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Research Publication: 2025-26

Sudhansu S. Maiti

1. Ruidas, M. K., Choudhury, M. M., & Maiti, S. S. (2025). Unit one parameter polynomial exponential distribution. Statistics. https://doi.org/10.1080/02331888.2025.2574291
2. Saha, M., Yadav, A. S., Bhattacharya, A., Maiti, S. S., & Gupta, A. (2025). Bayesian estimation of unified generalized process capability index for logistic-exponential distribution under progressive type II censoring scheme. Engineering Applications of Artificial Intelligence, 160(Part B), 111868. https://doi.org/10.1016/j.engappai.2025.111868
3. Das, S., Saha, M., & Maiti, S. S. (2025). Control chart for mean based on multiple dependent state repetitive sampling for exponential power distribution. Life Cycle Reliability and Safety Engineering, 14, 745-754. https://doi.org/10.1007/s41872-025-00359-w

Saran Ishika Maity

1. Das, S., & Maiti, S. I. (2025). A class of consistent tests of independence between covariate and error in nonparametric regression with missing at random responses. International Journal of Applied Mathematics and Statistics, 64(2), 18-46. ISSN 0973-1377 (Print); ISSN 0973-7545 (Online).
2. Chowdhury, A., & Maiti, S. I. (2026). Zero-truncated Geometric Ishita Distribution and Its Application. International Journal of Applied Mathematics, 39(1), 1129-1159. ISSN 1311-1728 (Print); ISSN 1314-8060 (Online).

Tirthankar Ghosh

1. Ghosh, J., Das, S. K., Pramanik, A. K., Majumder, D., Ghosh, T., Hossain, M., & Chatterjee, A. (2025). Probabilistic assessment of non-carcinogenic health risks posed by groundwater iron and fluoride in Indo-Bangladesh international frontier town in

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Debashis Chatterjee

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2. Hore, M., Bhattacharyya, S., Chatterjee, D., Saha, S., Biswas, J. K., & Roy, S. (2025). Assessing water quality of River Mahananda, Malda, India using *Cirrhinus reba* as a bioindicator: Oxidative stress biomarkers and histopathological fingerprints. *Environmental Monitoring and Assessment*, 197, 530. DOI: https://doi.org/10.1007/s10661-025-13969-9
3. Chatterjee, D., & Ghosh, P. (2025). Bayesian hierarchical modeling of mucosal immune responses and growth efficiency in young animals: Demonstrating the superiority of data-dependent empirical priors. *PLOS ONE*, 20(6), e0326273. DOI: https://doi.org/10.1371/journal.pone.0326273
4. Chatterjee, D., Saha, S., & Ghosh, P. (2025). Circular insights for rhythmic health: A Bayesian approach with stochastic diffusion for characterizing human physiological rhythms with applications to arrhythmia detection. *PLOS ONE*, 20(6), e0324741. DOI: https://doi.org/10.1371/journal.pone.0324741
5. Banerjee, N., Mazumdar, S. M., Chatterjee, D., & Pal, A. (2025). A novel Bayesian approach based on wing geometric morphometry to discriminate *Culicoides* species (Diptera: Ceratopogonidae). *Journal of Medical Entomology*, 62(5), 1124–1138. DOI: https://doi.org/10.1093/jme/tjaf082
6. Chatterjee, D., & Ghosh, P. (2025). On the directional nature of the fall of celestial objects on the surface of Venus. *Planetary and Space Science*, 266, 106167. DOI: https://doi.org/10.1016/j.pss.2025.106167
7. Chatterjee, D., & Bhattacharya, S. (2025). How ominous is the premonition of future global warming? *Sankhya B*. DOI: https://doi.org/10.1007/s13571-025-00390-y
8. Chatterjee, D., & Ghosh, P. (2025). Whisperers of whales wander: A directional statistical investigation of whales' migration influenced by geomagnetic, ocean current, and celestial cues. *Journal for Nature Conservation*, 88, 127011. DOI: https://doi.org/10.1016/j.jnc.2025.127011
9. Acharyya, S., Saha, S., & Chatterjee, D. (2026). A machine-learning framework for virus early warning from weather and urban sustainability signals. *Explora: Environment and Resource*, 025440076. DOI: https://doi.org/10.36922/EER025440076

