

Rui Gong

H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology
765 Ferst Drive NW, Atlanta, GA 30332.
rgong44@gatech.edu
rui-gong-0791.github.io

RESEARCH INTERESTS Semidefinite Optimization and its application to Combinatorial Optimization, Convex Optimization and other areas.

EDUCATION **Georgia Institute of Technology** Atlanta, Georgia, U.S.A.
PhD in Operation Research 2023.08-2027.08 (expected)
• Advisor: Diego Cifuentes, Alejandro Toriello
• Passed Comprehensive Exams

University of Waterloo Waterloo, Ontario, Canada
M.Math. in Combinatorics & Optimization 2021.09-2023.06
• Thesis: Low-Rank Plus Sparse Decompositions of Large-Scale Matrices via Semidefinite Optimization
• Advisor: Levent Tuncel
• Passed C&O PhD first stage comprehensive exams: Continuous Optimization, Graph Theory

University of Waterloo Waterloo, Ontario, Canada
B.Math. Triple Major in Mathematical Finance, Mathematical Optimization, Statistics 2017.09-2021.08
• Dean's Honour List

RESEARCH

SCHOLARSHIPS & AWARDS **Georgia Institute of Technology**
ISyE Premium Fellowship
Ronald & Carol Beerman Fellowship
University of Waterloo
Math Domestic Graduate Student Award 2022-2023
Sinclair Graduate Scholarship 2023.01-2023.04
Sinclair Graduate Scholarship 2022.09-2022.12
C & O Graduate Award 2022.01-2022.04
Sinclair Graduate Scholarship 2022.01-2022.04
President's Scholarship of Uwaterloo 2017

SEMINARS

Talks:
Value Function Approximation for Maximum Stable Set Problem, Combinatorial Optimisation and Graph Theory Session, International Symposium on Mathematical Programming (ISMP 2024), Montréal, Canada. July 26, 2024
Value Function Approximation for Maximum Stable Set Problem, First Year PhD Seminar, ISyE, Georgia Institute of Technology. February 23, 2024
Low-Rank Plus Sparse Decompositions of Large-Scale Matrices via Semidefinite Optimization, MMATH Thesis Talk, Department of Combinatorics & Optimization, Faculty of Mathematics, University of Waterloo. May 3, 2023
Convex Optimization, Factor Analysis and Realizability of a Subspace, Graduate

Research Seminar, Department of Combinatorics & Optimization, Faculty of Mathematics, University of Waterloo. April 11, 2022

Posters:

Rounding the Lovasz Theta Function with a Value Function Approximation, Mixed Integer Programming Workshop 2024, Poster Finalist, University of Kentucky. March 4, 2024

Workshops:

Attendee: Fulkerson 100, University of Waterloo. July 17-19, 2024.
 Algorithms, Combinatorics and Optimization Research Network (ACORN) Meeting 2023, Georgia Institute of Technology. March 9–11, 2023
 24th Midwest Optimization Meeting & Workshop on Large Scale Optimization and Applications, University of Waterloo. October 28-29, 2022

**WORK
EXPERIENCE**

Intact Financial Corporation Toronto, Canada
Actuarial Analyst of Ontario PL Pricing 2020.01 - 2020.04
 Extracted and manipulated databases to respond to internal inquiries by SAS. Generated earning and loss reports weekly and monthly by Excel and SAS. Analyzed correctness of rates for insurance premium algorithm with R.

TEACHING

Teaching Assistant University of Waterloo
 • Undergraduate course: Portfolio Optimization (CO372) 2021.09-2022.04;
 2022.09-2022.12
 Holding office hours, marking assignments and exams.
 • Graduate course: Semidefinite Programming (CO471/671) 2022.05-2022.08
 Marking assignments.

**TECHNICAL
STRENGTHS**

Language Proficiency: Native Chinese Speaker, Proficient in English
Programming Languages: Julia, Python, Matlab, R, C++, \LaTeX