Yao Ji

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EDUCATION

Aug. 2019 – Aug. 2024 (expected)

Ph.D., School of Industrial Engineering

Purdue University, West Lafayette, Indiana
- *Major:* Operation Research
- *Committee:* Gesualdo Scutari (co-chair), Harsha Honnappa (co-chair), Raghu Pasupathy, Alex L. Wang

Aug. 2016 – June 2019

M.S., School of Mathematical Sciences

Beijing Normal University, Beijing, China
- *Major:* Probability and Mathematical Statistics; Core GPA: 93.8/100
- Thesis: Conditional Limit Theorem of Bellman-Harris Branching Porcess

Aug. 2012 – June 2016

B.S., School of Mathematical Sciences

Beijing Normal University, Beijing, China
- *Major:* Statistics; GPA: 89.3/100
- Thesis: Conceptual New Proofs of Geometric Convergence of Moment Generating Function for Galton-Waston Process in the Noncritical Cases

RESEARCH INTEREST

Statistical Machine Learning, Decentralized Estimation and Inference, Distributed Optimization Theory, Stochastic Optimization, High-dimensional Probability and Statistics

PUBLICATIONS

Apr. 2023   **Yao Ji**, Gesualdo Scutari, Ying Sun, Harsha Honnappa   "Distributed (ATC) Gradient Descent for High Dimension Sparse Regression" *In IEEE Transactions on Information Theory (Early Access).*

TBD   **Yao Ji**, Gesualdo Scutari, Ying Sun, Harsha Honnappa   "Distributed Sparse Regression via Penalization" , *In Journal of Machine Learning Research (Accepted).*

Oct. 2018   Vladimir Vatutin, **Yao Ji**, Wenming Hong   "Reduced critical Bellman−Harris branching processes for small populations" , *In Journal Discrete Mathematics and Applications.*

WORKING PAPERS

2023   **Yao Ji**, Gesualdo Scutari, Harsha Honnappa   "Distributed Composite Stochastic Mirror Descent for Stochastic Optimization"
- Stochastic optimization and sparse statistical recovery over a network; Unified decentralized stochastic mirror descent
- Unification of decentralized stochastic mirror descent

AWARDS AND HONORS

2023   Graduate School Summer Research Grant, Purdue University

2019, 2020   Ross Fellowship, Purdue University

2019   Dr. Theodore J. and Isabel M. Williams Fellowship in Industrial Control Systems, Purdue University

2018   First Prize Scholarship (ranked 2/53, School of Mathematics), Beijing Normal University

2017   First Prize Scholarship (ranked 1/12, Markov Process), Beijing Normal University

2017   Outstanding Teaching Assistant for Measure Theory, Beijing Normal University

2016   Outstanding Undergraduate Thesis in School of Mathematics, Beijing Normal University

2015   First Prize Scholarship (Top 5%), School of Mathematics, Beijing Normal University

2014   Second Prize Scholarship (Top 20%), School of Mathematics, Beijing Normal University

2014   Second Prize in China Undergraduate Mathematical Contest in Modeling (Top 5%), School of Mathematics, Beijing Normal University

POSTER PRESENTATION

July. 2022   The seventh International Conference on Continuous Optimization (ICCOPT) and the Modeling and Optimization, Lehigh, Bethlehem

May. 2023   Midwest Machine Learning Symposium, UIC, Chicago

May. 2023   Statistics and Optimization in Data Science Workshop, Purdue, West Lafayette

TEACHING EXPERIENCE

Jan. 2023 – Present   IE 33500 Operation Research, Teaching Assistant, Purdue

Aug. 2022 – Jan. 2023   IE 33000 Probability and Statistics in Engineering, Teaching Assistant, Purdue

Aug. 2022 – Jan. 2023   IE 59000 Introduction to Optimization Algorithms (graduate level), Teaching Assistant, Purdue

Sep. 2017 – Jan. 2018   Measure Theory, Teaching Assistant, School of Mathematical Sciences, Beijing Normal University
Sep. 2018 – Jan. 2019

SERVICE

Jan. 2023 – Present   IEEE International Symposium on Information Theory (ISIT), Operation Research