakshmi, M.V., Deb, S. and Sen, R., (2025) "Environmentally Responsible Index Tracking: Maintaining Performance while Reducing Carbon Footprint of the Portfolio", *Statistics and Applications*, 23(1).
3. Biswas, S. and Sen, R. (2024) "Kernel Based Estimation of Spectral Risk Measures", *The Journal of Risk*, 26(5), 17-47.
4. (**Book**) Sen, R. and Das, S. (2023) Computational Finance with R, Springer Indian Statistical Institute Series.
5. Biswas, S. and Sen, R. (2023) "Nonparametric Estimation of Range Value at Risk", *Computation* 11(2): 28.
6. Chakrabarti, A. and Sen, R. (2023) Copula Estimation for Non-Synchronous Financial Data, *Sankhya B*, 85 (Suppl 1): 116-149.
7. Sen, R., Majumdar, A. and Sikaria, S. (2022) Bayesian Testing of Granger Causality in Functional Time Series, *Journal of Quantitative Economics*, 20, 191-210.
8. Sreelakshmi, N., Kattumannil, S. K. and Sen, R. (2021) Jackknife Empirical Likelihood-based Inference for S-Gini Indices, *Communications in Statistics - Simulation and Computation*, 50(6), 1645-1661.
9. Sikaria, S., Sen, R. and Upadhye, N. S. (2021) Bayesian Filtering for Multi-period Mean-Variance Portfolio Selection, *Journal of Statistical Theory and Practice*, 15(2), 1-19.
10. Das, S. and Sen, R. (2021) Sparse Portfolio Selection via Bayesian Multiple Testing, *Sankhya B*, 83(2), 585-617.
11. Lahiri, A. and Sen, R. (2020) Fractional Brownian Markets with Time-Varying Volatility and High-Frequency Data , *Econometrics and Statistics*, 16: 91-107.
12. Sen, R. and Manavathi, S. (2019) Stylized Facts of the Indian Stock Market, *Asia-Pacific Financial Markets*, 26(4): 479-493.
13. Sen, R and Klueppelberg, C (2019) Time Series of Functional Data, *Applied Stochastic Models in Business and Industry*, 35(4), 1028-1043.
14. Chaudhuri, K., R Sen and Z. Tan (2018) Testing Extreme Dependence in Financial Time Series, *Economic Modeling*, 73, 378-394.
15. Sen, R. and P. Mehrotra (2016) Modeling volatility and jumps of Indian Stock market using high-frequency data, *Journal of Quantitative Economics*, 14(1), 137–150.
16. Müller, H. G., R. Sen and U. Stadmüller (2011) Functional Data Analysis for Volatility. *Journal of Econometrics*. 165(2) 233-245.
17. Sen, R. (2009) Hedging Options in the Incomplete Market with Stochastic Volatility. *Statistics and Its Interface*. 2(4) 469-480.
18. Sen, R. and F. Hsieh (2009) A note on testing regime switching assumption based on recurrence times. *Statistics and Probability Letters*. 79(24) 2443-2450.
19. Sen, R. and M.H. Hansen (2003) Predicting Web User's Next Access Based on Log Data. *Journal of Computational and Graphical Statistics*, 12(1): 143-155.

EXTERNALLY FUNDED PROJECTS

2025 Education Statistics with Prayoga Institute of Education Research
2023 Risk Management with Canara Bank
2020 MATRICS research grant (MAThematical Research Impact Centric Support) for 3 years from the Science and Engineering Research Board (SERB), Government of India.
2017 Mathematical examination of a load forecasting model for Hitachi India
2016 Finding the best possible precision in a changing environment for Hitachi India
2015 Predictive Analytics for Lucid Technologies
2013 Classification of ECG for Intel Bangalore

TEACHING EXPERIENCE

University of California at Santa Barbara: Nonparametrics, Survival Analysis, Probability, Design of Experiments.
Indian Statistical Institute,BSDS: Multivariate Data and Regression, Advanced Statistical MethodsI
Indian Statistical Institute, BMath: Statistics I, Statistics II, Probability I, Probability II.
Indian Statistical Institute, MStat: Computational Finance, Large Sample Statistical Methods, Multivariate Analysis, Probability and Stochastic Processes I, Statistical Inference II.
Indian Statistical Institute, MMath: Quantitative Finance
Indian Statistical Institute, Business Analytics: Weekend classes for the professional program
Indian Institute of Quantitative Finance: Post Graduate Program in Financial Engineering, Certificate Program in Applied Mathematical Finance for Engineers
Madras School of Economics: Statistical Methods
Chennai Mathematical Institute: Mathematics and Finance Summer School, Certificate Program on Data Science, Risk Management
University of California at Davis: Advanced Topics in Mathematical Finance, Applied Statistics, Multivariate Analysis, Probability for Engineers, Probability Modeling, Mathematical Statistics, Elementary Statistics.
University of Chicago: Elementary Statistics.
Joint Statistical Meetings: Full day continuing education course.

