Shuang Zhou

CONTACT INFORMATION

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Texas A&M University
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RESEARCH INTERESTS

- Statistical inference using non-standard constraints, Bayesian methods for complex objects, measurement error models, high dimensional probability, Bayesian asymptotics
- Statistical applications in nuclear Physics and epidemiology

EDUCATION

Texas A&M University, College Station, TX, USA

Ph.D. Student, Department of Statistics, 2018 (expected graduation date: August 2020)

- Advisor: Dr. Debdeep Pati and Dr. Anirban Bhattacharya
- Area of Study: Semi-parametric Bayesian function estimation using Gaussian process transformations

Florida State University, Tallahassee, FL, USA

Ph.D. Student, Department of Statistics, 2016 - 2018

- Advisor: Dr. Debdeep Pati
- Area of Study: Semi-parametric Bayesian function estimation using Gaussian process transformations

M.S., Mathematical Statistics, 2016

Shandong University, Jinan, Shandong, China

B.S., Mathematics, 2013

- Bachelors Thesis: Application of Monte Carlo method for option pricing model
- Concentration: Statistics

HONORS AND AWARDS

- 2^{nd} Place Award for SETCASA poster session, Department of Statistics, Texas A&M University, College Station, Texas (April 2019)
- Travel Award for attending IISA International Conference on Statistics, University of Florida, Gainesville, Florida (May 2018)
- Travel Award for attending Latent Variable Conference, University of South Carolina, Columbia, South Carolina (October 2016)
- University Scholarship, Florida State University (2015 – 2016)
- Award for the outstanding thesis of Bachelor, Shandong University (2013)

RESEARCH PROJECTS

(Alphabetically ordered)

- Bayesian hierarchical shape constrained estimation for Proton radius puzzle problem (With Bhattacharya, A., Pati, D., Piekarewicz, J. and Giulani, P.)
- On truncated multivariate normal priors for Bayesian shape constrained regression (With Bhattacharya, A., Pati, D. and Ray, P.)
- Frequentist coverage properties of shape constrained Gaussian process model (With Bhattacharya, A. and Pati, D.)
- Adaptive kernel ridge regression with Gaussian kernels (With Yang, Y.)

Publications

- **Zhou, S.**, Giulani, P., Piekarewicz, J., Bhattacharya, A., and Pati, D. (2019). Reexamining the proton-radius problem using constrained Gaussian processes, *Physical Review C*, 99(5):055202. [link]

Papers under revision

- **Zhou, S.**, Pati, D., Wang, T., Yang, Y., and Carroll, RJ. (2019). Gaussian Processes with Errors in Variables: Theory and Computation, submitted to *Biometrika*. [Arxiv]
- **Zhou, S.**, Pati, D., Bhattacharya, A., and Dunson, D. (2017). Adaptive posterior convergence rates in non-linear latent variable models. [Arxiv]

Papers in preparation

- **Zhou, S.**, Ray, P., Pati, D., and Bhattacharya, A. On truncated multivariate normal priors in constrained parameter spaces. *In preparation*.

Conference Presentations

- Reexamining the proton-radius problem using constrained Gaussian processes. Speed presentation at Joint Statistical Meetings 2019, Denver, Colorado (July 2019)
- Gaussian processes with errors in variables. Poster presentation at 11th Conference on Bayesian Nonparametric, Paris, France (June 2017)

Work Experiences

- Research Assistant, Department of Statistics, Texas A&M University (Fall 2018 - present)
- Instructor for BootCamp for incoming Ph.D. students, Department of Statistics, Texas A&M University (Summer 2018)
- Teaching Assistant for Advanced Probability and Inference II, STAT 6448, Department of Statistics, Florida State University (Spring 2018)
- Consultant at the Statistical Consulting Center, Department of Statistics, Florida State University (Fall 2017)
- Teaching Assistant for Applied Multivariate Analysis, STA 4702/5707, Department of Statistics, Florida State University (Spring 2017)
- Teaching Assistant for Engineering Statistics, STA3032, Department of Statistics, Florida State University (Fall 2016)

Technical Skills

MATLAB toolboxes: statistics, wavelets
R toolboxes: mcmc, coda, parallel computing, Rcpp
Statistical softwares: Mathemetika, SAS
Applications: LaTeX, BibTeX, Microsoft Office
Operating Systems: Windows, OS X, Unix/Linux