Soham Jana

Yale University
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New Haven, CT-06511

Updated on: November 3, 2021
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Research Interests

Theoretical and algorithmic aspects of mixture modelling, high-dimensional statistics, dependent data analysis, sparse recovery.

Education

PhD. in Statistics and Data Science, 2017–2022 (expected)
Yale University, New Haven, CT, USA
Thesis: Minimax estimation on dependent and independent data
Advisor: Yihong Wu

Master of Statistics (Hons.) (First class with Distinction) 2015–2017
Indian Statistical Institute, Kolkata, West Bengal, India
Specialization: Theoretical Statistics
Dissertation: Characterization of single integral non-kernel divergences
Advisor: Ayanendranath Basu

Bachelor of Statistics (Hons.) (First class with Distinction) 2012–2015
Indian Statistical Institute, Kolkata, West Bengal, India

In preparation

1. Soham Jana, Yury Polyanskiy, and Yihong Wu. **Regret optimality of minimum distance based empirical Bayes methods for the Poisson model**.

Publications and preprints (Authors lists that are not in alphabetical order denoted by "*")

1. Soham Jana, Henry Li, Yutaro Yamada, and Ofir Lindenbaum. **Support Recovery with Stochastic Gates: Theory and Application for Linear Models**. arXiv preprint arXiv: 2110.15960 (2021).
2. Yanjun Han, Soham Jana, and Yihong Wu. **Optimal prediction of Markov chains with and without spectral gap**. NeurIPS 2021.
3. Soham Jana, Yury Polyanskiy, and Yihong Wu. **Extrapolating the profile of a finite population**. In Conference on Learning Theory 2020 Jul 15 (pp. 2011-2033). PMLR.
4. Soham Jana and Ayanendranath Basu.* **A characterization of all single-integral, non-kernel divergence estimators**. IEEE Transactions on Information Theory 65.12 (2019): 7976-7984.

Honors and Awards

INSPIRE Scholarship, Govt. of India 2012-2017

Indian National Mathematical Olympiad (INMO) merit certificate 2012
(For being among top 75 in the country)

Graduate teaching assistance

Stochastic processes Spring 2021
S&DS 351–551/EENG 434/ENAS 502
Instructor: Joseph Chang

Information Theory Fall 2020
S&DS 364–664/EENG 454
Instructor: Andrew Barron

Probability Theory Fall 2019
S&DS 241–541
Instructor: Winston Lin

Advanced Probability Spring 2019
S&DS 400–600/Math 600
Instructor: Sekhar Tatikonda

Statistical Inference Fall 2018
S&DS 410–610
Instructor: Zhou Fan

Languages

R, Python

References

Yihong Wu
Associate Professor,
Statistics and Data Science,
Yale University
New Haven, CT, USA

Andrew Barron
Charles C. and Dorothea S. Dilley Professor
of Statistics & Data Science,
Yale University,
New Haven, CT, USA

Yury Polynskiy
Associate Professor,
Electrical Engineering and Computer Science,
Massachusetts Institute of Technology
Cambridge, MA, USA