STUDENTS SUPERVISED

Main PhD thesis advisor for:

Debanjana Datta ISI expected 2027
Shubhangi Sikaria IIT Madras 2023
Arnab Chakrabarti ISI 2020
Zheng Tan UCDavis 2012
Qiuyan Xu UCDavis 2008

Post-doctoral researchers supervised:

Dr Kumarapandiyan Gnanasegaran, currently Assistant Professor at Madras Christian College
Dr Ashmita Gupta, currently Visiting Faculty at Asian Development Research Institute
Dr Arun Kumar, currently Associate Professor at IIT Ropar
Dr Ayon Ganguly, currently Associate Professor at IIT Guwahati
Dr Suparna Biswas, currently Assistant Professor at IISER Tirupati

Masters Thesis Project supervised

Debjyoti Mondal, MStat, ISI, 2027
Lakshmi M V, 2023, IISER Tirupati
Siddharth Mohapatra, 2023, IISER Pune
Mbhense Lindokuhle. S, University of Zululand, 2021
Chittala Sai Ram, IITM, 2021
Divyashish Chowdhury, IITM, 2020
Manavathi S., PSG College of Technology, Coimbatore 2018
Nilabja Ray, ISI Chennai, 2013

Member of PhD thesis reading/defense committee

Kunal Rai, IIMB, 2026
Archi Roy, 2025, IISER Pune
Nunkoo Sabera, 2023, University of Mauritius
Aastha M Sathe, 2021, IITM
Sudhanshu Pani, 2020, NMIMS

INVITED and PLENARY TALKS (last 2 years)

1. 66th World Statistics Congress, Lusaka, Zambia, 11-15 July, 2027.
2. Keynote address, International Conference on Economics & Business, RV University, Bangalore, 19-20 January, 2027.
3. Plenary talk, ISBIS-StatFin 2026 Joint Conference, CMI, Chennai, December 9–11, 2026.
4. Paari School of Business, SRM University, Amaravati, September 9th, 2026.
5. Departmental seminar, ISI Chennai Seminar Series, Chennai, September 8, 2026.
6. Department of Economics, IIT Kanpur, April 9, 2026
7. Keynote talk, Conference on Data-driven Statistical Decision Making, IIT Hyderabad, Mar 27-28, 2026.
8. Two-Day National Seminar on 'Recent Advances in Statistical Sciences', Bangalore University, March 17-18, 2026
9. Recent Trends in Quantitative Finance, IISc Bangalore, Feb 20-21, 2026
10. Keynote talk, International Conference on Recent Trends in Advance Computing, St Joseph Univertity, Feb 20-21, 2026
11. ISI-ISM-ISSAS Joint Conference, Taiwan, Feb 9-11, 2026
12. Statistics Department, Sri Dharmasthala Manjunatheshwara College, Ujire, Jan 16, 2026.
13. Mathematics Department, IISER Tiruvananthapuram, Jan 8, 2026.
14. Workshop and Conference on Statistical Methods in Finance, CMI, Dec 18-20, 2025
15. Statistics Department, St Xaviers college, Ahmedabad, Dec 6, 2025
16. Amrut Mody School of Management, Ahmedabad University, Dec 5, 2025
17. Mathematics Department colloquium and CIS seminar, IISER Pune, Sept 18-19, 2025
18. National Conference on Time Series, Analytics, and Advanced Statistical Modelling, Central University of Rajasthan, Feb 10-11, 2025.

SERVICE

Editorial and Review

1. Associate Editor, Statistics and Applications, 2024-Present.
2. Editor of Special Issue of Sankhya B on Statistical Methods in Finance 2021.
3. Associate Editor, Journal of Indian Statistical Association, 2020-2022.
4. Member, Publications Committee, International Statistical Institute, 2020-2022.
5. Associate Editor Indian Statistical Institute book series by Springer, 2019-Present.
6. Associate Editor of Sankhya, Series B, 2016-Present.
7. Associate Editor Applied Stochastic Models in Business and Industry, 2014-2020.

8. Reviewed papers for S&PL, JASA, JRSS(B), ASMBI, JFM, JBES, JMVA, Oxford Bulletin of Economics & Statistics, Managerial Finance, QF, JAS, Sankhya, Indian Growth and Development Review, Communications in Statistics, IIMB Management Review, Managerial and Decision Economics, Insurance: Mathematics and Economics, Statistics & Applications, Studies in Nonlinear Dynamics & Econometrics, Journal of Quantitative Economics.
9. Reviewed book proposal for Wiley, Chapman & Hall.
10. Reviewed research grant proposal for Indo-French Centre for the Promotion of Advanced Research.
11. Panelist for NSF Graduate Research Fellowship in the Mathematical Sciences 2007.
12. Reviewed Research grant proposal for Institute of Eminence.
13. Reviewed NPTEL course proposal.

Speaker at Workshop/Training/Outreach Program (last 2 years)

1. Mathematical Foundations for Data Modelling and Visualization, Ramaiah University, Sept 1, 2026.
2. Summer School for Women in Mathematics and Statistics, ICTS, June 9, 2026.
3. Commerce department, Presidency College, Bangalore, April 4, 2025.
4. Students and teachers visiting ISI from Veer Narmada South Gujarat University, Feb 13, 2025.

