

## W. Justin Toth

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CONTACT INFORMATION	Combinatorics and Optimization Dept. Faculty of Mathematics University of Waterloo 200 University Ave W Waterloo, Ontario Canada			(226)345-7600 wjtoth@uwaterloo.ca wjtoth.wordpress.com
RESEARCH INTERESTS	Combinatorial Optimization, Algorithmic Game Theory, Approximation Algorithms, Matching Theory, and Polyhedral Combinatorics.			
EDUCATION	<b>Department of Combinatorics and Optimization, University of Waterloo</b> Ph.D. Student, Combinatorics and Optimization (expected Jan 2021) <ul style="list-style-type: none"><li>• Advisor: Jochen Könemann</li></ul> MMath in Combinatorics and Optimization, Dec 2016 <ul style="list-style-type: none"><li>• Thesis: Structure in Stable Matching Problems</li><li>• Advisor: Jochen Könemann</li></ul> <b>Department of Mathematics and Statistics, University of Windsor</b> BMath in Mathematics and Computer Science, May 2015 <ul style="list-style-type: none"><li>• Graduate with Great Distinction</li><li>• Outstanding Scholar</li></ul>			
CERTIFICATION	<b>Centre for Teaching and Learning, University of Waterloo</b> Fundamentals of University Teaching Certificate, Dec 2016 <ul style="list-style-type: none"><li>• 6 Workshops and 3 Practice Teaching Sessions</li></ul>			
RECOGNITIONS	2018	2021	NSERC Graduate Scholarship - Doctoral (\$21000/year value) University of Waterloo	
	2018	2021	President's Graduate Scholarship - Doctoral (\$10000/year value) University of Waterloo	
	2015	2016	NSERC Canadian Graduate Scholarship - Masters (\$17500 value) University of Waterloo	
	2015	2016	President's Graduate Scholarship (\$5000 value) University of Waterloo	
	Spring	2013	NSERC Undergraduate Student Research Award (\$9000 value) University of Windsor	
	2011	2015	President's Scholarship (\$9000/year value) University of Windsor	
	2011	2015	Outstanding Scholars Award (\$1300/year value) University of Windsor	

### EMPLOYMENT

	Spring	2015	Software Engineer Coop Communications Security Establishment, Ottawa.
	2014	2015	Undergraduate Research Assistant in Computational Geometry. Advisor: Asish Mukhopadhyay, School of Computer Science University of Windsor.
	Spring	2014	Software Engineer Coop Communications Security Establishment, Ottawa.
	2013	2014	Undergraduate Research Assistant in Graph Algorithms. Advisor: Peter Tsin, School of Computer Science University of Windsor.
	Spring	2013	NSERC Undergraduate Research Assistant in PDE Computation. Advisor: Ronald Barron, Department of Mathematics University of Windsor.
	2012	2013	Undergraduate Research Assistant in PDE Computation. Advisor: Ronald Barron, Department of Mathematics University of Windsor.
JOURNAL PUBLICATIONS	J. Könemann, K. Pashkovich, and J. Toth. An Elementary Integrality Proof of Rothblum's Stable Matching Formulation. <i>Operations Research Letters</i> , 44.6 :754-756 (2016)		
CONFERENCE PRESENTATIONS	Computing the Nucleolus of Matching Games in Polynomial Time. <i>International Symposium on Mathematical Programming</i> , University of Bordeaux. (July 1-6 2018)		
	An Elementary Integrality Proof of Rothblum's Stable Matching Formulation. 9 <sup>th</sup> <i>Ottawa Mathematics Conference</i> , University of Ottawa. (June 17-19 2016)		
OTHER PRESENTATIONS	Semesterly Presenter. <i>CombOpt Reading Group</i> , University of Waterloo. (Spring 2017 - Fall 2018)		
	Optimal Stable Matching. <i>3 Minute Thesis</i> , University of Waterloo. (Feb 14 2017)		
	A Short New Proof that the Stable Matching Polytope is Integral. <i>Optimization Seminar</i> , University of Waterloo. (Jan 25 2017)		
TEACHING EXPERIENCE	University of Waterloo		
	Fall	2018	Teaching Assistant, CO 456 Introduction to Game Theory
	Spring	2018	Teaching Assistant, CO 351 Network Flow Theory
	Winter	2018	Teaching Assistant, CO 353 Computational Discrete Optimization
	Fall	2017	Teaching Assistant, CO 456 Introduction to Game Theory
	Spring	2017	Teaching Assistant, Co 250 Introduction to Optimization
	Winter	2017	Teaching Assistant, CO 353 Computational Discrete Optimization
	Fall	2016	Teaching Assistant, CO 456 Introduction to Game Theory
	Spring	2016	Teaching Assistant, MATH 128 Calculus for the Sciences
	Winter	2016	Teaching Assistant, CO 353 Computational Discrete Optimization
	Fall	2015	Teaching Assistant, MATH 136 Linear Algebra 1
	University of Windsor		
	Winter	2015	Teaching Assistant, 62-190 Mathematical Foundations
	Fall	2015	Teaching Assistant, 62-120 Linear Algebra 1

# SERVICE

Fall	2018	Co-Organizer, CombOpt Reading Group at University of Waterloo
Spring	2018	Subreviewer, EC Conference Papers on behalf of Jochen Könnemann
March	2018	Volunteer Organizer, TORCH Operations Research Challenge at University of Waterloo
2017	2018	Graduate Student Representative, C&O to Computing Facilities
Spring	2017	Volunteer, IPCO Conference at University of Waterloo
Spring	2017	Subreviewer, ESA Conference Papers on behalf of Jochen Könnemann
2014	2015	Undergraduate Student Representative, Mathematics Department Council at University of Windsor
2014	2015	Finance Minister, Computer Science Society at University of Windsor