Soham Jana

Postdoctoral Research Associate (From June, 2022),
Operations Research and Financial Engineering,
Princeton University

Updated on: March 9, 2021
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Research Interests

Theoretical and methodological aspects of high-dimensional statistics, dependent data analysis, non-parametric estimation, fairness, sparse recovery, optimization methods.

Education

PhD. in Statistics and Data Science 2017–2022 (expected)
Yale University, New Haven, CT, USA
Thesis: Inference with 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

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

1. Soham Jana, Yury Polyanskiy, and Yihong Wu. **Regret optimality of minimum distance based empirical Bayes methods for the Poisson model**. Manuscript in preparation.
2. 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).
3. Yanjun Han, Soham Jana, and Yihong Wu. **Optimal prediction of Markov chains with and without spectral gap**. NeurIPS 2021.
4. 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.
5. 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.

Talks

Neural information processing systems (NeurIPS) 2021

Conference on learning theory (COLT) 2020

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

Programming Languages

R, Python, C

Services

Paper Reviewer
IEEE Transactions on Information Theory

Yale S&DS M.A. Admisssion Committee 2021
Reviewer: one of the committee members handling over
150 applications and making admission recommendations

Yale S&DS Graduate Reading Group 2020
Co-organizer
Scheduled talks and lead discussion sessions

Yale Women in Data Science (WiDS) Workshop 2020
Served as a mentor for Yale undergrad students participating
in the WiDS Datathon Challenge 2020

Yale South Asian Graduate and Professional Association (SAGA) 2018- 2021
Treasurer, core committee member and cultural committee head
Objective: organizing socio-cultural events to promote diversity and inclusion at Yale