

Imon Banerjee

PHD STUDENT, DEPARTMENT OF STATISTICS, PURDUE UNIVERSITY

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Education

Indian Statistical Institute (ISI)

Kolkata, India

GRADUATION

2013-2018

- **Bachelor of Statistics**, BSTAT— 2016
- **Master of Statistics**, MSTAT — 2018

Purdue University

West Lafayette, Indiana, USA

POSTGRADUATION

2018-current

- **PhD in Statistics**, Supervisors : Dr. VA Rao, Dr. H Honnappa.
- **Selected Courses:** *Divide and Recombine, Large Deviations, Machine Learning in Finance, Dynamic Programming, Hands on Learning Theory, Differential Privacy, Theory of Random Matrices and Multivariate Statistics, Martingales*

Submitted/Published Manuscripts

1. Offline Estimation of Controlled Markov Chains: Minimax Nonparametric Estimators and Sample Efficiency

<https://arxiv.org/pdf/2211.07092.pdf>

I BANERJEE, H HONNAPPA, VA RAO

2022

2. Meta Learning of Sparse PCA's

<https://arxiv.org/abs/2208.08938>

I BANERJEE, J HONORIO

2022

3. PAC-Bayes Bounds on Variational Tempered Posteriors for Markov Models

Approximate Bayesian Inference, Entropy 23 (3), 313

I BANERJEE, VA RAO, H HONNAPPA

2021

4. On Convergence of the Class Membership Estimator in Fuzzy k-Nearest Neighbor Classifier

IEEE Transactions on Fuzzy Systems 27 (6), 1226-1236

I BANERJEE, SS MULLICK, S DAS

2018

Current Projects

5. Histogram based optimal estimation for controlled Markov chains

I BANERJEE, H HONNAPPA, VA RAO

6. Fair Combinatorial Logistic Regression: Sparsistency and Sample complexity

I BANERJEE, J HONORIO

7. A Variational Approach to Thompson Sampling for Offline Bandits

I BANERJEE, P JAISWAL

Internships

Optimal Design of Experiments using Neural network Surrogate Modelling

Argonne National Laboratory

I BANERJEE, S LEYFFER, K NARAYANAN

Summer 2022

Predicting Probability of 90-Days Past Due For 2 and 3 Years of Loan Tenure

Transunion

I BANERJEE, R PAUL, D MUKHERJEE

Summer 2017

Teaching Experience

1. Instructor

PURDUE UNIVERSITY

- STAT 503: Statistical Methods in Biology, Summer 2021 (**Primary Instructor**)
- STAT 225: Introduction to Probability, Spring 2019 — Summer 2020

2. Teaching Assistant

PURDUE UNIVERSITY

- STAT 503: Statistical Methods in Biology, Fall 2021 — Spring 2022
- STAT 225: Introduction to Probability, Fall 2020 — Spring 2021
- STAT 512: Applied Regression Analysis, Fall 2018
- STAT 301: Elementary Statistical Methods, Fall 2018

Administrative Responsibilities

2022-2023 **Grant Reviewer**, Grant Review and Allocation Committee, PGSG

2022-2023 **Senator, Department of Statistics**, Purdue Graduate Student Government

2020-2021 **Networking Committee**, National Institute of Statistical Sciences, Graduate Student Network

2019-2021 **Member**, Safety Committee

Skills & Interests

Coding R, Python (pandas/pytorch/matplotlib), C/C++, \LaTeX , SAS

Interests MDP's, Reinforcement Learning, Bayesian Consistencies, Variational Inference, Random Graphs

Talks

October 2022 **(Invited)** Informs Annual Conference

January 2022 **(Contri.)** International Indian Statistical Association virtual Mini Conference

September 2020 **(Contri.)** NISS Graduate Student Conference

Class Projects

High Frequency Pair Trading

I BANERJEE, KS NAGARAJU, R ZHUANG, K LEE, X WANG

2020

An Analysis of New Car Prices

I BANERJEE, D ARTHUR, QIFAN SONG

2018

Effects of Cognitive Load on Memory of Individuals

I BANERJEE, R BHATTACHARYA, S CHAKRABORTY, DD ROY

2016

Critical Statistical Analysis of Consumer Satisfaction Index by RBI

I BANERJEE, R BHATTACHARYA, S CHAKRABORTY, S MAITY

2016

Personal

Spoken Languages English, Bengali, Deutsch, Hindi

Personal Interests

- Proficient in Arduino. Made multiple projects using MQTT.
- Reading Novels and Stories.
- Learning Piano.
- Motorcycle touring.