

Stephen Michael Finbow

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Citizenship: Canadian

EDUCATION

- Ph.D. (Mathematics), University of Victoria, 2003
Thesis: Generalizations of Irredundance in Graphs
Co-supervisors: E. Cockayne and G. MacGillivray
- M.Sc. (Mathematics), Dalhousie University, 1999
Thesis: Graph Parameters and Graph Products
Supervisor: R. J. Nowakowski
- B.Sc. (Combined Mathematics and Physics), St. Mary's University, 1998
Honours Thesis: Graphs on Fire
Supervisor: B. Hartnell

ACADEMIC POSITIONS HELD

- Dr. W.F. James Research Chair, St. Francis Xavier University, July 2020 - July 2023
- Adjunct Professor, Memorial University of Newfoundland, 2020 - present
- Chair, Department of Mathematics & Statistics, July 2019 - June 2022
- Professor, St. Francis Xavier University, September 2018 - present
- Associate Professor, St. Francis Xavier University, July 2010 - August 2018
- Adjunct Professor, Dalhousie University, July 2012 - present
- Assistant Professor, St. Francis Xavier University, May 2006 - July 2010
- Assistant Professor, St. Francis Xavier University, August 2005 - May 2006
- Postdoctoral Fellowship, University of Victoria, September 2003 - June 2005
(Co-supervisors, E. Cockayne and G. MacGillivray)
- Research Assistant, St. Mary's University, May - August 1998 (Supervisor, B. Hartnell)
- Research Assistant, St. Mary's University, May - August 1997 (Supervisor, B. Hartnell)

AWARDS & GRANTS

- NSERC Individual Discovery Grant, 2020-2025: \$120,000
- Maple League Research Fund, 2020: \$6093
- NSERC Individual Discovery Grant, 2014-2020: \$66,000
- St. Francis Xavier University Dean's Travel Grant, 2019: \$1800
- St. Francis Xavier University Dean's Travel Grant, 2018: \$1750
- St. Francis Xavier University Research / Publication / Teaching Award Grant, 2017: \$1695
- St. Francis Xavier University Dean's Travel Grant, 2017: \$1800
- St. Francis Xavier University Dean's Travel Grant, 2016: \$1800
- St. Francis Xavier University Research / Publication / Teaching Award Grant, 2016: \$1695
- St. Francis Xavier University Research / Publication / Teaching Award Grant, 2015: \$1603
- St. Francis Xavier University Dean's Travel Grant, 2015: \$1650
- Atlantic Association for Research in the Mathematical Sciences Collaborative Research Grant (Games and Graphs), 2013-2014: \$24,000
- St. Francis Xavier University Dean's Travel Grant, 2014: \$1650
- St. Francis Xavier University Council on Research, Salary Based Research Grant, 2013: \$10,000
- St. Francis Xavier University Research / Publication / Teaching Award Grant, 2013: \$2183
- St. Francis Xavier University Dean's Travel Grant, 2013: \$1650
- St. Francis Xavier University Dean's Travel Grant, 2012: \$1800
- St. Francis Xavier University Council on Research, Salary Based Research Grant, 2012: \$15,000
- St. Francis Xavier University Council for Research Award, 2012: \$2230
- St. Francis Xavier University Council on Research Salary Based Research Grant, 2011: \$10,000
- St. Francis Xavier University Dean's Travel Fund, 2010: \$2000
- St. Francis Xavier University Summer Research Award, 2009: \$2300
- NSERC Individual Discovery Grant, 2008-2013: \$60,000
- St. Francis Xavier University Dean's Travel Fund, 2008: \$2000
- St. Francis Xavier University Summer Research Award, 2008: \$2650
- St. Francis Xavier University Council for Research Award, 2008: \$2000
- St. Francis Xavier University Council for Research Award, 2007: \$3000
- St. Francis Xavier University Dean's Travel Fund, 2007: \$2000
- St. Francis Xavier University Summer Research Award, 2006: \$2300
- St. Francis Xavier University Start-Up Grant, 2006: \$10,000
- St. Francis Xavier University Dean's Travel Fund, 2005: \$1500
- NSERC Postgraduate Scholarship (PGS B), 2001-2003: \$38200
- NSERC Postgraduate Scholarship (PGS A) with Ph.D. Stipend, 1999-2001: \$38,200

