RUFENG LIU

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EDUCATION

Florida State University   **Aug 2019 - May 2025 (Est.)**
PhD Candidate Statistics

Stony Brook University   **Aug 2015 - Dec 2016**
M.S Statistics

Shandong University   **Sep 2011 - Jun 2015**
B.S Mathematics

PROFESSIONAL EXPERIENCE

Florida State University   **Tallahassee, FL**
Instructor of STA1013 - Statistics Through Example   *Jan 2024 - May 2024*

Florida State University   **Tallahassee, FL**
Instructor of STA2171 - Statistics for Biology   *Aug 2022 - May 2023*

Florida State University   **Tallahassee, FL**
Research Assistant   *Dec 2021 - May 2022, Aug 2023 - Dec 2023*

GlimmAnalytics   **Port Jefferson, NY**
Financial Analyst Intern   *May 2017 - Feb 2018*

RESEARCH INTERESTS

Bayesian Methodology; Nonparametric Bayesian Inference; Bayesian Model/Variable selection; Statistical Computing.

PROJECT EXPERIENCE

Independence testing between different components on the product of simplexes and the hypercube   **Jun 2024 - present**
- Performing model selection between dependent/independent models using a spike-and-slab prior.

Bayesian density estimation on the product of simplexes and the hypercube using MBP   **Jan 2022 - May 2024**
- Defined Bernstein Polynomials on product of simplexes and the hypercube, proved Bernstein Polynomials pointwisely and uniformly converge to their corresponding function; proved derivatives of Bernstein Polynomials are densities and converge to their corresponding density function
- Gave definition of Product Bernstein Polynomial Process, proved Product Bernstein Polynomial Process has full weak support
- Proved weak and strong consistency of the Bernstein posterior, together with posterior marginal and conditional densities; Finding convergence rate of the Bernstein posterior
- Illustrated the performance of the model in a simulation study with two scenarios and in an application to data from the 2005 – 2006 cycle of the U.S. NHANES data.

PUBLICATIONS

Preprints will be on arxiv soon.

PRESENTATIONS

Invited Talks:
- 'Bayesian density estimation on the product of simplexes and the hypercube using multivariate Bernstein polynomials'
  Webinar by BNP-ISBA   Online   March 2024
- 'Bayesian density estimation on the product of simplexes and the hypercube using multivariate Bernstein polynomials'
  Bayesian reading group in department of Statistics at FSU   Tallahassee, Florida   April 2023

Contributed Talks:
- 'Bayesian density estimation on the product of simplexes and the hypercube using multivariate Bernstein polynomials'
  2024 Annual Meeting of the American Statistical Association Florida chapter   Tallahassee, Florida   March 2024

Contributed Posters:
- 'Bayesian density estimation on the product of simplexes and the hypercube using multivariate Bernstein polynomials'
  2024 ICSA Applied Statistics Symposium   Nashville, Tennessee   June 2024
- 'Bayesian density estimation on the product of simplexes and the hypercube using multivariate Bernstein polynomials'
  Theory and Foundations of Statistics in the Era of Big Data   Tallahassee, Florida   April 2024

HONORS AND AWARDS

Best First Year Student Awards   **Aug 2020**
- The department gives annual awards honoring excellent performance in the first-year courses.

PROFESSIONAL MEMBERSHIPS

- International Society for Bayesian Analysis
- International Chinese Statistical Association