Curriculum Vitae

Aranyak Acharyya

Education

Johns Hopkins University **2019 – Present**
Ph.D. (on-going) in Applied Mathematics and Statistics *Baltimore, USA*

Johns Hopkins University **2023**
Master of Science in Engineering in Applied Mathematics and Statistics *Baltimore, USA*

Indian Institute of Technology Kanpur **2017 – 2019**
Master of Science in Statistics *Kanpur, India*

Presidency University **2014 – 2017**
Bachelor of Science in Statistics *Kolkata, India*

Research interests

- Statistical inference on networks
- Manifold learning
- Nonparametric Statistics
- High-dimensional Statistics
- Model selection
- Optimization

Publications and preprints

- "Consistent response prediction for multilayer networks on unknown manifolds", Aranyak Acharyya, Jesús Arroyo Relión, Michael Clayton, Marta Zlatic, Youngser Park, Carey E. Priebe, *arXiv preprint, arXiv:2405.03225*.
- "Semisupervised regression in latent structure networks on unknown manifolds", Aranyak Acharyya, Joshua Agterberg, Michael W. Trosset, Youngser Park, Carey E. Priebe, *Applied Network Science* 75 (8), November 2023. doi: 10.1007/s41109-023-00598-9.
- "Variable Selection in Multiple Nonparametric Regression Modelling", Subhra Sankar Dhar, Shalabh, P. Jha, Aranyak Acharyya, *Advanced Mathematical Techniques in Computational and Intelligent Systems*, ISBN 9781032398662 (accepted for publication), 2023+.
- "Random walk with nonuniform angular distribution biased by an external periodic pulse", Aranyak Acharyya, *European Journal of Physics 37 (2016) 065104*.

Talks

- *5th March 2024*: "Convergence guarantees for response prediction in latent structure networks on unknown one-dimensional manifolds", Student Seminar, Department of Applied Mathematics and Statistics, Johns Hopkins University
- *4th March 2024*: "Convergence guarantees for response prediction in latent structure networks on unknown one-dimensional manifolds", Research Interaction Team, University of Maryland
- *17th December 2023*: "Convergence guarantees for response prediction in latent structure networks on unknown one-dimensional manifolds", International Conference of the ERCIM WG on Computational and Methodological Statistics, HTW Berlin, University of Applied Sciences, Berlin, Germany (*invited talk*)
- *18th April 2023*: "Measurement Error correction in RDPG on manifolds", Student seminar, Department of Applied Mathematics and Statistics, Johns Hopkins University
- *9th November 2021*: "On convergence guarantees of regression parameter estimates for Random Dot Product Graphs (RDPGs) with latent positions on 1-dimensional manifold in a high dimensional ambient space", Student seminar, Department of Applied Mathematics and Statistics, Johns Hopkins University
- *13th April 2021*: "Improving performance of regression parameter estimator on random dot product graph using Fuller's measurement error adjustment", Student seminar, Department of Applied Mathematics and Statistics, Johns Hopkins University

Technical Skills

Coding: C, R, Python

Word processing: LATEX

Teaching Experience

- **High Dimensional Approximation, Probability and Statistical Learning (EN.553.738)**, Teaching Assistant, Spring 2024, Johns Hopkins University
- **Applied Statistics and Data Analysis (EN.553.613)**, Teaching Assistant, Fall 2023, Johns Hopkins University
- **Shape and Differential Geometry (EN.553.780)**, Teaching Assistant, Fall 2022, Johns Hopkins University
- **Statistical Pattern Recognition Theory and Methods (EN.553.739)**, Teaching Assistant, Spring 2022, Johns Hopkins University
- **Statistical Theory(EN.553.730)**, Teaching Assistant, Fall 2021, Johns Hopkins University
- **Statistical Theory(EN.553.730)**, Teaching Assistant, Fall 2020, Johns Hopkins University
- **Introduction to Data Science (EN.553.436)**, Teaching Assistant, Spring 2020, Johns Hopkins University
- **Introduction to Statistics (EN.553.430)**, Teaching Assistant, Spring 2020, Johns Hopkins University
- **Discrete Mathematics (EN.553.171)**, Teaching Assistant, Fall 2019, Johns Hopkins University
- **Introduction to Statistics (EN.553.430)**, Teaching Assistant, Fall 2019, Johns Hopkins University

Miscellaneous Experience

Awards

- **MINDS Fellowship**, Johns Hopkins University (2022)
- **Edwin D. and Rachel Lowthian Endowed Fellowship**, Whiting School of Engineering, Johns Hopkins University (2019-2020)
- **INSPIRE Scholarship**, Department of Science and Technology, Government of India (2014-2019)

Certification

- **Certificate for Merit of Academic Excellence**, Department of Mathematics and Statistics, Indian Institute of Technology Kanpur (2017)

Other

Languages: Bengali (native), English (proficient), Hindi (fluent)