

CURRICULUM VITAE

Dr. Shuvashree Mondal

Assistant Professor (Mathematics and Computing)
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Gender: Female

Category: Gen

ACADEMIC QUALIFICATIONS:

Examination/Degree	Year	Board/Institution
PhD (Statistics)	2014-2019 (Date of defense: 21 st Jan, 2019)	Department of Mathematics and Statistics, IIT Kanpur
MSc (Statistics)	2011-2013	Department of Mathematics and Statistics, IIT Kanpur
BSc (Statistics)	2008-2011	Department of Statistics, St. Xavier's College (Autonomous) Under University of Calcutta

DOCTORAL RESEARCH DETAIL:

Thesis Title : On Joint Type-II Progressive Censoring Schemes

Thesis Advisor : *Prof. Debasis Kundu*,
Department of Mathematics & Statistics, IIT Kanpur.

CURRENT RESEARCH AREA :

- Robust Inference
- Reliability & Survival Analysis
- Distribution Theory

PROFESSIONAL EXPERIENCE:

Position	Duration	Place	Detail
Assistant Professor	15 th October, 2019 -present	Dept of Mathematics and Computing, IIT (ISM) Dhanbad	Teaching & Research
Visiting Scientist	1 st Jan, 2019 - 3 rd Oct, 2019	Indian Statistical Institute Kolkata	Post-Doctoral Research
System Engineer	July-December, 2013	TATA Consultancy Services, Hyderabad	Being Trained on Java Programming

MEMBER OF PROFESSIONAL BODY :

- Life membership at International Indian Statistical Association.

PHD THESIS GUIDANCE :

AS SOLE GUIDE : 1 Completed, 2 Ongoing.

- Miss. Shanya Baghel: Robust divergence based inference for One-Shot devices (**Completed**; Currently doing post-doc in Department of Industrial Engineering Hanyang University, South Korea)
- Miss. Udit Goswami: Robust inference for panel data analysis- a multilevel framework. In progress.
- Miss. Anamika Gupta: Bivariate cure rate model. In progress.

AS CO-GUIDE : 2 Ongoing.

M.TECH THESIS (IN DATA ANALYTICS) GUIDANCE :

- Mr. Ashutosh Kedar. LSTM with robust cost function. Completed. (Currently working in industry)
- Mr. Suman Barman. Robust Predictive classification with neural networks and minimum density power divergence. Completed. (Currently working in industry)

COURSE TAUGHT:

- UG Level: Statistical Methods; Probability & Statistics; Mathematics-II (Linear algebra, DE).
- PG Level: Statistical Inference; Machine Learning ; Bio-informatics; Multivariate Analysis.
- JRF Course Work: Statistical Reliability Theory; Decision Theory

DETAILS OF EXTERNALLY FUNDED RESEARCH PROJECTS : Title - “Prediction of Relapse time and Recovery Rate of Substance Use Disorder Based On Longitudinal Survey Study Applying Statistical and Machine Learning Tools”; Role - PI, Funding agency - ANRF-ARG, Status- Ongoing (Value: Aprox. - 35 Lakhs)

PUBLICATIONS:

1. Udit Goswami, **Shuvashree Mondal***, Adaptive LASSO penalized least square approximated Minimum Density Power Divergence Estimation in Panel Data analysis. (**Under review**)
2. U Goswami, M Jaenada, **S Mondal**, L Pardo, Robust Estimation for Simple Step-Stress Tests under the Tampered Random Variable model and Interval-Censoring. (**Under review**)
3. U Goswami, M Jaenada, **S Mondal**, L Pardo, Robust tests for Tampered Random Variable Step-Stress Tests under Weibull lifetimes and interval censoring. (**Under review**)

