

EDUCATION

Ph.D. in Mathematics (2021 – Present)

University of Victoria, British Columbia.

Advisors: Dr. G. MacGillivray & Dr. W. Myrvold

M.Sc. in Mathematics (2021)

University of Victoria, British Columbia.

Advisors: Dr. G. MacGillivray & Dr. F. Ruskey

Thesis: *2-limited broadcast domination on grid graphs***B.A.Sc. in Mathematics** (2018)

Quest University Canada, Squamish, British Columbia

Advisors: Dr. S. Mayes-Tang & Dr. R. Hoshino

Thesis: *Betti table stabilization of homogeneous monomial ideals***Budapest Semesters in Mathematics, Hungary** (Summer 2018)

Credits conferred by St. Olaf College, Northfield, Minnesota, USA

FELLOWSHIPS
AND AWARDS

Alexander Graham Bell Scholarship (CGS-D), NSERC	2022 – Present
President's Research Scholarship, University of Victoria	2022, 2023
TA Recognition of Excellence, Department of Math & Stats, University of Victoria	2021, 2022
Betty and Gilbert Kennedy Graduate Scholarship in Math & Stats, University of Victoria	2021
Faculty of Graduate Studies Scholarship, University of Victoria	2019 – 2021
JJEM Graduate Award in Mathematics & Statistics, University of Victoria	2020
Canadian Mathematical Society Student Committee Award (<i>top 3 poster presentation</i>)	2019, 2020
British Columbia Graduate Scholarship, University of Victoria	2019
Canada Graduate Scholarship Masters (CGS-M), NSERC (<i>declined: health</i>)	2018
Deployed Application Award, IAAI – 2018 (<i>publication 4</i>)	2018
AbbVie IBD Scholarship, Crohn's and Colitis Canada (<i>15 in Canada</i>)	2017
Keystone Distinction Award, Quest University Canada	2017
Outstanding Classroom Citizen Award, Quest University Canada (<i>1 per year</i>)	2017
Quest Summer Fellowship, Quest University Canada (<i>1 of 5 students</i>)	Summer 2016
President's List Award, Quest University Canada	Fall 2014, Fall 2015 – Spring 2017
President's Scholarship, Quest University Canada	2013 – 2017

PUBLICATIONS

1. **A. Slobodin**, P. W. Fowler, W. Myrvold, & G. MacGillivray (2023+). Tight upper bounds for the p -anionic Clar number of fullerenes. *Submitted*. 28 pages.
2. **A. Slobodin**, G. MacGillivray, & W. Myrvold (2023). Proving exact values for the 2-limited broadcast domination number on grid graphs. *Discrete Mathematics & Theoretical Computer Science*, vol. 25:2. 16 pages. doi.org/10.46298/dmtcs.11478.
3. **A. Slobodin**, G. MacGillivray, & W. Myrvold (2023). 2-limited broadcast domination on grid graphs. *Discrete Applied Mathematics*, 338:158 – 178. doi.org/10.1016/j.dam.2023.05.031.
4. R. Hoshino, **A. Slobodin**, & W. Bernoudy. (2018) An automated employee timetabling system for small businesses. AAAI 2018. *Proceedings of the 30th IAAI Conference on Artificial Intelligence*, 7673 – 7679. Menlo Park, CA: AAAI Press. doi.org/10.1609/aaai.v32i1.11383