- University of Victoria Petch Research Scholarship, 2002: \$5000
- University of Victoria President's Scholarship, 2001: \$4000
- University of Victoria President's Scholarship, 1999-2000: \$4000
- B.C. Advanced Systems Institute Graduate Scholarship, 1999: \$3000
- Dalhousie University Entrance Scholarship, 1998: \$12,500

PUBLICATIONS

Submitted

34. **A. Clow**, S. Finbow, *Advances in Finding Ideal Play on Poset Games*, Integers, submitted 2021.
33. D. Huang, J. Qi, W. Wang, S. Finbow, *DP-coloring for Planar Graphs of Diameter Two*, Discrete Mathematics, Discrete Applied Mathematics, submitted 2020.
32. **W. Yang**, W. Wang, **J. Liu**, **Y. Wang**, S. Finbow, P. Wang, *A structural theorem on 1-Planar Graphs with an Application to Acyclic Edge Coloring*, Journal of Graph Theory, submitted 2019.

Papers in Refereed Journals

31. D. Huang, X. Zhang, W. Wang, S. Finbow, *Adjacent Vertex Distinguishing Edge Coloring of Planar Graphs without 3-Cycles*, Discrete Mathematics, Algorithms and Applications, 12 (04), (2020) DOI: 10.1142/S1793830920500354.
30. A. Burgess, R.A. Cameron, N.E. Clarke, P. Danziger, S. Finbow, C. Jones, D.A. Pike, *Cops that Surround a Robber*, Discrete Applied Mathematics, 285, (2020) 552-566.
29. S. Finbow, **R. MacIassac**, **C.M. van Bommel**, *A Note on the Existence of Infinite Sequences of γ -Graphs of Graphs*, Discrete Applied Mathematics, 285, (2020) 182-187.
28. Y. Wang, D. Huang, S. Finbow, *On the Vertex Partition of Planar Graphs into Forests with Bounded Degree*, Applied Mathematics and Computation, 374, 374, (2020) 125032.
27. S. Finbow, M.F. van Bommel, *The Eternal Domination Number for $3 \times n$ Grid Graphs*, Australasian Journal of Combinatorics, Volume 76(1), (2020) 1–23.
26. S. Finbow, **C.M. van Bommel**, *γ -Graphs on Trees*, Algorithms, 12(8), 153; 2019. Doi:10.3390/a12080153.
25. A. Bonato, N.E. Clarke, D. Cox, S. Finbow, F. McInerney, M.E. Messinger, *Hyperopic Cops and Robbers*, Theoretical Computer Science, 794, (2019) 59-68.
24. S. Finbow, S. Gaspers, M.E. Messinger, P. Ottaway, *A Note on the Eternal Dominating Set Problem*, International Journal of Game Theory, 47(2) (2018), 543-555.