4. S Baghel, **S Mondal***, Exponential-polynomial divergence based inference for nondestructive one-shot devices under progressive stress model, arXiv:2503.06414. (**Under review**)
5. S Baghel, **S Mondal***, A Robust Bayesian approach for reliability prognosis of one-shot devices under cumulative risk model, arXiv:2406.08867. (**Under review**)
6. A Gupta, **S Mondal***, Simulated Annealing-based EM Algorithm for Bivariate Cure Rate Model with Block and Basu Weibull lifetime. (**Under review**)
7. S Baghel, **S Mondal***. Robust Bayesian inference for nondestructive one-shot device testing data under competing risk using Hamiltonian Monte Carlo method, Accepted in Journal of Applied Statistics
8. Pal, A., Prajapati, D., **Mondal, S.** and Kundu, D., 2025. Implementation of order-restricted inference, optimal design and model misspecification in step-stress model with progressive first-failure censored data. Annals of Operations Research, pp.1-37.
9. Sau, S., D. Bhattacharyya, G. N. Singh, and **S. Mondal**. "Calibration estimators for population mean with robust strategy for outliers." Communications in Statistics-Simulation and Computation (2025): 1-28.
10. Udit Goswami, **Shuvashree Mondal***, Inequality restricted minimum density power divergence estimation in panel count data, Applied Mathematical Modelling, Volume 150, Part B, 2026, 116371, ISSN 0307-904X, <https://doi.org/10.1016/j.apm.2025.116371>.
11. Baghel, S. and **Mondal, S.***, 2024. Analysis of one-shot device testing data under logistic-exponential lifetime distribution with an application to SEER gallbladder cancer data. Applied Mathematical Modelling, 126, pp.159-184.
12. Prajapati, D., **Mondal, S.** and Kundu, D., 2024. Two sample Bayesian acceptance sampling plan. Annals of Operations Research, 340(1), pp.425-449.
13. Baghel, S. and **Mondal, S.***, 2024. Robust estimation of dependent competing risk model under interval monitoring and determining optimal inspection intervals. Applied Stochastic Models in Business and Industry, 40(4), pp.926-944.
14. Prajapat K., **Mondal S.**, Mitra S. and Kundu D., 2023. Meta-analysis of exponential lifetime data from Type-I hybrid censored samples. Communications in Statistics-Theory and Methods, pp.1-19. (<https://doi.org/10.1080/03610926.2023.2169048>).
15. **Mondal S*** and Kundu, D. 2022. Exact Likelihood Ratio and Wald Tests for the Balanced Joint Progressive Censoring Scheme. Applied Stochastic Models in Business and Industry. 38(6), pp.1113-1126.
16. Shamanta D, **Mondal S** and Kundu D. 2022. Optimal Plan For Ordered Step-Stress Stage Life Testing. Statistics. 56(6), pp.1319-1344.
17. Kundu, D. and **Mondal, S.**, 2021. Analyzing competing risks data using bivariate Weibull-geometric distribution. Statistics, 55(2), pp.276-295.
18. Prajapati, D., **Mondal, S.** and Kundu, D., 2021. Optimal decision-theoretic sampling plan for two exponential distributions under joint censoring scheme. Applied Stochastic Models in Business and Industry, 37(3), pp.560-576.
19. Pal, A., **Mondal, S.** and Kundu, D., 2021. A Cure rate model for exponentially distributed lifetimes with competing risks. Journal of Statistical Theory and Practice, 15(1), pp.1-24.

20. **Mondal, S.***, Bhattacharya, R., Pradhan, B. and Kundu, D., 2020. Bayesian optimal life-testing plan under the balanced two sample type-II progressive censoring scheme. *Applied Stochastic Models in Business and Industry*, 36(4), pp.628-640.
21. **Mondal, S.** and Kundu, D., 2019. Exact inference on multiple exponential populations under a joint type-II progressive censoring scheme. *Statistics*, 53(6), pp.1329-1356.
22. **Mondal, S.** and Kundu, D., 2020. Inference on Weibull parameters under a balanced two-sample type II progressive censoring scheme. *Quality and Reliability Engineering International*, 36(1), pp.1-17.
23. **Mondal, S.** and Kundu, D., 2020. A bivariate inverse Weibull distribution and its application in complementary risks model. *Journal of Applied Statistics*, 47(6), pp.1084-1108.
24. **Mondal, S.** and Kundu, D., 2020. Bayesian inference for Weibull distribution under the balanced joint type-II progressive censoring scheme. *American Journal of Mathematical and Management Sciences*, 39(1), pp.56-74.
25. **Mondal, S.** and Kundu, D., 2020. On the joint Type-II progressive censoring scheme. *Communications in Statistics-Theory and Methods*, 49(4), pp.958-976.
26. **Mondal, S.** and Kundu, D., 2019. A new two sample type-II progressive censoring scheme. *Communications in Statistics-Theory and Methods*, 48(10), pp.2602-2618.
27. **Mondal, S.** and Kundu, D., 2019. Point and interval estimation of Weibull parameters based on joint progressively censored data. *Sankhya b*, 81(1), pp.1-25.

