Yao Ji

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EDUCATION

Purdue University, West Lafayette, Indiana — Aug. 2019 — May. 2024 (Expected)
Ph.D., School of Industrial Engineering — Major: Operation Research
Advisors: Gesualdo Scutari, Harsha Honnappa
Committee: Gesualdo Scutari, Harsha Honnappa, Raghu Pasupathy, Alex L. Wang

Beijing Normal University, Beijing, China — Aug. 2016 — Jun. 2019
Thesis M.S., School of Mathematical Sciences — Major: Probability and Mathematical Statistics
Advisor: Wenming Hong
Thesis: Conditional Limit Theorem of Bellman-Harris Branching Process
GPA: 93.8/100

Beijing Normal University, Beijing, China — Aug. 2012 — Jun. 2016
B.S., School of Mathematical Sciences — Major: Mathematics
Thesis: Conceptual New Proofs of Geometric Convergence of Moment Generating Function for Galton-Waston Process in the Noncritical Cases
GPA: 89.3/100

RESEARCH INTERESTS

- **Optimization**: Distributed Optimization Theory, Stochastic Optimization, Non-smooth Optimization, Non-convex Optimization
- **Statistics**: Statistical Machine Learning, Distributed Estimation and Inference, High-dimensional Probability and Statistics

PUBLICATIONS

Distributed Sparse Regression via Penalization
Yao Ji, Gesualdo Scutari, Ying Sun, Harsha Honnappa
In Journal of Machine Learning Research (Accepted), Sep. 2023

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

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

WORKING PAPERS

Distributed Composite Stochastic Mirror Descent for Stochastic Optimization, 2023+
Yao Ji, Gesualdo Scutari, Harsha Honnappa

- Stochastic optimization and sparse statistical recovery over a network
- Unification of decentralized stochastic mirror descent

AWARDS AND HONORS

Graduate School Summer Research Grant, Purdue University	2023
Travel Grant from Industrial Engineering, Purdue University	2022,2023
Ross Fellowship, Purdue University	2020
Ross Fellowship, Purdue University	2019
Dr. Theodore J. and Isabel M. Williams Fellowship in Industrial Control Systems, Purdue University	2019
First Prize Scholarship (Ranked 2/53, School of Mathematics), Beijing Normal University	2018
First Prize Scholarship (Ranked 1/12, Markov Process), Beijing Normal University	2017
Outstanding Teaching Assistant for Measure Theory, Beijing Normal University	2017
Outstanding Undergraduate Thesis in School of Mathematics, Beijing Normal University	2016
First Prize Scholarship (Top 5%), School of Mathematics, Beijing Normal University	2015
Second Prize Scholarship, School of Mathematics, Beijing Normal University	2014
Second Prize in China Undergraduate Mathematical Modeling Contest (Top 5%), School of Mathematics, Beijing Normal University	2014

POSTER PRESENTATIONS

2023 Young researchers Workshop, Cornell, Ithaca	Oct. 2023
Statistics and Optimization in Data Science Workshop, Purdue, West Lafayette	May 2023
Midwest Machine Learning Symposium, UIC, Chicago	May 2023
The seventh International Conference on Continuous Optimization (ICCOPT) and the Modeling and Optimization, Lehigh, Bethlehem	Jul. 2022

TEACHING EXPERIENCE

IE 33500 Operation Research, Teaching Assistant, Purdue	Jan. 2023 — May 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	Aug. 2022 — Jan. 2023
Measure Theory, Teaching Assistant I, Beijing Normal University	Sep. 2018 — Jan. 2019
Measure Theory, Teaching Assistant II, Beijing Normal University	Sep. 2017 — Jan. 2018

SERVICE

Reviewer for IEEE International Symposium on Information Theory (ISIT)
Reviewer for Operation Research (OR)
Reviewer for IEEE Transactions on Automatic Control (TAC)