

Dr. Arindam Gupta

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Designation: Professor

Citizenship: India

Research interests Demography, Occupational Mobility, Operations Research, Growth Curve Modelling, Multivariate Analysis, Bio-Statistics etc.

Education **Ph.D.** Calcutta University
Ph.D. in Statistics 2009
Thesis Titled: Problems Related to Social Processes- A Statistical Study

NET- CSIR-UGC
JRF 2002

M.Sc. Calcutta University
M.Sc in Statistics 2001

B.Sc. Calcutta University
B.Sc in Statistics 1999
(R.K.M.R. College, Narendrapur)

Life Member [1] The Calcutta Statistical Association
[2] Indian Association for the Study of Population

Honors K. Srinivasan Award (Indian Association for Study of Population) 2023

Editor in Chief Asian Journal of Statistics and Applications, ISSN :3048-7455

Guide of Ph.D. Students [1] **Mr Debashis Samanta** Awarded: November, 2019
Title of The Thesis: Analysis Of Life Testing Data Using Step-Stress Model

[2] **Mrs Anindita Ghosal** Awarded: December, 2019
Title of The Thesis: Development Of New Occupational Mobility Models: A Statistical Investigation

[3] **Mrs Chowdhury Sadeka Nazrin** Awarded: November, 2022
Title of The Thesis: Intimate Partner Violence: A Statistical Study

[4] **Mrs Frahana Yesmin** Awarded: October, 2023
 Title of The Thesis: Some Applications of Relative Growth Rate in Various Growth Curve Inference Problems
 Joint Supervisor: Prof Sabyasachi Bhattacharaya, ISI. Kolkata

[5] **Mr Amartya Bhattacharyay** Awarded: August, 2024
 Title of The Thesis: A Study on Statistical Inference in Process Capability Analysis
 Joint Supervisor: Prof S. S. Maiti, Visva- Bharati

Ongoing

- [1] Suman Kapoor
- [2] Debjit Konai
- [3] Sumit Mondal
- [4] Bristi Bose
- [5] Arga Nath Bhattacharya
- [6] Rajasree Dutta

Experience

Assistant Professor 2007-2009
 Department of Statistics
 Vivekananda Mahavidyalaya, Burdwan

Assistant Professor 2009-2019
 The Department of Statistics
 The University of Burdwan, Burdwan

Associate Professor 2019- 2022
 The Department of Statistics
 The University of Burdwan, Burdwan

Professor 2022-
 The Department of Statistics
 The University of Burdwan, Burdwan

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Google Scholar

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Project Completed

[1] **Title:** Study of Mobility pattern over socio-economic categories: A model based Approach Scheme: SERC Fast Track Scheme for Young Scientist in Mathematical Science

Agency: Department of Science and Technology, Govt of India

Amount Sanctioned: 3.5 L

Duration: 3 Years (2012-2015)

[2] **Title:** Development of Effective Estimation Strategies for Socio-Economic, Agriculture and Health Care Parameters in Presence of Non-Response Situations and their Applications in Real Life Problems in India

Scheme: Extra Mural Research

Agency: Department of Science and Technology, Govt of India

Amount Sanctioned: Rs 1339040/-

Duration: 3 Years (2017-2020)

Session Chair

[1] Eleventh International Triennial Calcutta Symposium, 2024, jointly organized by the Department of Statistics, University of Calcutta and the Calcutta Statistical Association from 27-30 December 2024.

[2] National Seminar on Data Science Innovations in Astronomy, jointly organized by the Department of Statistics, Amity University and IUCAA Center for Astronomical Research and Development (ICARD), Kolkata from 3-4 January, 2025

Publications

[40] Arindam Gupta, Suman Kapoor, Sudipta Basu and Anirban Goswami. Analysis of Interval Censored Data under Rayleigh distribution with Baseline assessment and censored Imputation under Estimand Framework. Submitted

[39] Anindita Ghosal, Argha Nath Bhattacharyya and Arindam Gupta. Prediction of Employees through continuous-time semi-Markov process and Measure of Occupational Mobility by using Winsorised Mean. Submitted

[38] Arindam Gupta, Suman Kapoor, Sudipta Basu and Anirban Goswami. Analysis of Interval Censored Data under Generalized Weibull Model structure with Fixed Co-variate - an Inferential approach. Submitted

[37] Abhimanyu Singh Yadav, Arindam Gupta; Dr Mahendra Saha; Amartya Bhattacharya; Sudhansu S. Maiti. Bayesian estimation of unified generalized process capability index for logistic-exponential distribution under progressive type II censoring scheme, Engineering Applications of Artificial Intelligence, Accepted.