23. S. Finbow, **D. Marchand, C. M. van Bommel, B. Yu**, *Equality Throughout the Domination Chain*, *Ars Combinatoria*, accepted 2016.
22. N. E. Clarke, S. Finbow, S. Fitzpatrick, M.E. Messinger, R. Milley, R. J. Nowakowski, *Grundy Numbers and Graph Products*, *Discrete Applied Mathematics* 202 (2016), 1-7.
21. S. Finbow, M.E. Messinger, M.F. van Bommel, *Eternal Domination on $3 \times n$ Grid Graphs*, *Australasian Journal of Combinatorics* 61(2) (2015), 156-174.
20. S. Finbow, **C.M. van Bommel**, *Triangulations and Equality in the Domination Chain*, *Discrete Applied Mathematics* 194 (2015), 81-92.
19. Y. Bu, S. Finbow, D. Liu, X. Zhu, *List Backbone Colouring of Graphs*, *Discrete Applied Mathematics* 167 (2014), 45-51.
18. N.E. Clarke, S. Finbow, G. MacGillivray, *A Simple Method of Computing the Catch Time*, *Ars Mathematica Contemporanea* 7 (2014), 353-359.
17. W. Wang, S. Finbow, **J. Kong**, *The 2-Surviving Rate of Planar Graphs Without 6-Cycles*, *Theoretical Computer Science* 518 (2014), 22-31.
16. A. Bonato, N. Clarke, S. Finbow, S. Fitzpatrick S, M.E. Messinger, *A Note on Bounds for the Cop Number Using Tree Decompositions*, *Contributions to Discrete Mathematics*(9) 2 (2014), 50-56.
15. W. Wang, S. Finbow, P. Wang, *A Lower Bound of the Surviving Rate of a Planar Graph with Girth At Least Seven*, *Journal of Combinatorial Optimization* 27 (2014), 621-642.
14. A. Bonato, S. Finbow, P. Gordinowicz, A. Haidar, W. Kinnersley, D. Mitsche, P. Pralat, L. Stacho, *The Robber Strikes Back*, *Advances in Intelligent and Soft Computing Series* 246 (2013), 3-12.
13. **I. Beaton, R. Begin**, S. Finbow, **C. M. van Bommel**, *Even Time Constraints on the Watchman's Walk*, *Australasian Journal of Combinatorics* 56 (2013), 113-121.
12. **I. Beaton**, S. Finbow, **J.A. MacDonald**, *Eternal Domination Numbers of $4 \times n$ Grid Graphs*, *Journal of Combinatorial Mathematics and Combinatorial Computing* 85 (2013), 33-48.
11. W. Wang, S. Finbow, P. Wang, *An Improved Bound on Parity Vertex Colourings of Outerplane graphs*, *Discrete Mathematics* 312 (2012), 2782–2787.
10. W. Wang, S. Finbow, P. Wang, *The Surviving Rate of an Infected Network*, *Theoretical Computer Science* 411 (40-42) (2010), 3651-3660.
9. E. Cockayne, S. Finbow, J. S. Swarts. *OO-Irredundance and Maximum Degree in Paths and Trees*, *Journal of Combinatorics Mathematics and Combinatorial Computing* 73 (2010), 223-236.
8. S. Finbow, G. MacGillivray, *The Firefighter Problem: A Survey*, *Australasian Journal of Combinatorics* 43 (2009), 57-78.
7. N.E. Clarke, S. Finbow, S.L. Fitzpatrick, M.E. Messinger, R. J. Nowakowski *Seepage in Directed Acyclic Graphs*, *Australasian Journal of Combinatorics* 43 (2009), 91-102.
6. E. Cockayne, O. Favaron, S. Finbow, C. Mynhardt, *A Lower Bound for the Open Irredundance Number of a Graph*, *Discrete Mathematics* 308 (2008), 5358-5375.

5. S. Finbow, A. King, G. MacGillivray, R. Rizzi, *The Fire-fighter Problem for Graphs of Maximum Degree Three*, Discrete Mathematics 307 (16) (2007), 2094-2105.
4. S. Finbow, *A Lower Bound for the CO-Irredundance Number of a Graph*, Discrete Mathematics 295 (2004), 49-62.
3. E. Cockayne, S. Finbow, *Generalized Irredundance in Graphs: Nordhaus-Gaddum Bounds*, Discussiones Mathematicae Graph Theory 24 (2004), 147-160.
2. C. Davies, S. Finbow, B. Hartnell, Q. Li, K. Schmeisser, *The Watchman Problem on Trees*, Bulletin of the Institute of Combinatorics and its Applications 37 (2003), 35-43.
1. S. Finbow, B. Hartnell, Q. Li, and K. Schmeisser, *On Minimizing the Effects of Fires on a Graph*, Journal of Combinatorial Mathematics and Combinatorial Computing 33 (2000), 311- 322.

Technical Reports and Cited Manuscripts

2. **I. Beaton**, S. Finbow, **J.A. MacDonald**, *Eternal Domination of Grids*, (2013).
1. S. Finbow, *An Introduction to Irredundance in Graphs*, (2000) 49 pages.

CONFERENCE CONTRIBUTIONS

Invited Lectures

- *The Y-Graph of a Graph*, Atlantic Association for Research in the Mathematical Sciences(AARMS), Atlantic Graph Theory Seminar (online), 2021
- *Firefighter Problem on Planar Graphs*, Graph Searching in Canada Workshop, Toronto, ON, 2019
- *The Firefighter Problem*, Scottish Combinatorics Meeting, Plenary Speaker, Edinburgh, Scotland, May 2019
- *Mobile Resource Allocation in Networks*, Advances in Graph Theory, Hangzhou, China, 2018
- *Hyperopic Cops and Robbers*, Graph Searching in Canada Workshop, Regina, SK, 2018
- *Eternal Domination on 3 by n Grids*, Canadian Mathematics Society Summer Meeting, Graph Searching Pursuit Evasion Games on Graphs Session, Fredericton, NB, 2018
- *Eternal Domination on King Graphs*, The Canadian Discrete and Algorithmic Mathematics Conference, Graphs and Games: The Mathematics of Richard Nowakowski Session, Toronto, ON, 2017
- *Hamiltonicity of Bell and Stirling Colour Graphs*, Canadian Mathematics Society Summer Meeting, Graphs Designs and Hypergraphs session, Charlottetown, PEI, 2015

