Antik Chakraborty

CONTACT
INFORMATION

Department of Statistical Science
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RESEARCH
INTERESTS

Shrinkage priors, Scalable Bayes, High-dimensional data, Binary/Count data, Ecological applications.

CURRENT POSITION
(2018 -)

Postdoctoral associate, Department of Statistical Science, Duke University.
- Mentor: Prof. David Dunson

EDUCATION

Texas A&M University

Ph.D., Statistics, August, 2018

- Adviser: Dr. Bani K. Mallick
- Co-adviser: Dr. Anirban Bhattacharya

University of Calcutta

Master of Statistics, May 2012
- First Division
- Specialization: Biostatistics

PUBLICATIONS/
PREPRINTS

Chakraborty, A., Ovaskainen, O., Dunson, D. B. (2020+) *Bayesian semiparametric long memory models for discretized event data. (Submitted)* [arxiv]

Chattopadhyay, S., **Chakraborty, A.**, Dunson, D. B. (2020+) *Nearest neighbor Dirichlet process. (Submitted)* [arxiv]

Lee, S.Y., **Chakraborty, A.**, Mallick, B.K. (2019+) *Hierarchical Bayesian modeling: application towards production results in the Eagle Ford Shale of South Texas. Submitted*

Chakraborty, A., Bhattacharya, A., Mallick, B. K. (2019). *Bayesian sparse multiple regression for simultaneous rank reduction and variable selection.*[arxiv]

Jain, P., **Chakraborty, A.**, Pistikopoulos, E., Sam Mannan, M. (2018). *Resilience-Based Process Upset Event Prediction Analysis for Uncertainty Management Using Bayesian Deep Learning: Application to a Polyvinyl Chloride Process.* [Link]

Sarkar, A., Pati, D., **Chakraborty, A.**, Mallick, B. K., and Carroll, R. J. (2016). *Bayesian semiparametric multivariate density deconvolution. Journal of American Statistical Association* [arxiv]

Bhattacharya,A. , **Chakraborty, A.**, Mallick, B.K. (2016). *Fast sampling with Gaussian scale-mixture priors in high dimensional regression. Biometrika* 104, 985-991 [arxiv]

SOFTWARE

- R package `horseshoe`: Implementation of the Horseshoe prior. Joint with van der Pas, S.L., Scott J.G., Bhattacharya A. [link]
- Github profile: https://github.com/antik015.

AWARDS	NSF Junior Travel Award for ISBA 2016.
	Emanuel Parzen Graduate Research Fellowship 2017, Department of Statistics, Texas A&M University.
	IISA, 2017 student paper competition finalist- *Theory and Methods*.

TEACHING EXPERIENCE

Guest Instructor
- **STAT 633** Spring 2018 Taught a mini course on Bayesian nonparametrics asymptotics to PhD students enrolled in the Advanced Bayesian methods course offered by Prof. Bani K. Mallick. The course introduced ideas ranging from posterior consistency to posterior contraction and required mathematical tools to apply in different statistical problems of interest.

Course Instructor
- **STAT 302** Summer II 2016

  Intended for undergraduate students in biological sciences and agriculture. Had sole responsibility of a five week summer session. Prepared course materials, exams, homework and quizzes.

Teaching Assistant
- **STAT 601** Fall 2014,2015

  Intended for graduate students in engineering, physical, and mathematical sciences. Responsibilities included grading weekly assignments and sometimes conducting in class Q&A sessions helping students with their querries.
- **STAT 604** Spring 2015

  Intended for graduate students from various fields to an introduction to statistical computer programs (R, SAS etc.), designing of simulation studies. Responsibilities included grading weekly assignments and helping students with their querries.

RESEARCH EXPERIENCE

- *Applications of Semi-Supervised clustering* (December 2012 - June 2013).
- Project Superviser: Dr. B. Umashankar, Machine Inteligence Unit, Indian Statistical Institute, Kolkata.

REFEREE SERVICE   *Journal of Computational and Graphical Statistics, Sankhya A*

TECHNICAL SKILLS

Programming	R, MATLAB, Rcpp
Applications	LATEX, Microsoft Office

PRESENTATIONS

Fast Sampling of Gaussian Posteriors in Shrinkage Prior Settings, SETCASA statistics Poster Session, College Station, Texas , USA, October 2015.

Fast Sampling of Gaussian Scale-Mixture Priors and Applications, ISBA 2016 poster Session, Cagliari, Italy, June 2016.

Bayesian sparse reduced rank regression for simultaneous dimension reduction and variable selection, JSM 2017 contributed talk, Baltimore, USA, July-August 2017.

REFERENCES

Dr. Bani K. Mallick
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Department of Statistics
Texas A&M University
Email: bmallick@stat.tamu.edu

Dr. Anirban Bhattacharya
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