[36] Arindam Gupta, Ardhendu Banerjee and Asis Kumar Chattopadhyay. Psychosocial Stress Model of Fertility. Submitted.

[35] Arindam Gupta, Ardhendu Banerjee and Asis Kumar Chattopadhyay. A Revised Estimate of NMR with Effect Due to Migration and Discounted Number of Deaths. Demography India, Vol. 54, No. 1 (2025).

[34] Ardhendu Banerjee, Arindam Gupta and Asis Kumar Chattopadhyay. Estimation of undocumented migration - a model based approach. Communications in Statistics – Case Studies and Data Analysis. Pages 127-142 — Published online: 03 Feb 2025, <https://doi.org/10.1080/23737484.2025.2456829>

[33] Majumder, Sanjoy., Bandyopadhyay, Arnab., Gupta, Arindam., Formulation of Estimator for Population Mean in Stratified Successive Sampling using Memory Based Information, Statistics in Transition New Series, 2025 (Accepted, article in press).

[32] Mahendra Saha; Amartya Bhattacharya; Sukanta Pramanik; Sudhansu S Maiti and Arindam Gupta. A unified generalized process capability index and its applications to logistic-exponential distributed characteristic. European Journal of Industrial Engineering, European J. Industrial Engineering, Vol. 19, No. 4, 2025. DOI: 10.1504/EJIE.2025.146523

[31] Majumder, Sanjoy., Bandyopadhyay, Arnab., Gupta, Arindam., Development of a Chain Regression-Product Type Estimation Strategy for Population Mean under Two-Phase Sampling, INTERNATIONAL CONFERENCE PROCEEDINGS ON MULTIDISCIPLINARY RESEARCH ON INTEGRATING KNOWLEDGE FOR SUSTAINABLE FUTURE IN GLOBAL OUTLOOK,ISBN: 978-81-980794-9-7, Publishers: Multi Spectrum Publications, 68-78, 2024.

[30] Sudhansu S. Maiti; Amartya Bhattacharya; Mriganka Mouli Choudhury and Arindam Gupta. On Estimation of Generalized Process Capability Index C_{py} for One Parameter Polynomial Exponential Family of Distributions and Its Natural Discrete Version, International Journal of Reliability, Quality and Safety Engineering,31(01): 2350033-1 to 2350033-28, 2024.

[29] Abhimanyu Singh Yadav; Mahendra Saha; Amartya Bhattacharya and Arindam Gupta. Assessment of generalized lifetime performance index for Lindley distribution using progressive type-ii samples, Reliability: Theory and Applications,18 (4(76)): 69-86, 2023.

[28] Chowdhury Sadeka Nazrin; Arnab Bandyopadhyay and Arindam Gupta. General estimation procedures for population mean in successive cluster sampling in presence of scrambled response situation. Proceedings of the National Academy of Sciences, India Section: A Physical Sciences, 93:95-105, 2023.

[27] Arindam Gupta Arnab Bandyapadhya and Chowdhury Sadeka Nazrin. Development unbiased estimation strategy for population mean through two-occasion successive sampling scheme. Journal of Statistical Approaches in Research, 1: 98-112, 2023.

[26] Arindam Gupta, Ardhendu Banerjee and Asis Kumar Chattopadhyay. Migration through aspiration: A model based investigation. Demography India, 51(2), 111-124 2022.

[25] Arindam Gupta and Chowdhury Sadeka Nazrin . The main factors of intimate partner violence - a statistical study. Journal of Statistics Applications and Probability, 10(1):103-112, 2021.

- [24] Farhana Yeasmin; Ranadeep Daw; Bratati Chakraborty; Arindam Gupta; Sabyasachi Bhattacharya and Biman Chakraborty. A new growth rate measure in identifying extended Gompertz growth curve and development of goodness-of-fit test. *Calcutta Statistical Association Bulletin*, 73(2):127-145, 2021.
- [23] Arnab Bandyapadhy; Arindam Gupta and Chowdhury Sadeka Nazrin. Logarithmic estimation strategy in cluster sampling in presence of random-non response and measurement error. *Journal of Statistics Applications and Probability*, 10(1):135-146, 2021.
- [22] Debashis Samanta, Arnab Koley, Arindam Gupta, and Debasis Kundu. Exact inference of a simple step stress model with hybrid type-ii stress changing time. *Journal of Statistical Theory and Practice*, 14(12), 2020. DOI: <https://doi.org/10.1007/s42519-019-0072-5>
- [21] G Dutta, S Gupta, A Gupta. Lake Hydro Geochemistry: An Implication to Chemical Weathering, Ion-exchange Phenomena and Metal Interaction, *Pollution*, 5(4): 203-819, 2019.
- [20] Debaashis Samanta, Ayon Ganguly, Arindam Gupta, and Debasis Kundu. On classical and bayesian order restricted inference for multiple exponential step stress model. *Statistics*, 53(1):177-195, 2019.
- [19] Harjeet Kaur, Srimanta Gupta, Surya Parkash, Raju Thapa, Arindam Gupta, and G. C. Khanal. Evaluation of landslide susceptibility in a hill city of Sikkim Himalaya with the perspective of hybrid modelling techniques. *Annals of GIS*, 25(2):113-132, 2019.
- [18] Debashis Samanta; Arindam Gupta and Debasis Kundu. Analysis of Weibull step stress model in presence of competing risk. *IEEE Transaction on Reliability*, 68(2):420-438, 2019.
- [17] Arindam Gupta and Chowdhury Sadeka Nazrin. Muslim women in south asia and intimate partner violence- a statistical modelling. *International Journal of Research in Applied Natural and Social Sciences*, 7(2):51-56, 2019.
- [16] Arindam Gupta and Chowdhury Sadeka Nazrin. Intimate partner violence- a statistical measure. *Statistica Applicata - Italian Journal of Applied Statistics*, 31(2):215-226, 2019.