WORKSHOP & SEMINAR :

- Delivered invited talk on 8th April, 2026 in Department of Statistics, Operational Research and Numerical Analysis, National University of Distance Education, Madrid, Spain
- Presented paper in 12th International Conference on Advances in Statistics, Barcelona, Spain during 10-12th April, 2026
- Worked as resource person in “Summer School for Women in Mathematics and Statistics” during 9-13th June, 2025, organized by ICTS-TIFR, Bengaluru.
- Worked as resource person in “Summer School for Women in Mathematics and Statistics” during 1-3rd June, 2023, organized by ICTS-TIFR, Bengaluru
- Presented paper in 9th International Conference on Advances in Statistics, (E-Conference) on 20-22nd June, 2023, organized by Izmir University of Economics, Turkey.
- Invited speaker in “International Day for Women in Statistics and Data Science” a virtual conference organized by Caucus for Women in Statistics sponsored by Indian International Statistical Association on 11th October, 2022.
- Attended “Online Summer School-cum-Faculty Development Program on Advances in Signal Processing and Machine Learning” jointly organized by MHRD-Institution Innovation Council, Deen Dayal Upadhyaya College, University of Delhi & National Academy of Sciences India (NASI) during 20-26th July, 2020.
- “A Cure Rate Model For Exponentially Distributed Lifetimes Under Competing Risk Setup”, Presented in Tenth International Triennial Calcutta Symposium on Probability & Statistics Held During 27-30th December, 2018, in Department of Statistics, University of Calcutta.

- “Inference On Weibull Parameters Under A Two Sample Type-II Progressive Censoring Scheme”, Presented in Workshop on Reliability Theory and Survival Analysis Held During 28-30th November, 2018, in Indian Statistical Institute, Bangalore.
- Attended Workshop on “Reliability Theory and Survival Analysis” Held During 20-22th November, 2017, in Indian Statistical Institute, Kolkata.
- “Inference for Weibull Populations Under The New Balanced Joint Type-II Progressive Censoring Scheme”, Presented at Departmental Open House, 18th February, 2017, Department of Mathematics and Statistics, Indian Institute of Technology, Kanpur.
- “On Progressive Censoring Scheme For Two Samples” Presented in International Workshop of Reliability Theory and Survival Analysis Held During 3-5th November, 2016, in Department of Statistics, Savitribai Phule Pune University.
- “On Progressive Censoring Scheme For Two Samples” Presented at Departmental Open House, During 23-24th January, 2016, Department of Mathematics and Statistics, Indian Institute of Technology, Kanpur.

ADMINISTRATIVE ACTIVITIES :

- Working as DPGC member in the department of Mathematics and Computing, IIT (ISM) Dhanbad.
- Working as one of the mentors of UG students in the department of Mathematics and Computing, IIT (ISM) Dhanbad.
- Served as Co-convenor in National conference entitled “Data Predictive Analytics and Numerical Simulations” during 23rd-25th April, 2025 at IIT (ISM) Dhanbad.
- Worked as convener of One Day Seminar on Statistics & Data Science on the Occasion of National Statistics Day on 29th June, 2022 in IIT (ISM) Dhanbad.
- Worked as member of Departmental Faculty Selection Committee in the department of Mathematics and Computing, IIT (ISM) Dhanbad
- Worked as member of Anti-Ragging Squad in IIT (ISM) Dhanbad.
- Worked as Faculty-In-Charge of Student Technology Clubs (Finance Technology Club)