- *Vertex Colouring of Plane Graphs with Restrictions Given by Faces*, Canadian Mathematics Society Summer Meeting, Graphs and Hypergraphs Invited Session, Winnipeg, MB, 2014
- *Equality in the Domination Chain in Planar Graphs*, The Canadian Discrete and Algorithmic Mathematics Conference, Domination in Graphs Session, St. John's, NFLD, 2013
- *Eternal Domination*, Euro XXV, Graph Searching and Guarding Invited Session, Vilnius, Lithuania, 2012
- *The Surviving Rate of Plane Networks*, Euro XXV, Graph Searching and Guarding Invited Session, Vilnius, Lithuania, 2012
- *The Problem of Fighting Fires on Graphs*, Graph Protection Workshop, Paris, France, 2012
- *Firefighting on Plane Graphs with Girth Seven*, Ryerson University Graph Theory Seminar, Toronto, ON, 2012
- *Discharging from the Point of View of a Fire Extinguisher*, Dalhousie University Graph Theory Seminar, Halifax, NS, 2012
- *The Problem of Michelle's Birthday Cake: Containing the Fire*, University of Victoria Graphs and Combinatorics Seminar, Victoria, BC, 2012
- *Equality Thru the Domination Chain*, Chinese Combinatorial Graph Theory Conference 2011, Invited Lecture, Jinhua, China, 2011
- *The Problem of Fighting Fires on Graphs*, Shanghai University, Invited Lecture, Shanghai, China, 2011
- *Finding Upper Bound on the Robbing Ratio*, Thompson Rivers University, Mathematics Seminar, Thompson Rivers University, Kamloops, BC, 2011
- *Modeling Firefighting with Graphs*, Euro XXIV, Graph Searching and Guarding Invited Session, Lisbon, Portugal, 2010
- *Eternal Domination, Gamma Forever!* SIAM Conference on Discrete Mathematics, Dominating Sets and Domination Games Mini-Symposium, Austin, Texas, 2010
- *Firefighting on K_4 Minor Free Graphs*, Canadian Mathematics Society / CSHPM Summer Meeting, Graph Searching Session, St. John's, NFLD, 2009
- *On the Surviving Rates of a Graph*, The Canadian Discrete and Algorithmic Mathematics Conference, Graph Protection Session, Montreal, QC, 2009
- *The Angel and Devil: New Results by Mathe Showing an Angel of Power Two Can Always Win*, Dalhousie University, Games and Graphs Seminar, Halifax, NS, 2007

Presentations

- *Bell and Stirling Numbers of a Graph*, Coast Combinatorics Conference, Kailua-Kona, Hawaii, 2017
- *Protecting Small Grids*, East Coast Combinatorics Conference, Memorial University – Grenfell Campus, Corner Brook, NFLD, 2013
- *Results in the Cops and Robber Game*, Coast Combinatorics Conference, Kailua-Kona, Hawaii, 2013

- *Parity Vertex Colourings of Outerplanar Graphs*, East Coast Combinatorial Conference, Memorial University, St. John's, NFLD, 2012
- *Discharging Fireworks!*, Graph Searching in Canada, Ryerson University, Toronto, ON, 2012
- *Efficiency in Watchmen's Walks*, The Canadian Discrete and Algorithmic Mathematics Conference, University of Victoria, Victoria, BC, 2011
- *Well Irredundant Graphs*, The Fourth International Conference on Combinatorial Mathematics and Combinatorial Computing, University of Auckland, Auckland, New Zealand, 2008
- *Seepage in Directed Acyclic Graphs*, Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, 2008
- *OO-irredundance in Graphs*, 21st British Combinatorial Conference, Reading University, Reading, UK, 2007
- *Bounds on Irredundance Parameters in Trees*, East Coast Combinatorial Conference, Mt. Allison University, Sackville, NB, 2007
- *A Bound on the Size of an OO-irredundant Set in Trees*, Coast Combinatorial Conference, University of Victoria, Victoria, BC, 2007
- *Protecting a Network with Maximum Degree Three Against a Fire or Virus*, East Coast Combinatorial Conference, University of Prince Edward Island, Charlottetown, PEI, 2006
- *A Generalization of Independence Irredundance and Domination in Graphs*, Canadian Mathematics Society Winter Meeting, University of Victoria, Victoria, BC, 2005
- *Generalizations of Independence Irredundance and Domination in Graphs*, Atlantic Association for Research in the Mathematical Sciences Symposium on Graph Theory and Combinatorics, Acadia University, Wolfville, NS, 2005
- *A Bound on the Open Irredundance Number*, Coast Combinatorial Conference, University of Victoria, Victoria, BC, 2003
- *Nordhaus-Gaddum Bounds for Generalized Irredundant Sets*, Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, 2003
- *Open Irredundance in Graphs*, presented by E. Cockayne, Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton, Florida, 2002
- *Firefighters – An Application of Domination*, Rutgers Workshop on Domination in Graphs, Rutgers University, New Brunswick, New Jersey, 1999
- *The Watchman's Walk Problem on Trees*, Atlantic Provinces Council on Sciences Mathematics/Statistics and Computer Science Conference, St. Mary's University, Halifax, NS, 1998