- [15] Arindam Gupta and Anindita Ghosal. Reward structure model for faculty members of Indian University. *International Journal of Research in Business Management*, 7(2):1-12, 2019.
- [14] Raju Thapa, Srimanta Gupta, Arindam Gupta, Dontireddy Venkat Reddy, Harjeet Kaur. Geochemical and geostatistical appraisal of fluoride contamination: An insight into the Quaternary aquifer. *Science of The Total Environment*, 640: 406-418, 2018.
- [13] Raju Thapa, Srimanta Gupta, Arindam Gupta, DV Reddy, and Harjeet Kaur. Use of geospatial technology for delineating groundwater potential zones with an emphasis on water-table analysis in Dwarka river basin, Birbhum, India. *Hydrogeology Journal*, 26(3):899-922, 2018.
- [12] Raju Thapa, Srimanta Gupta, Arindam Gupta, Dontireddy Venkat Reddy, and Harjeet Kaur. Geochemical and geostatistical appraisal of fluoride contamination: An insight into the quaternary aquifer. *Science of The Total Environment*, 640-641(1 November):406-418, 2018.
- [11] Arindam Gupta; Chowdhury Sadeka Nazrin and Sudhansu Sekhar Maiti. Situation of intimate partner violence - a statistical study. *International Journal of Reviews and Research in Social Sciences*, 5(2):93-102, 2017.
- [10] Arindam Gupta and Anindita Ghosal. Prediction of employees through semi-markov process and measure of occupational mobility based on first passage time. *Journal of Applied Probability and Statistics*, 6(1):75-90, 2016.
- [9] Arindam Gupta and Anindita Ghosal. Occupational mobility among residents of Burdwan town and Durgapur town. *Journal of Statistics Applications and Probability*, 5(1):141-146, 2016.
- [8] Arindam Gupta and Anindita Ghosal. A manpower planning model based on length of service under varying class sizes. *OPSEARCH*, 51(4):615-623, 2014.
- [7] Arindam Gupta and Samba Siva Rao Pasupuleti. A new behavioural model for fertility schedules. *Journal of Applied Statistics*, 40(9):1921-1930, 2013.

- [6] Arindam Gupta, Sabyasachi Bhattacharya, and Asis Kumar Chattopadhyay. Exploring new models for population prediction in detecting demographic phase change for sparse census data. *Communications in Statistics - Theory and Methods*, 41(7):1171-1193, 2012.
- [5] Sabyasachi Bhattacharya; Arindam Gupta and Asis Kumar Chattopadhyay. Effect of migration on population growth under dynamical system. *Journal of Applied Probability and Statistics*, 4(2): 239-253, 2009.
- [4] Asis Kumar Chattopadhyay and Arindam Gupta. A stochastic manpower planning model under varying class sizes. *Annals of Operations Research*, 155(1):41-49, 2007.
- [3] Sudipta Tripathi, Sabitri Kumari, Asis Chakraborty, Arindam Gupta, Kalyan Chakrabarti, and Bimal Kumar Bandyopadhyay. Microbial biomass and its activities in salt-affected coastal soils. *Biology and Fertility of Soils*, 42(3):273-277, 2006.
- [2] Asis Kumar Chattopadhyay and Arindam Gupta. Study on diffusion of rumours through epidemic models under non-identical set-up. *Calcutta Statistical Association Bulletin*, 58(3 and 4):263-280, 2006.
- [1] Asis Kumar Chattopadhyay and Arindam Gupta. A model based study on the career prospects of individuals in an Indian university. *Journal of Statistical Research*, 37(2):231-239, 2003.