

## RESEARCH INTERESTS

Reinforcement Learning, Online Learning & Multi-Armed Bandits, Statistical Machine Learning, Tensor Learning, Recommender Systems & Online Advertising

## EDUCATIONS

<b>Ph.D. in Statistics</b> Department of Statistics, Purdue University Thesis Advisor: Dr. Guang Cheng	Sep. 2014 - Dec. 2019
<b>B.S. in Statistics</b> School of Mathematics, Nankai University Thesis Advisor: Dr. Changliang Zou	Sep. 2010 - Aug. 2014

## EXPERIENCES

<b>▲ Department of Electrical Engineering, Princeton University, NJ</b> <i>Postdoctoral Researcher</i> Mentor(s): Dr. Mengdi Wang	Dec. 2019 - Present
<b>▲ School of Mathematics, Institute for Advanced Study, NJ</b> <i>Visiting Researcher</i>	Jan. 2020 - Apr. 2020
<b>▲ Deepmind, London, UK</b> <i>Research Intern</i> Mentor(s): Dr. Tor Lattimore, Dr. Csaba Szepesvári	May 2019 - Sep. 2019
<b>▲ Adobe Research, San Jose, CA</b> <i>Research Intern</i> Mentor(s): Dr. Zheng Wen	May 2018 - Aug. 2018

## JOURNAL PUBLICATIONS

- ▲ Sparse and Low-rank Tensor Estimation via Cubic Sketchings**  
**Botao Hao**, Anru Zhang, and Guang Cheng  
*IEEE Transactions on Information Theory (2020)*.  
Accepted in part to AISTATS 2020. [[ArXiv](#)]
- ▲ Nonparametric Bayesian Aggregation for Massive Data**  
Zuofeng Shang, **Botao Hao**, and Guang Cheng  
*Journal of Machine Learning Research (2019)*. [[ArXiv](#)]
- ▲ Simultaneous Clustering and Estimation of Heterogeneous Graphical Models**  
**Botao Hao**, Will Wei Sun, Yufeng Liu, and Guang Cheng  
*Journal of Machine Learning Research (2018)*. [[ArXiv](#)]

## CONFERENCE PUBLICATIONS

- ▲ Bootstrapped Upper Confidence Bound**  
**Botao Hao**, Yasin Abbasi-Yadkori, Zheng Wen, and Guang Cheng  
*NeurIPS 2019*. [[ArXiv](#)]
- ▲ Adaptive Exploration in Linear Contextual Bandit**  
**Botao Hao**, Tor Lattimore, and Csaba Szepesvári  
*AISTATS 2020*. [[ArXiv](#)]

## PREPRINTS

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### ▲ Sparse Tensor Additive Regression

**Botao Hao**, Boxiang Wang, Pengyuan Wang, Emma Jingfei Zhang, Jian Yang and Will Wei Sun  
*Submitted.* [[ArXiv](#)]

### ▲ Provably Efficient Adaptive Approximate Policy Iteration

**Botao Hao**, Nevena Lazic, Yasin Abbasi-Yadkori, Pooria Joulani and Csaba Szepesvári  
*Submitted.* [[ArXiv](#)]

### ▲ Residual Bootstrap Exploration for Bandit Algorithms

Chi-Hua Wang\*, Yang Yu\*, **Botao Hao**, Guang Cheng  
*Submitted.* [[ArXiv](#)]

## HONORS AND AWARDS

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### ▲ Bilsland Dissertation Fellowship

2019-2020

*Nominated and selected by members of the graduate faculty to support outstanding Ph.D. candidates in the final year of doctoral degree completion across the whole university.*

### ▲ NeurIPS 2019 Travel Award

## INVITED TALKS

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### ▲ Deepmind for Google, Mountain View, CA

Jan. 2020

### ▲ Institute of Statistics, Nankai University, Tianjin

Dec. 2018

### ▲ International Conference on Data Science, Shanghai

Dec. 2017

### ▲ The 25th ICSA Applied Statistics Symposium, Chicago

Jun. 2017

### ▲ Conference on Statistical Learning and Data Science, Chapel Hill, NC

Jun. 2016

## TEACHING EXPERIENCES

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### ▲ Lab Instructor, STAT 301: Elementary Statistical Methods, Spring 2015, Summer 2015, Fall 2015

### ▲ Lab Instructor, STAT 113: Statistics and Society, Summer 2017

### ▲ Grader, STAT 519: Introduction to Probability Theory, Fall 2014, Spring 2015, Fall 2016, Fall 2017

### ▲ Grader, STAT 516: Basic Probability and Applications, Fall 2015

## SERVICES

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### ▲ Co-chair of Ubicomp 2019 Workshop on [Continual and Multimodal Learning for Internet of Things](#), London, UK

### ▲ Reviewers for Journals: Journal of the American Statistical Association, Journal of Machine Learning Research, Journal of Multivariate Analysis, Computational Statistics and Data Analysis, The IEEE Control Systems Letters, Statistica Sinica, Biostatistics

### ▲ Reviewers for Conferences: NeurIPS 2019, AISTATS 2020, ICML 2020, UAI 2020