Conferences and Talks Organizer

- Canadian Mathematical Society Winter Meeting: Graph Searching Session (Co-organizers A. Bonato, M.E. Messinger), Toronto, ON, 2019
- Guest Lecture: Matthew van Bommel, *NBA Sports Analytics*, St. Francis Xavier University, Antigonish, NS, 2019
- East Coast Combinatorial Conference, (Co-organizers M. van Bommel, D. Cox), St. Francis Xavier University, Antigonish, NS, 2019
- Guest Lecture: Jared Howell, *A look at Watchman's Walks*, St. Francis Xavier University, Antigonish, NS, 2018
- East Coast Combinatorial Conference, Special Session: Should We Have an Atlantic Canada Research Group Centered on Social Networks (Co-organizers K. De'Bell, S. Fitzpatrick, J. Janssen, D. Pike), University of New Brunswick, St. John, NB, 2017
- Guest Lecture: Bill Kocay, *Constructing and Coordinatizing n_3 Configurations*, St. Francis Xavier University, Antigonish, NS, 2017
- Guest Lecture: Andrei Gagarin, *Applying the Probabilistic Method to Limited Packings in Graphs*, St. Francis Xavier University, Antigonish, NS, 2017
- The Atlantic Association for Research in the Mathematical Sciences Graphs and Games Collaborative Research Group, Research Workshop, St. Francis Xavier University, Antigonish, NS, 2014
- Guest Lecture: Jessica Enright and Rowland Kao, *How Do Differing Farmers Play the Game?*, St. Francis Xavier University, Antigonish, NS, 2013
- Science Atlantic Mathematics, Statistics & Computer Science Conference, Co-organizer M. van Bommel, St. Francis Xavier University, Antigonish, NS, 2011
- Canadian Mathematical Society Summer Meeting: Graph Theory Session (Co-organizer S. Fitzpatrick), Fredericton, NB, 2010
- Society for Industrial and Applied Mathematics Conference on Discrete Mathematics) 15th Annual Meeting: Graph Theory Session (Co-organizer G. McGillivray), Austin, Texas, 2010
- The Mathematical Meeting of the Saints (one-day workshop with Undergraduate Presentations), (Co-organizer A. Finbow), St. Mary's University, Halifax, NS, 2009
- East Coast Combinatorial Conference, St. Francis Xavier University, Antigonish, NS, 2008
- Guest Lecture: Neil Calkin, Atlantic Association for Research in the Mathematical Sciences Distinguished Lecturer, *Tossing Coins, and a Random Shooting Game of Lampert and Slater*, St. Francis Xavier University, Antigonish, NS, 2007
- Atlantic Undergraduate Astronomy and Physics Conference, Member of the Organizing Committee, Saint Mary's University, Halifax, NS, 1997
- A Conference in Honour of M. C. Escher, Assistant to the Organizer, St. Mary's University, Halifax, NS, 1996

