Rudy Zhou

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https://rudyzhou.github.io/

Research Interests

Optimization uncertainty, Approximation Algorithms, Combinatorial Optimization, Operations Research

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 *GPA 3.83/4.00*
Advisor: Benjamin Moseley
Dissertation: On Combinatorial and Stochastic Optimization
Winner of 2023 Gerald L. Thompson Doctoral Dissertation Award in Management Science
Dissertation Committee: Gérard Cornuéjols, Anupam Gupta, Benjamin Moseley (chair), Viswanath Nagarajan (external, University of Michigan)

MS Computer Science *2016 - 2017*
Washington University in St. Louis *GPA 3.84/4.00*
Advisor: Brendan Juba

BA Mathematics *2012 - 2016*
Washington University in St. Louis *GPA 3.98/4.00*

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 (⋆).

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

Franziska Eberle, Anupam Gupta, Nicole Megow, Benjamin Moseley, Rudy Zhou
Configuration Balancing for Stochastic Requests
Integer Programming and Combinatorial Optimization (IPCO) 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

Benjamin Moseley, Kirk Pruhs, Clifford Stein, Rudy Zhou
A Competitive Algorithm for Throughput Maximization on Identical Machines
Integer Programming and Combinatorial Optimization (IPCO) 2022. Link
In submission to Math Programming

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

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

Anupam Gupta, Benjamin Moseley, Rudy Zhou
Structural Iterative Rounding for Generalized k-Median Problems
International Colloquium on Automata, Languages and Programming (ICALP) 2021. Link
In submission to Mathematics of Operations Research

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

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

Presentations

International Colloquium on Automata, Languages and Programming (ICALP) *2023*
Online Demand Scheduling with Failovers

Integer Programming and Combinatorial Optimization (IPCO) *2023*
Configuration Balancing for Stochastic Requests

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

INFORMS Annual Meeting *2022*
Combinatorial Optimization under Uncertainty

Integer Programming and Combinatorial Optimization (IPCO) *2022*
A Competitive Algorithm for Throughput Maximization on Identical Machines

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

International Colloquium on Automata, Languages and Programming (ICALP) *2021*
Structural Iterative Rounding for Generalized k-Median Problems

INFORMS Annual Meeting *2020*

Structural Iterative Rounding for Generalized k-Median Problems

Artificial Intelligence and Statistics (AISTATS) *2020*
Fast Noise Removal for k-Means Clustering

Teaching

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: 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

Reviewer for: International Conference on Artificial Intelligence and Statistics (AISTATS), International Symposium on Algorithms and Computation (ISAAC), European Symposium on Algorithms (ESA), Symposium on Discrete Algorithms (SODA), Symposium on Theory of Computing (STOC), Integer Programming and Combinatorial Optimization (IPCO), International Colloquium on Automata, Languages and Programming (ICALP), Approximation Algorithms for Combinatorial Optimization Problems (APPROX), Math Programming, Information Processing Letters

Programming Skills

Python, Java, C++