Membership of professional bodies:

ISI elected member, life member of SSCA, life member of IISA, life member of ISPS, IMS member.

Conference and Workshop organization

1. Invited session organizer, World Statistics Congress, 11-15 July, 2027, Lusaka, Zambia.
2. Member, Committee of Basu-Bahadur Memorial Conference on Modern Trends in Probability and Statistics, Dec 18-22, 2026, ISI, Kolkata.
3. Member, Scientific committee, ISBIS Statfin at Chennai Mathematical Institute, 7-11 December 2026.
4. Member, organizing committee, Indian Official Statistics Conclave on Theoretical and Empirical Issues (OCTEI) at Indian Statistical Institute, Kolkata, 3-4 November, 2026.
5. Organizing committee of Two-Day International Conference on Applied Statistics, Data Analytics, and Multidisciplinary Research at Krishtu Jayanti University, February 12-13, 2026.
6. Organized invited session for International Symposium on Business and Industrial Statistics (ISBIS 2024), Indonesia, July 11-13, 2024.
7. Member, Organizing committee, International Day of Statistical Literacy, 21st May, 2024.
8. Organizer and resource person, Workshop on Data Analysis, Statistical Inference and Regression at University of Zululand, South Africa, 30th May - 1st June, 2023.
9. Organized invited sessions for IISA annual conference, Bangalore, India, Dec 26th - 30th, 2022.
10. Organized topic contributed session for Joint Statistical Meetings (JSM), Washington DC, USA, August 6-12, 2022.
11. Chair, Organizing Committee, Weekend Online Program on Statistical Machine Learning, Centre for Artificial Intelligence and Machine Learning, ISI, 3 weekends in March 2021.
12. Member, Scientific Program Committee member of International Virtual Conference on Advanced Statistical Techniques in Business and Industry, CUSAT, Cochin, Dec 28-30, 2020.
13. Member, Scientific Program Committee of International Indian Statistical Association meeting, Mumbai, Dec 26-30, 2019.
14. Member, Organizing committee, Research Workshop and Conference on Statistical methods in finance at CMI, Chennai. 2015-2023. Eighth conferences.
15. Organizer and resource person, Summer Training Program for BSc statistics students, ISI Chennai, May 7-June 15, 2018.

16. Member, Scientific Committee and student paper competition committee, International Conference on Business and Industrial Statistics, Athens, Greece, July 4-6, 2018.
17. Member, organizing committee, Conference in ISI Kolkata to celebrate 125th birth centenary of P. C. Mahalanobis, Jan 2-4, 2018.
18. Chair, student paper competition and member, Scientific Program Committee of International Indian Statistical Association meeting, Hyderabad, Dec 27-30, 2017.
19. Coordinator, National Level Advanced Orientation Programme in Statistics, S.D.N.B. Vaishnav College for Women, Chennai, Aug 18 -22, 2014.
20. Director, Weekend Professional Training Program on Business Analytics, ISI Chennai, Feb-Apr 2014.
21. Organizer of Statistical Science Symposium in ISI Chennai, Feb 2014
22. Treasurer of IISA Conference Statistics, Science, and Society: New Challenges and Opportunities held during January 2-5, 2013.
23. Member of NBER-NSF Time Series Meeting Committee 2009

Others

1. Committee for evaluation of ANRF Inclusivity Research Grant (IRG) 2025-2027.
2. Local coordinator of Bachelors in Statistical Data Science program 2024 – 2026.
3. Board of Studies (BOS) member of Presidency University, Alliance University, Jain University, VIT Amaravati.
4. Jury member for best paper award ISBIS conference 2024.
5. Committee for evaluation of Matrics grant by SERB, DST 2021-2023, 20226-2028.
6. Development of Public Affairs Index 2022 with Public Affairs Centre (PAC)
7. Country coordinator of the International Statistics Literacy Project since 2022.
8. In-charge, Student Academic affairs, ISI Chennai, 2013 – 2015
9. Question paper setting committee for CSIR-NET Junior Research Fellowship examination 2014
10. Committee for selecting Gossett lecturer, Journal Stat Editor, Jan Tinbergen Award winner, IISA young statistician
11. Webpage on Statistical concepts
12. Free statistical consulting service for researchers and industry for one hour every week.
13. Webinars for IISA and Limit, ISI Bangalore
14. ISI committees: PhD-DSc statistics (convener), RFAC economics, CAIML, admission for various programs (MStat, JRF statistics, BMath, MSQMBA), Feasibility, Statistics RA, official statistics, MStat Project Evaluation and award, BSDS standing coordination committee and syllabus review, vision, Revision of courses for Statistics JRF.
15. ISI Bangalore committees: computer, library, Economics RFAC, C-CAIR, anti-ragging, placement, Guest house and hostel rules.
16. Served as convener in the following ISI committees: Syllabus committee of Five-year multi-centre master's programme in Statistics and data Science, MStat Project Sabyasachi memorial award, Standing committee of RA for ASD, PhD-DSc Statistics committee.
17. Representative of ASD in Academic Council 2020-2022.
18. Member, Centre for Artificial Intelligence and Machine Learning, ISI, 2020-Present.