Additional Conferences & Workshops Attended

- 37th Annual Cascadia Combinatorial Feast, Victoria, BC (online), 2020
- LGBTQ+ Math Day, The Fields Institute for Research in Mathematical Sciences, Toronto, ON (online), 2020
- Canadian Mathematics Society Winter Meeting, Toronto, ON, 2019
- Canadian Mathematics Society Summer Meeting, Regina, SK, 2019
- East Coast Combinatorial Conference, Dalhousie University, Halifax, NS, 2018
- Graph Searching in Canada Workshop, Grenfell Campus, Memorial University, Corner Brook, NFLD, 2017
- East Coast Combinatorial Conference, University of New Brunswick, St. John, NB, 2017
- East Coast Combinatorial Conference, University of New Brunswick, St. John, NB, 2009
- Coast Combinatorial Conference, University of Victoria, Victoria, BC, 2009
- East Coast Combinatorial Conference, St. Francis Xavier University, Antigonish, NS, 2008
- Fourth Workshop on Combinatorial and Algorithmic Aspects of Networking, Dalhousie University, Halifax, NS, 2007
- The Canadian Discrete and Algorithmic Mathematics Conference, Banff Research Centre, Banff, AB, 2007
- Discrete-Time Graph Processes and Games Workshop, Banff International Research Station, Banff, AB, 2007
- The 2nd Atlantic Association for Research in the Mathematical Sciences / Dalhousie Atlantic Analysis Days In honour of Tony Thomson, Dalhousie University, Halifax, NS, 2007
- Canadian Mathematics Society Winter Meeting, University of Victoria, Victoria, BC, 2005
- Combinatorial Potlatch, Simon Fraser University, Burnaby, BC, 2004
- The Graph Theory of Brian Alspach Conference, Simon Fraser University, Burnaby, BC, 2003
- Combinatorial Potlatch, University of Victoria, Victoria, BC, 2002
- Coast Combinatorial Conferences, University of Victoria, Victoria, BC, 1999-2001, 2003
- Combinatorics Workshop, Memorial University, St. John's, NFLD, 1999
- Canadian Mathematics Society Summer Meeting, Memorial University, St. John's, NFLD, 1999
- Atlantic Undergraduate Astronomy and Physics Conference, St. Mary's University, Halifax, NS, 1997
- A Conference in Honour of M. C. Escher, St. Mary's University, Halifax, NS, 1996
- Atlantic Provinces Council on Sciences Mathematics/Statistics and Computer Science Conferences, Atlantic Canada, 1995-1998, 2005

TEACHING EXPERIENCE

St. Francis Xavier University

Mathematical Concepts, Math 100 (Full Year Course)	<ul style="list-style-type: none"> ▪ Sept 2012 - April 2013 ▪ Sept 2010 - April 2011 ▪ Sept 2009 - April 2010 ▪ Sept 2008 - April 2009 ▪ Sept 2005 - April 2006
Mathematical Concepts: Sets, Logic and Number Theory, Math 101	<ul style="list-style-type: none"> ▪ Jan - April 2018 ▪ Sept - Dec 2016 ▪ Jan - April 2016 ▪ Sept - Dec 2015
Calculus: I, Math 111	<ul style="list-style-type: none"> ▪ Sept - Dec 2013 ▪ Sept - Dec 2007 ▪ Sept - Dec 2006 ▪ Sept - Dec 2005
Calculus: II, Math 112	<ul style="list-style-type: none"> ▪ Jan - April 2014 <ul style="list-style-type: none"> • 2 sections ▪ Jan - April 2008 ▪ Jan - April 2007 ▪ Jan - April 2006
Linear Algebra for Engineers, Engr 123 Math 223	<ul style="list-style-type: none"> ▪ Sept - Dec 2016
Elementary Statistics, Stat 201	<ul style="list-style-type: none"> ▪ Sept - Dec 2017 ▪ Jan - April 2016 ▪ Jan - April 2014 ▪ Jan - April 2010 ▪ Jan - April 2008 ▪ Sept - Dec 2007 ▪ Sept - Dec 2006 ▪ Jan - April 2006
Business Mathematics, Math 205	<ul style="list-style-type: none"> ▪ Sept - Dec 2014
Calculus III for Engineers, Math 222 Engr 222	<ul style="list-style-type: none"> ▪ Jan - April 2013
Matrix Algebra, Math 253	<ul style="list-style-type: none"> ▪ Sept - Dec 2010 ▪ Sept - Dec 2005
Linear Algebra, Math 254	<ul style="list-style-type: none"> ▪ Jan - April 2018
Discrete Structures, Math 277	<ul style="list-style-type: none"> ▪ Sept - Dec 2020 ▪ Sept - Dec 2019 ▪ Sept - Dec 2015 ▪ Sept - Dec 2012 ▪ Summer 2010 (reading) ▪ Sept - Dec 2009