10. Chatterjee, D., & Ghosh, P. (2026). Oriented odyssey of the lunar scars: Directional distribution of lunar craters. *Journal of Space Safety Engineering*. DOI: https://doi.org/10.1016/j.jsse.2026.02.009
11. Saha, S., & Chatterjee, D. (2025). A revisit to circular statistical analysis of the orientations of termite mounds. *Insight — Statistics*, 8(1), 662. DOI: https://doi.org/10.18282/i-s662
12. Saha, S., & Chatterjee, D. (2026). Statistical analysis of seismicity in the Fiji–Tonga region: Integrating classical and circular methods. *Journal of Statistical Research*, 59(2), 145–166. DOI: https://doi.org/10.3329/jsr.v59i2.88019

Research Publications within the year April 2024– March 2025

Sudhansu S. Maiti

Mondal, A. & **Maiti, S. S.** (2025): Repetitive Sampling Inspection Plan under truncated life test based on One Parameter Polynomial Exponential Distribution, *Reliability: Theory & Applications*, 20(1), 1100-1115.

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Saha, M., Bhattacharya, A., Pramanik, S., **Maiti, S. S.,** & Gupta, A. (2025): A unified generalized process capability index and its applications to logistic-exponential distributed characteristic, *European Journal of Industrial Engineering (EJIE)*, DOI: 10.1504/EJIE.2025.10066767

Pramanik, S. & **Maiti, S. S.** (2024): Odds One Parameter Polynomial Exponential - G Family of Distributions, *Asian Journal of Statistics and Applications*, 1(2), 1-33.

Hassan, A. S., **Maiti, S. S.**, Mousa, R., Alsadat, N. & Abu-Moussa, M. H. (2024): Analysis of Competing Risks Model Using the Generalized Progressive Hybrid Censored Data from the Generalized Lomax Distribution, *AIMS Mathematics*, 9(12), 33756-33799.

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Chakraborty, Arindom and Rana, Sourav, and Maiti. Saran Ishika."Transmuted shifted Lindley distribution: Characterizations, classical and Bayesian estimation with applications." Annals of Data Science, 2024, doi:https://doi.org/10.1007/s40745-024-00562-z

Dutta, Srimanti and Ghosh, Prithwish and **Chakraborty, Arindom**. "Modelling informative dropout in longitudinal data:A joint model approach".Journal of Statistical Research (Scopus), 2024, Vol. 58, no. 1, pp. 97-110, doi: https://doi.org/10.3329/jsr.v58i1.75415.

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Upendra Kumar Sahoo and **Tirthankar Ghosh:** An Analysis of Temperature Trends of Five Metro Cities in India, *International Journal of Applied Environmental Sciences*, Vol. 19, (1), pp. 19-49, 2024.

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Das, S. and **Maiti**, S. I. “A rank based test of independence of covariate and error in nonparametric regression with missing completely at random response situation”. Statistics and Applications, vol. 22, no. 1, 2024, pp. 195-219.

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Soumalya Mukhopadhyay

Arnab Chattopadhyay, Amit Samadder, Soumalya Mukhopadhyay, Sabyasachi Bhattacharya and Ying-Cheng Lai "Understanding pesticide-induced tipping in plant-pollinator networks across geographical scales: Prioritizing richness and modularity over nestedness." *Physical Review E* 111.1 (2025): 014407.

Sourav Rana

Kaushik Kayal, Sudip Samanta, **Sourav Rana**, Sagar Karmakar and Joydev Chattopadhyay. Impact of Predator-Driven Allee and Spatiotemporal Effect on a Simple Predator–Prey Model. ***International Journal of Bifurcation and Chaos***, 2024, 34(4), 2450046.

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