TECHNICAL REPORTS	<ol style="list-style-type: none"> 1. P. Bajpai, A. Slobodin, R. Xu, S. Mylvaganam, and A. Schaffer-Cohen (2023+). Analysis of the north coast (areas 3 & 4) recreational angling creel survey 2022. <i>Technical Report for the Math to Power Industry Program 2023</i>. 31 pages. 2. A. Slobodin, S. Mayes-Tang (2016). Betti table stabilization of homogeneous monomial ideals. 19 pages. <i>Technical Report for Quest Summer Fellowship</i>. arXiv:1712.04411. 	
PROFESSIONAL EXPERIENCE	<p>Teaching Assistant Consultant, University of Victoria 2023 – Present</p> <ul style="list-style-type: none"> • <i>Organized an observation program for new tutorial instructors. This involved giving workshops, observing new tutorial instructors, and providing feedback based on these observations.</i> <p>Programming Consultant, Victoria, British Columbia 2015 – 2019</p> <ul style="list-style-type: none"> • <i>Created a python-based Integer Linear Program for the Zephyr Cafe, Squamish Integrated Health Clinic, and Mountain Equipment Co-op (Victoria).</i> • <i>Each application produces optimal staff schedules based on employee preference and management requirements that reduce time to output schedules by over 90%.</i> 	
TEACHING EXPERIENCE	<p>Teaching Assistant, University of Victoria 2019 – 2022</p> <ul style="list-style-type: none"> • <i>Tutorial Instructor for Math 110 and 109.</i> • <i>Tutor at the Math and Stats Assistance Centre.</i> <p>Teaching Assistant, Quest University Canada 2015 – 2017</p> <ul style="list-style-type: none"> • <i>Hosted 200 hours of review sessions for other mathematics and science courses.</i> • <i>Developed assignments in basic algebra and geometry for an introductory quantitative reasoning course (IND 2250).</i> 	
INVITED TALKS	<p>Coast Combinatorics Conference</p> <ul style="list-style-type: none"> • <i>Tight upper bounds for the anionic Clar number of fullerenes (Victoria)</i> Nov 2023 • <i>2-limited broadcast domination in cylindrical grid graphs (Victoria, Virtual)</i> Mar 2021 • <i>Optimizing employee scheduling through linear programming (Vancouver)</i> Mar 2016 <p>Quest Scholarship Conference, Quest University Canada</p> <ul style="list-style-type: none"> • <i>Implementing an optimized employee timetabler at the Squamish integrated health clinic</i> Nov 2017 • <i>Szygies and Betti tables, a taste of computational algebra</i> Nov 2016 	
TALKS	<p>Canadian Discrete and Algorithmic Mathematics Conference</p> <ul style="list-style-type: none"> • <i>Families of fullerenes maximizing the anionic Clar number (Winnipeg)</i> Jun 2023 • <i>2-limited broadcast domination in grids¹ (Virtual)</i> May 2021 <p>SIAM Conference on Discrete Mathematics</p> <ul style="list-style-type: none"> • <i>2-limited broadcast domination in grids¹ (Virtual)</i> Jul 2021 <p>Discrete Mathematics Seminar, University of Victoria</p> <ul style="list-style-type: none"> • <i>An introduction to the discharging method via graph colouring</i> Dec 2021 • <i>Domination in graphs with minimum degree two</i> Oct 2021 • <i>Broadcast domination and multipacking: Bounds and the integrality gap</i> Sep 2021 • <i>Implementing an optimized employee timetabler at the Victoria MEC</i> Sep 2019 	

¹Same talk titles but different presentations.

TALKS CONT.	Math Club , Quest University Canada	
	• <i>Broadcast Domination in Grid Graphs... and Grad School (Virtual)</i>	Jan 2021
	• <i>Prime numbers and where to find them</i>	Nov 2015
	Canadian Mathematical Society Winter Meeting , Student Poster Session	
	• <i>2-limited broadcast domination in grid graphs (Montreal, Virtual)</i>	Dec 2020
	• <i>An automated employee timetabling system (Toronto)</i>	Dec 2019
	• <i>Betti table stabilization of homogeneous monomial ideals (Waterloo)</i>	Dec 2017
	Keystone Symposium , Quest University Canada	
	• <i>Betti diagram shape stabilization</i>	Dec 2017
	Canadian Undergraduate Mathematics Conference , University of Victoria	
	• <i>Syzygies and Betti tables, a taste of computational algebra</i>	Jul 2016
	Canadian Undergraduate Computer Science Conference , BCIT	
• <i>Optimizing employee scheduling through linear programming</i>	Jun 2016	
SERVICE TO PROFESSION	Volunteer , Saint Margaret's School, Mathematics Enrichment Program	2022 – 2023
	• <i>Worked with students during the Mathematics Enrichment Program; a program intended to highlight and encourage creative thinking processes with the students.</i>	
	Journal Referee	2021 – 2023
	• <i>Discrete and Applied Mathematics. Reviews: 2.</i>	
	• <i>AKCE International Journal of Graphs and Combinatorics. Reviews: 1.</i>	
	• <i>Information Processing Letters. Reviews: 2.</i>	
Guest Editor , Canadian Mathematical Society	2017 – 2021	
• <i>Review, comment, and edit submitted solutions to <i>Cruz Mathematicorum</i>. Number of published issues contributed to: 36.</i>		
SERVICE TO UNIVERSITY	President , University of Victoria, Students in Graduate Math & Stats	2023 – Present
	• <i>Executive member of the math and statistics graduate student society. Oversaw the organizations of social events and meetings.</i>	
	Treasurer , University of Victoria, Students in Graduate Math & Stats	2022 – Present
	• <i>Manage societies finances.</i>	
	Exams Sale Coordinator , University of Victoria, Students in Graduate Math & Stats	2023
	• <i>Organized volunteers to solve past exams and host exam sale as society fundraiser.</i>	
	Secretary , University of Victoria, Students in Graduate Math & Stats	2019 – 2023
	• <i>Writing and posting minutes, reminding members of tasks.</i>	
	Webmaster , University of Victoria, Students in Graduate Math & Stats	2019 – 2023
	• <i>Maintaining and improving society's website.</i>	
	Mini-talk Instructor , University of Victoria, IMAGINING	Jul 2022
• <i>Guided students in creating a mini-talk on the application of linear programming to scheduling at the camp: <i>Inspiring Mathematical Growth and Intuition in Girls</i>.</i>		
Committee Participation , University of Victoria		
• <i>Search Committee for the Chair of the Math & Stats Department</i>	Spring 2022	
• <i>Faculty of Science Strategic Planning Student Retreat</i>	Jun 2021	
• <i>Department of Math & Stats Space Planning Focus Group</i>	Mar 2021	

