

# Ian Yihang Zhu

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Education	<b>University of Toronto</b> , Ph.D. in Operations Research <ul style="list-style-type: none"><li>• Advisors: Merve Bodur and Timothy Chan</li><li>• GPA: A+/A+ in all coursework</li></ul> <b>University of Toronto</b> , M.A.Sc. in Operations Research <ul style="list-style-type: none"><li>• Advisor: Timothy Chan</li><li>• GPA: A+/A+ in all coursework</li></ul> <b>University of British Columbia</b> , B.Sc. in Mathematics <ul style="list-style-type: none"><li>• Graduated with Distinction</li></ul>	2018 - Present  2016 - 2018  2012-2016
Research Interests	Mathematical programming, optimization under uncertainty, inverse optimization, econometrics, transportation, logistics, energy economics	
Research	"Inverse Optimization: Theory and Applications", T.C.Y. Chan, R. Mahmood and I.Y. Zhu. Under Review at <i>SIAM Review</i> , 2021  "Spatial Price Integration in Commodity Markets with Capacitated Transportation Networks", J.R. Birge, T.C.Y. Chan, J.M. Pavlin, and I.Y. Zhu. Major Revision at <i>Operations Research</i> , 2021  "Inverse Mixed Integer Optimization: Polyhedral Insights and Trust Region Methods", M. Bodur, T.C.Y. Chan and I.Y. Zhu. Forthcoming at <i>INFORMS Journal on Computing</i> , 2021  "Prediction of Protein and Fat Content in Human Donor Milk Using Machine Learning", R.K. Wong, M.A. Pitino, R. Mahmood, I.Y. Zhu, D. Stone, S. Unger, D. O'Connor, and T.C.Y. Chan. <i>The Journal of Nutrition</i> , 2021	
In Progress	"Adaptability in Robust Binary Optimization Problems", M. Bodur, T.C.Y. Chan, and I.Y. Zhu. In Preparation.  "Milk Bank Batching Operations: A Data-driven Optimization Approach", T.C.Y. Chan, R. Mahmood, R. Wong, I.Y. Zhu. In Preparation.	
Presentations	"Spatial Price Integration in Commodity Markets with Capacitated Transportation Networks" <ul style="list-style-type: none"><li>• INFORMS Annual Meeting 2017, 2018, 2021</li><li>• MSOM International Meeting 2019</li></ul> "Inverse Mixed Integer Optimization: Polyhedral Insights and Trust Region Methods" <ul style="list-style-type: none"><li>• Mixed Integer Programming Workshop 2019</li><li>• INFORMS Annual Meeting 2019, 2020</li></ul>	

	<ul style="list-style-type: none"> <li>• Canadian Operational Research Society Conference 2021</li> </ul>	
Research Mentorship	<p>Nancy Li, 4th year undergraduate student</p> <ul style="list-style-type: none"> <li>• Thesis: "Predicting Demand in Bike Sharing Platforms"</li> </ul>	2021-2022
	<p>Chloe Wang, 3rd year undergraduate student</p> <ul style="list-style-type: none"> <li>• Project: "Adaptability Models for Robust Shortest Path Problems"</li> </ul>	2021
	<p>Rachel Wong, 4th year undergraduate student</p> <ul style="list-style-type: none"> <li>• Project: "Predicting Protein and Fat Content in Milk Bank Pools"</li> </ul>	2020
Other Projects	<p>Redeploy (redeploy.ca)</p> <ul style="list-style-type: none"> <li>• Member of a small team of graduate students that created an online app and non-profit service to help hospital redeployment centres during COVID-19</li> </ul>	2020
Teaching Assistant Experience	<p>MIE368: Analytics in Action</p> <ul style="list-style-type: none"> <li>• Topics: regression, classification, decision trees, optimization, simulation</li> <li>• Teaching evaluations: 4.62/5, won departmental group teaching award</li> </ul>	2020, 2021
	<p>MIE263: Stochastic Operations Research</p> <ul style="list-style-type: none"> <li>• Topics: decision analysis, stochastic processes, simulation, queueing theory</li> <li>• Teaching evaluations: 4.77/5</li> </ul>	2019, 2020
	MATH190/101: Calculus Survey	2015, 2016
	MATH110: Differential Calculus	2014, 2015
Honors & Awards	Ontario Graduate Scholarship	2021 - 2022
	NSERC Canada Graduate Scholarship - Doctoral	2018 - 2021
	MIE Group Teaching Assistant Award	2021
	INFORMS Poster Competition Finalist	2019
	Mixed Integer Programming Workshop Poster Finalist	2019
	University of Toronto SGS/MIE Conference Grant	2017, 2019 (×2)
	NSERC Canada Graduate Scholarship - Master's	2017
	University of Toronto Graduate Entrance Award	2016
	NSERC Undergraduate Summer Research Award	2014, 2015
	UBC Charles and Jane Banks Scholarship	2014
	UBC Trek Excellence Scholarship	2014
	UBC Science Scholar	2014
	UBC Chancellor's Scholar	2012
Personal	<p>Citizenship: Canadian</p> <p>Languages: English (native), Chinese (fluent), French (intermediate)</p> <p>Interests: traveling, sports, reading</p>	