Name: Dr. Durba Bhattacharya

Designation: Assistant Professor.

Department: Statistics

Qualification: • M.Sc. in Statistics, University of Calcutta (2004)

• PhD in Statistics, Indian Statistical Institute, Kolkata (2019)

Email Id: durba@sxccal.edu

Doctoral Research Topic: "Bayesian Nonparametric Approaches to Investigating Gene-Gene and Gene-Environment Interactions in Case-Control Studies".

Teaching Experience: 16 years of experience in Undergraduate teaching. Currently in the post of Assistant Professor at the Department of Statistics, St. Xavier's College.

Research Interests:

- Bayesian Non-parametric Modelling,
- Statistical Genetics
- Bayesian computation, Bio-statistics,
- Multi-objective optimization,
- Machine learning.

Publications:

- Effects of Gene-Environment and Gene-Gene Interactions in Case-Control Studies: A Novel Bayesian Semiparametric Approach, February 2020, Brazilian Journal of Probability and Statistics, Vol-34, Number 1 (2020), 71-89, 10.1214/18-BJPS413

- A Hybrid Multi-Objective Tour Route Optimization Algorithm Based on Particle Swarm Optimization and Artificial Bee Colony Optimization. Computational Intelligence, 25th January 2020, Computational Intelligence, Vol 36, Issue 3, 884-909, DOI: 10.1111/coin.12276

- Hierarchical Multi-Objective Route Optimization for Solving Carpooling Problem, April 2020, Proceedings of the Global AI Congress 2019, Pages-377-390, DOI: 10.1007/978-981-15-2188-1_30

- "A Bayesian Semiparametric Approach to Learning About Gene-Gene Interactions in Case Control Studies", Journal of Applied Statistics, Volume 45, 2018 - Issue 16, 2906-2928, doi.org/10.1080/02664763.2018.1444741

- "A Non-Gaussian, Nonparametric Structure for Gene-Gene and Gene-Environment Interactions in Case-Control Studies Based on Hierarchies of Dirichlet Processes"- arXiv.org

Paper Presentation and Participation in Conferences:

- Delivered an Invited talk on "A Novel Bayesian Hierarchical Testing Procedure in Studying Genetic Interactions in Case-Control Studies" at Sixth International Webinar on RECENT TRENDS IN STATISTICAL THEORY AND APPLICATIONS-2022 (WSTA-2022) in conjunction with Fifth Annual Convention of Statistics Fraternity Kerala (SFK) Indian Society for Probability and Statistics (ISPS), Kerala Statistical Association (KSA) & Department of Statistics, School of Physical and Mathematical Sciences University of Kerala, Trivandrum, India during 29th June – 1st July, 2022.

- Chaired a Special Invited Session at Sixth International Webinar on RECENT TRENDS IN STATISTICAL THEORY AND APPLICATIONS-2022 (WSTA-2022) in conjunction with Fifth Annual Convention of Statistics Fraternity Kerala (SFK) Indian Society for Probability and Statistics (ISPS), Kerala Statistical Association (KSA) & Department of Statistics, School of Physical and Mathematical Sciences University of Kerala, Trivandrum, India during on 1st July, 2022.

- Presented an Invited Talk on "Dirichlet process based mixture modelling for genetic association studies" during 24th Annual Conference of SSCA (online) on "Recent Advances in Statistical Theory and Applications (RASTA-2022)", 23 – 27 February, 2022 at ICAR - National Academy of Agricultural Research Management (ICAR -NAARM), Hyderabad.

- Delivered an Invited talk on "Bayesian Semiparametric Models in Studying Genetic Diseases" at the Seventh International Conference on Statistics for Twenty-first Century-2021 (ICSTC - 2021) organized by the International Statistics Fraternity (ISF) and Department of Statistics, University of Kerala, Trivandrum during 15 - 19 December, 2021.

- Chaired a Session at the Seventh International Conference on Statistics for Twenty-first Century-2021 (ICSTC - 2021) organized by the International Statistics Fraternity (ISF) and Department of Statistics, University of Kerala, Trivandrum during 15 - 19 December, 2021.

- Presented Paper in the "Tenth International Triennial Calcutta Symposium on Probability & Statistics (Celebrating the Birth Centenary of Prof. H.K Nandi) " heldduring 27-30 December, 2018.

- Presented Paper in the "Ninth International Triennial Calcutta Symposium on Probability & Statistics" held during 28-31 December, 2015.

- Delivered a Talk in the "International Seminar on Game Theory and its Applicationsto Social and Economic Networks" held at Dibrugarh University, Dibrugarh, Assam during 10-12 December, 2014.