Soham Jana

Yale University
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New Haven, CT-06511

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Research Interests

Theoretical and algorithmic aspects of Empirical Bayes, minimum distance estimation, estimation on Markov chains

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

Publications (Author list in alphabetical order of surnames, unless mentioned)

1. Yanjun Han, Soham Jana, and Yihong Wu. **"Optimal prediction of Markov chains with and without spectral gap"**. Accepted for publication in NeurIPS 2021.

2. 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.

3. 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. (First author)

Preprints (Author list in alphabetical order of surnames, unless mentioned)

1. Soham Jana, Yury Polyanskiy, and Yihong Wu. **"Regret optimality of minimum distance methods in certain Poisson empirical Bayes problems"**.

2. Soham Jana, Henry Li, Ofir Lindenbaum, and Yutaro Yamada. **"On consistency of stochastic gates in sparsed support recovery problems"**.

Honors and Awards

INSPIRE Scholarship, Govt. of India   2012-2017

Graduate teaching assistance

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

Information Theory   Fall 2020
S&DS364–664/ EENG454
Instructor: Andrew Barron

Probability Theory   Fall 2019
S&DS241–541
Instructor: Winston Lin

Advanced Probability   Spring 2019
S&DS400–600/ Math600
Instructor: Sekhar Tatikonda

Statistical Inference   Fall 2018
S&DS410–610
Instructor: Zhou Fan

Languages

R, Python

Social activities

- **Treasurer and Board member**   June 2018–March 2021
  South Asian Graduate and Professional Association (SAGA)
  Yale University, New Haven, CT, USA

- **Graphics designer**   June 2018–June 2020
  South Asian Graduate and Professional Association (SAGA)
  Yale University, New Haven, CT, USA

- **Graphics designer**   June 2015–June 2017
  Integration (Annual techno-cultural-sports fest)
  Indian Statistical Institute, Kolkata, West Bengal, India.

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