

Rudy Zhou

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<https://rudyzhou.github.io/>

Research Interests

Algorithms under uncertainty including online and stochastic models, Data-driven optimization, Approximation algorithms, Combinatorial optimization

Education

PhD Algorithms, Combinatorics, and Optimization 2018 - 2023 (Expected)
Tepper School of Business, Carnegie Mellon University GPA 3.83/4.00
Advisor: Benjamin Moseley
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

Preprints

Konstantina Mellou, Marco Molinaro, Rudy Zhou
Online Demand Scheduling with Failovers
arXiv, 2022. [Link](#)

Franziska Eberle, Anupam Gupta, Nicole Megow, Benjamin Moseley, Rudy Zhou
Configuration Balancing for Stochastic Requests
arXiv, 2022. [Link](#)

Publications

Author order is alphabetical by last name unless otherwise noted by (★).

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

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)
Fast Noise Removal for k -Means Clustering

2020

Teaching

MBA Calculus Fundamentals (Main Instructor)
Teaching Evaluations: 5/5 Course, 5/5 Instruction

Spring 2022 Session 2

MBA Calculus Fundamentals (Main Instructor)
Teaching Evaluations: 4.8/5 Course, 4.93/5 Instruction

Spring 2022 Session 1

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: 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

C++, Java, Python