

Hang Deng

SEPT. 1ST, 2020

CONTACT

Hill Center, 110 Frelinghuysen Road, Piscataway, NJ 08854
Cell Phone: (732)763-2589
Email: hdeng@stat.rutgers.edu
Personal website: hang-deng.github.io

RESEARCH INTERESTS

High-dimensional Statistics, Central Limit Theorem, Shape Constrained Regression, Nonparametrics, Large Scale Inference, Bootstrap methods, Statistical Machine Learning, Neural Network Overparameterization

EDUCATION

Rutgers University, New Brunswick, NJ
Ph.D. candidate, Statistics
Advisor: Prof. Cun-Hui Zhang
Expected to graduate in May 2021

Rutgers University, New Brunswick, NJ
M.Sc. Statistics, Jan. 2017

Fudan University, Shanghai, China
B.Sc. Mathematics and Applied Mathematics, June 2015

PAPERS & TECHNICAL REPORTS

- **Deng, Hang**. “Slightly conservative bootstrap for maxima of sums”. Submitted. Available at *arXiv:2007.15877* (2020).
- **Deng, Hang**, Qiyang Han, and Bodhisattva Sen. “Inference for local parameters in convexity constrained models.” Submitted. Available at *arXiv:2006.10264* (2020).
- **Deng, Hang**, Qiyang Han, and Cun-Hui Zhang. “Confidence intervals for multiple isotonic regression and other monotone models”. Submitted to *Annals of Statistics*, revision invited and submitted. Available at *arXiv:2001.07064* (2020).
- **Deng, Hang**, and Cun-Hui Zhang. “Isotonic regression in multi-dimensional spaces and graphs”. Accepted by *Annals of Statistics*, to appear. Available at *arXiv:1812.08944* (2018).
- **Deng, Hang**, and Cun-Hui Zhang. “Beyond Gaussian approximation: Bootstrap for maxima of sums of independent random vectors.” Accepted by *Annals of Statistics*, to appear. Available at *arXiv:1705.09528* (2017).
- Abdulla, G. M., **H. Deng**, B. Soper, J. Nagrad, and M. Nygard. Filling the gaps: using a static data source to create a rich temporal dataset. No. LLNL-CONF-752118. Lawrence Livermore National Lab.(LLNL), Livermore, CA, (2018).
Technical report at *Second ISC HPC Applications in Precision Medicine Workshop, 2018*

RESEARCH EXPERIENCES

Lawrence Livermore National Laboratory, CA *07/2017 - 09/2017*
NSF Graduate Intern at Institute for Scientific Computing Research
- Supported by **NSF-Mathematical Sciences Graduate Internship Program**.
- Collaborated with the Cancer Registry of Norway to construct a personalized cervical cancer screening policy for women in Norway.
- Proposed a deep learning framework which builds a long short-term memory (LSTM) neural network for each woman using her survey and screening test data and trains all neural nets with transfer learning.
- See my story on [SIAM News](#) or the [NSF-Mathematical Sciences Graduate Internship Program](#) website.

HONORS & AWARDS	<ul style="list-style-type: none"> • Oberwolfach Leibniz Graduate Student, Mathematical Research Institute of Oberwolfach, Germany, 2018 • Best Ph.D Qualifying Exam Performance, Department of Statistics, Rutgers University, 2016. <i>Awarded for the highest score in qualifying exam.</i> • Conference Travel Award, Rutgers University, 2018 • TA/GA Professional Development Fund Award, Rutgers University, 2017-2018 • Outstanding Graduate of Fudan University, Fudan University, 2015. • Scholarship for Outstanding Students at Fudan University, Fudan University, 2012-2014.
SELECTED TALKS	<ul style="list-style-type: none"> • Invited Talk. JSM, Denver, CO, “Isotonic Regression in Multi-Dimensional Spaces and Graphs”, <i>July 2019</i> • Invited Talk. International Workshop on Perspectives on High dimensional Data Analysis, Uppsala, Sweden. “Beyond Gaussian Approximation: Bootstrap for Maxima of Sums of Independent Random Vectors”, <i>June 2019</i> • PhD Student Talk. Statistical Inference for Structured High-dimensional Models Workshop, MFO, Germany, “Beyond Gaussian Approximation: Bootstrap for Maxima of Sums of Independent Random Vectors”, <i>March 2018</i> • Seminar Talk. Lawrence Livermore National Lab, Livermore, CA, “Feature Extraction from Patients Surveys to Facilitate Learning from Cervical Screening Data”, <i>Sept. 2017</i>
TEACHING	<p>Rutgers University, New Brunswick, NJ</p> <p><i>Instructor</i></p> <p>Linear Algebra and Multivariable Calculus Review for FSRM and MSDS (Fall 2020)</p> <p><i>Teaching Assistant</i></p> <p>Computing and Graphics in Applied Statistics (Spring 2020), Introductory Statistics for Business (Fall 2019), Algorithm Trading & Portfolio Management (Fall 2018), Design of Experiments (Fall 2018), Basic Statistics for Research (Fall 2016, Spring 2017), Statistics I (Fall 2016, Spring 2017).</p>
ACADEMIC SERVICES	<p>Reviewer for <i>Annals of Statistics</i>, <i>Probability Theory and its Related Fields</i>, and <i>Statistical Sciences</i>.</p>