	<ul style="list-style-type: none"> ▪ Sept - Dec 2008 ▪ Sept - Dec 2007 ▪ Sept - Dec 2006
Combinatorics, Math 347	<ul style="list-style-type: none"> ▪ Jan - April 2021 ▪ Sept - Dec 2016 ▪ Jan - April 2013 ▪ Jan - April 2011 ▪ Jan - April 2009 ▪ Jan - April 2007
Theory of Numbers, Math 372	<ul style="list-style-type: none"> ▪ Sept - Dec 2013 ▪ Sept - Dec 2009
The Number Games, Math 399	<ul style="list-style-type: none"> ▪ Jan - April 2016
Complex Variables, Math 462	<ul style="list-style-type: none"> ▪ Jan - April 2011 ▪ Jan - April 2009
Senior Seminar, Math 491	<ul style="list-style-type: none"> ▪ Sept - April 2021 ▪ Sept - April 2020

University of Victoria

Calculus: I, Math 100	<ul style="list-style-type: none"> ▪ May - June 2005
Calculus: II, Math 101	<ul style="list-style-type: none"> ▪ Jan - April 2005
Calculus for Biological and Social Sciences, Math 102	<ul style="list-style-type: none"> ▪ May - June 2004 ▪ Jan - April 2004
Mathematics for Economics, Math 103	<ul style="list-style-type: none"> ▪ July - Aug 2004 ▪ Jan - April 2004
Finite Mathematics, Math 151	<ul style="list-style-type: none"> ▪ Sept - Dec 2004 ▪ Sept - Dec 2003
Discrete and Combinatorial Mathematics, Math 222	<ul style="list-style-type: none"> ▪ Sept - Dec 2003

TRAINING OF HIGHLY QUALIFIED PERSONNEL SUPERVISION

- John Austin MacDonald, (Masters thesis Co-supervisor D. Pyke), *The Torching Problem*, 2021 - present
- Meredith Cudmore-Keating (Summer Research Student), *Properties of Generating Graphs of Finite Groups*, NSERC USRA Award, 2021
- Alexander Chow (Summer Research Student), *Switchable Homomorphisms of Mixed Graph*, NSERC USRA Award, 2021
- Allison Hancock, (Thesis supervisor), *The Power in the Power Play An Analysis of the NHL's Edmonton Oilers' Power Play Success*, 2021
- Allison Hancock (Summer Research Student), *The Math Behind a Power Play*, NSERC USRA Award, 2020

- Alexander Clow (Summer Research Student), *Hexagonal Chomp*, 2020
- April Long (Summer Research Student), *The Eternal Domination Numbers of Grid Graphs*, NSERC USRA Award, 2020
- Amanda Porter (Summer Research Student), *Hyperopic Cops and Robbers*, 2020 (Co-supervisors M. Messinger, N. Clarke via Maple League project), 2020
- Shelby Rouse (Summer Research Student), *Fractals*, (Co-supervisor T. Taylor), 2020
- Allison Hancock (Summer Research Student), *Using Linear Programming in Sports Management*, NSERC USRA Award, 2018
- Katie MacEachern (Summer Research Student), co-supervisor M.F. van Bommel, *Dual Independence in Chessboard Graphs*, NSERC USRA Award, 2017
- Dylan Coakely (Summer Research Student), co-supervisor M. van Bommel, *Eternal Domination on a King Graph*, NSERC USRA Award, 2017
- Claude-Michelle Chavy-Waddy (Summer Research Student), *Eternal Domination on the Strong Product of Grids*, 2016
- Mackenzie Pazos (Summer Research Student), *Kings Domination of a Chess Board*, University Council for Research Award, 2016
- Katie MacEachern (Summer Research Student), co-supervisor M. van Bommel, *Size Bounds for Peaceable Coexisting Armies of Queens*, NSERC USRA Award, 2016
- Dylan Coakely (Summer Research Student), co-supervisor M. van Bommel, *Eternal Domination on the 6 by n Grid*, NSERC USRA Award, 2016
- Thomas Favor (Summer Research Student), *Designing Fire Resistant Graphs*, Alley Heaps Award, 2014
- Christopher van Bommel (Honours) Thesis Supervisor, *Vertex Colouring Problems with Restrictions Given by Faces*, 2013
- Iain Beaton (Honours) Thesis co-supervisor J. Brown, *Math and Music: A Mathematical Survey of Change Ringing*, 2013
- John Austin MacDonald (Honours) Thesis co-supervisor R. Nowakowski, *Analyzing Variations of Combinatorial Games: Close Shave and Cricket Pitch*, 2013
- Christopher van Bommel (Summer Research Student), *Equality in the Domination Chain in Planar Triangulations*, NSERC USRA Award, 2012
- Iain Beaton (Summer Research Student), *Eternal Domination Number of Graphs*, 2012
- John Austin MacDonald (Summer Research Student), *Eternal Domination Number of Graphs*, 2012
- Christopher van Bommel (Summer Research Student), *The Gamma-Graph of Hypercubes*, NSERC USRA Award, 2011
- Michelle Begin (Summer Research Student), *The Gamma-Graph of the Cartesian Product of Graphs*, NSERC USRA Award, 2011
- Iain Beaton (Summer Research Student), *The Eternal Domination Number of Square Grids*, 2011