WORKSHOPS ATTENDED	Math to Power Industry, Pacific Institute for the Mathematical Sciences	Jul 2023
	<ul style="list-style-type: none"> • <i>During this work-integrated learning workshop, we analyzed the North Coast (Areas 3 & 4) Recreational Angling Creel Survey 2022. (See technical report 1).</i> 	
	Sums of Squares Method in Geometry, Combinatorics and Optimization, Joint MSRI-BIRS Graduate Summer School (registration & accommodation inc.)	Aug 2022
TRAVEL FUNDING	Student Travel Grant, Canadian Discrete and Algorithmic Mathematics Conference	Jun 2023
	FGS & GSS Travel Grant, University of Victoria	Jul 2022
	DM21 Student Travel Award, Society for Industrial and Applied Mathematics	Jun 2021
	SODA21 Student Travel Award, Society for Industrial and Applied Mathematics	Jan 2021
	FGS Conference Travel Grant, University of Victoria	Dec 2019, 2020
	CMS 2019 Student Travel Award, Canadian Mathematical Society	Dec 2019
CONFERENCES ATTENDED	Coast Combinatorics Conference (Victoria, British Columbia)	Nov 2023
	Canadian Discrete and Algorithmic Mathematics Conference (Winnipeg, Manitoba)	Jun 2023
	Coast Combinatorics Conference (Vancouver, British Columbia)	Mar 2023
	Cascadia Combinatorial Feast (Seattle, Washington)	Nov 2022
	Cascadia Combinatorial Feast (Virtual)	Nov 2021
	SIAM Conference on Discrete Mathematics (Virtual)	Jul 2021
	Canadian Discrete and Algorithmic Mathematics Conference (Virtual)	May 2021
	Coast Combinatorics Conference (Virtual)	Mar 2021
	ACM-SIAM Symposium on Discrete Algorithms (Virtual)	Jan 2021
	Canadian Mathematical Society Winter Meeting (Virtual)	Dec 2020
	Cascadia Combinatorial Feast (Virtual)	Nov 2020
	Canadian Mathematical Society Winter Meeting (Toronto, Ontario)	Dec 2019
	Combinatorial Potlatch (Bellingham, Washington)	Nov 2019
	Canadian Mathematical Society Winter Meeting (Waterloo, Ontario)	Dec 2017
	Quest Scholarship Conference (Squamish, British Columbia)	Nov 2017
	Power, Race, and Privilege Symposium (Squamish, British Columbia)	Feb 2017
	Quest Scholarship Conference (Squamish, British Columbia)	Nov 2016
	Canadian Undergraduate Mathematics Conference (Victoria, British Columbia)	Jul 2016
	Canadian Undergraduate Computer Science Conference (Vancouver, British Columbia)	Jun 2016
	Coast Combinatorics Conference (Vancouver, British Columbia)	Mar 2016
OTHER WORK EXPERIENCE	Bike Mechanic , Mountain Equipment Co-op	Sep 2018 – Jan 2020
	Ground Keeper , Quest University Canada	Summer 2014
	Academic Clerk , Quest University Canada	2013 – 2014

OTHER	Mountain Bike Guide , Quest University Canada	Fall 2014, Fall 2016
VOLUNTEER	<ul style="list-style-type: none">• <i>Hosted introductory mountain bike rides for new students.</i>	
WORK	Volunteer Fire Fighter , Denman Island Fire Department, British Columbia	2011 – 2013
	<ul style="list-style-type: none">• <i>Trained in equipment handling, fire procedures, and fire fighting scenarios.</i>• <i>Participated in community fundraising and events.</i>	
	Big Buddy , School-based Buddy Program, Courtenay, British Columbia	2012 – 2013
	<ul style="list-style-type: none">• <i>Mentored an elementary student who was in need of a positive male role model.</i>	