Rudy Zhou

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Research Interests

optimization under uncertainty, approximation algorithms, combinatorial optimization

Academic Experience

Postdoc *2023 - present*
Tepper School of Business, Carnegie Mellon University
Advisor: Benjamin Moseley

PhD Algorithms, Combinatorics, and Optimization *2018 - 2023*
Tepper School of Business, Carnegie Mellon University
Advisor: Benjamin Moseley
Winner of 2023 Gerald L. Thompson Doctoral Dissertation Award in Management Science

MS Computer Science *2016 - 2017*
Washington University in St. Louis
Advisor: Brendan Juba

BA Mathematics *2012 - 2016*
Washington University in St. Louis

Industry Experience

Research Intern *Summer 2022*
Microsoft Research Redmond, Cloud Operations Research (CORE) group
Mentor: Konstantina Mellou

Publications

Author order is alphabetical by last name unless otherwise noted by ($\star$).

Preprints

Konstantina Mellou, Marco Molinaro, Rudy Zhou
The Power of Migrations in Dynamic Bin Packing
Preprint 2024. Link

Journal Publications

Franziska Eberle, Anupam Gupta, Nicole Megow, Benjamin Moseley, Rudy Zhou
Configuration Balancing for Stochastic Requests
Mathematical Programming B 2024. Link
(Conference Version) Integer Programming and Combinatorial Optimization (IPCO) 2023. Link

Anupam Gupta, Benjamin Moseley, Rudy Zhou
Structural Iterative Rounding for Generalized k-Median Problems
Mathematical Programming A 2024. Link
(Conference Version) International Colloquium on Automata, Languages and Programming (ICALP) 2021. Link

Benjamin Moseley, Kirk Pruhs, Clifford Stein, Rudy Zhou
A Competitive Algorithm for Throughput Maximization on Identical Machines

Mathematical Programming B 2024. Link
(Conference Version) Integer Programming and Combinatorial Optimization (IPCO) 2022. Link

Sungjin Im, Benjamin Moseley, Rudy Zhou
The Matroid Cup Game
Operations Research Letters 2021. Link

Rudy Zhou, Han Liu, Tao Ju, Ram Dixit (⋆)
Quantifying the polymerization dynamics of plant cortical microtubules using kymograph analysis
Methods in Cell Biology, 2020. Link

Conference Publications

Konstantina Mellou, Marco Molinaro, Rudy Zhou
Online Demand Scheduling with Failovers
International Colloquium on Automata, Languages and Programming (ICALP) 2023. Link

Anupam Gupta, Benjamin Moseley, Rudy Zhou
Minimizing Completion Times for Stochastic Jobs via Batched Free Times
Symposium on Discrete Algorithms (SODA) 2023. Link

Silvio Lattanzi, Benjamin Moseley, Sergei Vassilvitskii, Yuyan Wang, Rudy Zhou
Robust Online Correlation Clustering
Neural Information Processing Systems (NeurIPS) 2021. Link

Sungjin Im, Mahshid Montazer Qaem, Benjamin Moseley, Xiaorui Sun, Rudy Zhou
Fast Noise Removal for k-Means Clustering
Artificial Intelligence and Statistics (AISTATS) 2020. Link

Invited Talks

INFORMS Annual Meeting *2023*
Online Demand Scheduling with Failovers

Banff International Research Station *2023*
Online Demand Scheduling with Failovers

Dagstuhl Scheduling Seminar *2023*
Minimizing Completion Times for Stochastic Jobs via Batched Free Times

INFORMS Annual Meeting *2022*
Combinatorial Optimization under Uncertainty

Combinatorial Optimization and Logistics Seminar, University of Bremen *2022*
A Competitive Algorithm for Throughput Maximization on Identical Machines

Theory Reading Group, Dartmouth College *2022*
Structural Iterative Rounding for Generalized k-Median Problems

INFORMS Annual Meeting *2020*
Structural Iterative Rounding for Generalized k-Median Problems

Teaching

***(Course Designer)** MSBA Machine Learning Fundamentals (Main Instructor)* *Spring 2024 Session 1*
Teaching Evaluations: 4.88/5 Course, 4.91/5 Instruction

MBA Calculus Fundamentals (Main Instructor) *Spring 2023 Session 2*
Teaching Evaluations: 3.75/5 Course, 4.75/5 Instruction

MBA Calculus Fundamentals (Main Instructor) *Spring 2022 Session 2*
Teaching Evaluations: 5/5 Course, 5/5 Instruction

MBA Calculus Fundamentals (Main Instructor) *Spring 2022 Session 1*
Teaching Evaluations: 4.8/5 Course, 4.93/5 Instruction

Teaching Assistant at Carnegie Mellon University: PhD Graph Theory (Fall 2020, Fall 2021)

Teaching Assistant at Washington University in St. Louis: Computational Geometry (Fall 2017), Object-Oriented Software Development Laboratory (Spring 2017)

Service

Organization: *Session chair for approximation algorithms at INFORMS Annual Meeting 2024*

Program Committee: *Workshop on Models and Algorithms for Planning and Scheduling Problems (MAPSP) 2024*

Journal Reviewer: *Mathematics of Operations Research, Mathematical Programming, Information Processing Letters*

Conference Reviewer: *STOC, SODA, IPCO, ITCS, ICALP, AISTATS, ISAAC, ESA, APPROX, SWAT*

References

Benjamin Moseley
Carnegie Bosch Associate Professor
Carnegie Mellon University
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Anupam Gupta
Professor
New York University
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Marco Molinaro
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Nicole Megow
Professor
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Sungjin Im
Associate Professor
University of California Merced
sim3@ucmerced.edu