

**Dr. Surupa Chakraborty (Roy)**

**Designation:** Associate Professor

**Department:** Statistics

**Institution:** St Xavier's College (Autonomous), Kolkata

Email id: [surupastat@sxccal.edu](mailto:surupastat@sxccal.edu)

**Qualification:**

- M.Sc. in Statistics, Calcutta University (1996)
- PhD in Statistics, Calcutta University (2005)

**Doctoral Research Topic:** "Measurement Error Models: Some Related Inference problems".

**Teaching Experience:**

- 22 years (UG level)
- Guest faculty, MBA (Financial Management) Department of Commerce, University of Calcutta (December, 2020- June, 2023)

**PhD supervision** (working as joint supervisor under the University of Calcutta)

**Topic:**

- Multivariate ordinal data (degree awarded)
- Under reported count data (Thesis submitted)

**Completed Research Projects:**

1. "A Methodological Study on Misclassified Binary Responses when predictors are subject to measurement Error" (sole investigator) under DST (SERC FAST TRACK SCHEME) Ref No. SR/FTP/MS-03/2006. Project duration: 1.5.2007- 30.4.2010. Total funding: Rs 3,48,000/-
2. "Ascertainment adjusted familial data analysis under some irregular phenomena" (principal investigator) under CSIR, Ref No. 25(0207)/12/EMR-II. Project duration: 1.2.2013- 30.1.2016. Total funding: Rs 5,88,383/-

### Research area of interest:

1. Count and Ordinal Data
2. Measurement error/ Classification error
3. Group testing
4. Missing data
5. Survey Sampling

### Publication list:

1. **Roy, S.**, Adhya, S. & Rana. S. (2024): Estimation of odds ratio from group testing data with misclassified exposure. Biometrical Journal. <https://doi.org/10.1002/bimj.202200254>
2. Sengupta, D., & **Roy, S.** (2023): Modelling zero inflated and under-reported count data. Journal of Statistical Computation and Simulation. 93(14), Pg 2390-2409.
3. Adhya, S., **Roy, S.** & Banerjee, T. (2022): Prediction of finite population proportion when responses are misclassified. Journal of Survey Statistics and methodology, 10(5), Pg 1319-1345
4. Sengupta, D., Banerjee, T. & **Roy, S.** (2021): Estimation of Poisson mean with under-reported counts: A double sampling approach. Australian and New Zealand Journal. 62 (4), Pg 508-535.
5. Sengupta, D., **Roy, S.** & Banerjee, T. (2021): Testing of Poisson mean with under-reported counts. Brazilian Journal of Probability and Statistics. 35(3), Pg 523-543.
6. **Roy, S.** & Banerjee, T (2019): Estimation of log-odds ratio from group testing data using Firth correction. Biometrical Journal. 61(3), 714-728.
7. Rana, S., **Roy, S.** & Das, K. (2018): Analysis of Ordinal Longitudinal Data Under Nonignorable Missingness and Misreporting: An Application to Alzheimer's Disease Study. Journal of Multivariate Analysis. 166, 62-77.
8. Das, K., Rana, S. & **Roy, S.** (2017): Evaluation of Alzheimer Disease Progression based on Clinical Dementia Rating Scale with Missing Responses and Covariates. Journal of Biopharmaceutical Statistics. ISSN: 1054-3406 (Print) 1520-5711 (Online) Journal homepage: <http://www.tandfonline.com/loi/lbps20>.
9. Banerjee T & **Roy, S.** (2017): Measurement Error in Astronomy, Wiley StatsRef, Statistics Reference online, DOI: 10.1002/9781118445112.stat07930.

10. Sengupta, D. & **Roy, S.** (2016): One way ANOVA model with under reported counts. *CSA Bulletin*, 68(1&2) 1-15.
11. Das, K., **Roy, S.** & Chattopadhyay, A.K. (2016): Analysis of ordinal longitudinal data using semi-parametric mixed models. *Journal of Statistical Research*, 48-50(1), 15-33.
12. **Roy, S.**, Rana, S. & Das, K (2016): Clustered data Analysis under Miscategorized Ordinal outcomes and missing covariates. *Statistics in Medicine*. 35, 3131-3152.
13. **Roy, S** (2016): Analysis of ordered Probit Model with surrogate response data and measurement error in covariates. , *Communications in Statistics: Theory and Methods*, 45 (9), 2665-2678.
14. Rana, S., **Roy, S** and Das K (2016): On Analyzing Ordinal Data when Responses and Covariates are both missing at random: *Statistical Methods in Medical Research*, 25(4), 1564-1578.
15. **Roy, S.**, Sarkar, A and Das, K (2014). : Analysis of Bivariate Binary data with possible chances of wrong ascertainment, *Journal of Statistical Computation and Simulation*, 84 (4), 724-738.
16. **Roy, S.**, Das K and Sarkar A (2013). : Analysis of binary data with the possibility of wrong ascertainment. *Statistica Neerlandica* , 67(3) , 293-310.
17. **Roy, S.** (2012): Accounting for Response Misclassification and Covariate Measurement Error using a Random Effects Logit Model, *Communications in Statistics (Simulation and Computation)*, 41 (9), 1623-1636.
18. **Chakraborty, S.** and Banerjee, T.(2010) : Analysis of mixed outcomes: misclassified binary responses and measurement error in covariates, *Journal of Statistical Computation and Simulation*, 80(11), 1197-1209.
19. **Roy, S.** and Banerjee, T. (2009): Analysis of Misclassified Correlated Binary data using Multivariate Probit Model when Covariates are subject to Measurement Error, *Biometrical Journal*, Vol 51(3), 420-432.
20. **Roy, S.**, Banerjee, T. (2008): Misclassification and Measurement Error Models in Epidemiological Studies: Edited Volume “Statistical Advances in Biomedical Sciences: State of the Art and Future Directions” Editors- Biswas, A, S.Fine, J and Segal, M. Published by John Wiley, NewYork.
21. **Roy, S.** and Banerjee, T.(2006): A flexible model for generalized linear regression with measurement error, *The Annals of the Institute of Statistical Mathematics*, 58(1), 153-169.

22. **Roy, S.**, Banerjee, T. and Maiti, T. (2005): Measurement Error Model for Misclassified Binary Responses, *Statistics in Medicine*. 24, Pg 269-283.
23. Banerjee, T. and **Roy, S.** (2004): A simple Test for Polarization of multinomial cell probabilities, *Calcutta Statistical Association Bulletin*, 55(217-218), 29-38.
24. **Roy, S.** and Banerjee, T. (2001): Generalised Linear Measurement- Error Models with Multivariate t- Measurement Error, *Calcutta Statistical Association Bulletin*, 51, Pg 192-203.