

Ryan Cory-Wright

Operations Research Center
Massachusetts Institute of Technology
77 Massachusetts Avenue, E40-103
Cambridge, MA 02139

Email: ryancw@mit.edu
Cell: 617-955-5710
Website: ryancorywright.github.io

Education	Massachusetts Institute of Technology, Cambridge, MA, USA Candidate for PhD in Operations Research; expected completion, May 2022. GPA: 5.0/5.0 Advisor: Dimitris Bertsimas University of Auckland, Auckland, New Zealand BE (1 st Class Honours) in Engineering Science, May 2017. GPA 8.84/9.00 (9.00/9.00 in Major). Advisors: Golbon Zakeri, Andy Philpott.
Research Interests	Methodological: Optimization (discrete/conic/stochastic/robust), machine learning, statistics Applications: Finance, energy (market design/renewable integration)
Publications	<i>On Polyhedral and Second-Order Cone Decompositions of Semidefinite Optimization Problems</i> with Dimitris Bertsimas, Operations Research Letters, under review. <i>On Stochastic Auctions in Risk-Averse Electricity Markets With Uncertain Supply</i> with Golbon Zakeri, Operations Research Letters, under review. <i>A Unified Approach to Mixed-Integer Optimization: Nonlinear Formulations and Scalable Algorithms</i> with Dimitris Bertsimas and Jean Pauphilet, Operations Research, under review. <ul style="list-style-type: none">Awarded 1st place, INFORMS Computing Society Student Paper Competition (2019). <i>A Scalable Algorithm for Sparse Portfolio Selection</i> with Dimitris Bertsimas, Operations Research, under 2 nd round of review (submitted June 2018). <i>Payment Mechanisms for Electricity Markets With Uncertain Supply</i> with Andy Philpott and Golbon Zakeri, Operations Research Letters. 46 (1):116-121, 2018. <ul style="list-style-type: none">Awarded 1st place, ORSNZ Young Practitioner's Prize (2016).
Talks	<i>A Unified Approach to Mixed-Integer Optimization: Nonlinear Formulations and Scalable Algorithms</i> Presented at: ICCOPT, August 2019; INFORMS Annual Meeting, October 2019. <i>A Scalable Algorithm for Sparse and Robust Portfolios</i> Presented at: INFORMS, November 2018; LIDS student conference, January 2019. <i>Payment Mechanisms and Risk-Aversion in Electricity Markets With Uncertain Supply</i> Presented at: EPOC mini workshop, July 2017; ISMP Bordeaux, July 2018. <i>Cost-Recovering, Revenue-Adequate Single-Settlement Schemes for Electricity Markets</i> Presented at: ORSNZ, December 2016.
Honors and Awards	
2019	First place, INFORMS Computing Society (ICS) Student Paper Award For: <i>A Unified Approach to Mixed-Integer Optimization: Nonlinear Formulations and Scalable Algorithms</i>
2017	Senior Scholar Award, University of Auckland (top of graduating class).
2016	First place, Young Practitioner's Prize, Operations Research Society of New Zealand. For: <i>Payment Mechanisms for Electricity Markets With Uncertain Supply</i>
2014-2016	Deans Honours List, Faculty of Engineering, University of Auckland (top 5% of class).

2014-2016 First in Course Award x5, University of Auckland.
2013 NZQA Outstanding Scholar Award (top 50 high school students in New Zealand).

Research Experience

2017-Present **Massachusetts Institute of Technology, Cambridge, MA, USA**

Research Assistant. Advisor: Dimitris Bertsimas

2016-2017 **University of Auckland, Auckland, New Zealand**

Research Assistant. Advisor: Golbon Zakeri

Teaching Experience

Fall 2019 **15.095 Machine Learning Under a Modern Optimization Lens TA** (MBaN/MSc/PhD level).

Instructor in charge: Dimitris Bertsimas

Teaching assistant for a course which provides masters/PhD students with a modern treatment of Machine Learning using the lenses of convex, robust and mixed-integer optimization.

Duties: Assisting students, leading recitations, writing and marking assignments and exams.

Summer 2019 **15.089 Analytics Capstone Project: Student Mentor.** Instructor in charge: Dimitris Bertsimas

Advised a project completed by two MBaN students, who applied prescriptive analytics to prescribe actions which optimize fund flows for a large investment management company.

IAP 2019 **15.S60 Computing in Operations Research and Statistics Instructor** (MSc/PhD level).

Taught a 3-hour session which aims to provide PhD students with an overview of state-of-the-art software tools used in optimization and statistics. Material available [here](#).

Fall 2018 **15.093 Optimization Methods TA** (MBaN/MSc level). Instructor in charge: Bart Van Parys

Teaching assistant for a course which aims to provide masters students with a unified overview of the main algorithms and areas of application in optimization.

Duties: Assisting students, leading recitations, writing and marking assignments and exams.

Summer 2018 **15.089 Analytics Capstone Project: Student Mentor.** Instructor in charge: Dimitris Bertsimas

Advised a project completed by two MBaN students, who applied machine learning techniques to predict fund flows at the financial advisor level for a large investment management company.

- Mentees received an award for the best capstone presentation in their graduating class.

Work Experience

2014-2016 **Derceto Ltd**, Auckland, New Zealand

Assistant Optimization Engineer

Assisted with installing a pump-scheduling optimization tool for two municipal water providers.

Refurbished 5+ VBA spreadsheet tools used in day-to-day operations.

Professional Activities and Service

2019-present **Coordinator**, MIT ORC Student Seminar Series

2019 **Session Chair**, INFORMS 2019 Annual Meeting

2019 **Tester and Proctor**, MIT Operations Research Center Qualifying Exam

2018-present **Reviewer**, European Journal of Operational Research; INFORMS Journal On Computing

2017-present **Student member**, INFORMS; Mathematical Optimization Society

Skills and Activities

Programming Languages: Julia (preferred), R, VBA, SQL, MATLAB, C++, HTML, CSS.

Optimization Software: JuMP (preferred), CPLEX (preferred), MOSEK (preferred), most other languages/solvers.

Languages: English (native), French (conversational), German (beginner).

Extracurriculars: Skiing, Running, Hiking.

Citizenship Citizen of New Zealand, Ireland.