- John Austin MacDonald (Summer Research Student), *The Eternal Domination Number of Four by n Grids*, 2011
- Christopher van Bommel (Summer Research Student), *The Watchmen's Walk with Even Time Constraints*, NSERC USRA Award, 2010
- Michelle Begin (Summer Research Student), *The Robbing Ratio for Small Values of Time*, NSERC USRA Award, 2010
- Iain Beaton (Summer Research Student), *The Watchmen's Walk on Modified Spiders*, 2010
- Xuan (Tim) Meng (Honours) Thesis Supervisor, *Firefighting in Grid Graphs*, 2009
- Christopher van Bommel (Summer Research Student), *Defining the Robbing Ratio of a Graph*, 2009
- Xuan (Tim) Meng (Summer Research Student), *Fighting Fires on Variations of the Grid Graph*, University Council for Research Award, 2009
- Kewei (Ben) Yu (Honours) Thesis Supervisor, *Cryptographical Methods*, 2009
- Kewei (Ben) Yu (Summer Research Student), *The Domination Chain*, University Council for Research Award, 2008
- Dana Marchand (Summer Research Student), *Well Irredundance in Graphs*, 2008
- Kewei (Ben) Yu (Summer Research Student), *An Irredundant Game on Trees*, University Council for Research Award, 2007
- Daniel MacNeil (Advanced Major) Thesis Supervisor, *List Colouring and Frequency Assignment*, 2008
- Doug Ross (Honours) Thesis Supervisor, *Designing Virus Resistant Networks*, 2007
- Blair Dorion (Advanced Major) Thesis Supervisor, *Some Applications of Game Theory*, 2007

GRADUATE STUDENT THESIS EXAMINATION

- Alice Lacaze-Masmonteil, MSc Thesis Examination, Acadia University, *Some Problems on the Game of Ambush Cops and Robbers*, 2019
- Elham Roshanbin, PhD Thesis Examination, Dalhousie University, *Burning a Graph as a Model for the Spread of Social Contagion*, 2016
- Stefan Bard, MSc Thesis Examination, University of Victoria, *Gray Code Numbers of Complete Multipartite Graphs*, 2014

ELECTED & ADMINISTRATIVE POSITIONS, COMMITTEES, & OTHER SERVICE AT UNIVERSITIES

- Academic Priorities and Planning Committee, St. Francis Xavier University, 2020 - 2022

- Academic Strategic Plan, St. Francis Xavier University, 2021 - present
- Academic Strategic Plan Microcommittee: Questions, 2021 - present
- Academic Strategic Plan Microcommittee: Consultation, 2021 - present
- Chair, Department of Mathematics & Statistics, St. Francis Xavier University, 2019 - 2022
- University Senate, St. Francis Xavier University, 2019 - 2022
- Student Mental Health Committee, St. Francis Xavier University, 2021 - present
- Co-Chief Grievance Officer, St. Francis Xavier University, 2019 - 2020
- Co-Chief Grievance Officer, St Francis Xavier University, 2017 - 2018
- Committee on Nominations, St. Francis Xavier University, 2016 - 2018
 - Chair, Committee on Nominations, St. Francis Xavier University, 2017 - 2018
- Faculty of Science Recruitment Calling Campaign, St Francis Xavier University, 2017, 2018
- St. Francis Xavier University Mathematics & Statistics Representative for Science Atlantic, 2011 - 2018
- St. Francis Xavier University Mathematics Competition Coach: Science Atlantic/ Atlantic Provinces Council on Sciences and William Lowell Putnam Mathematics Competitors, 2008 - 2018
- William Lowell Putnam Mathematics Competition: Local Organizer and Invigilator, 2008 - 2018
- Department Roles, various years:
 - Department Evaluation Committee
 - Transfer Mathematics Credit Coordinator
 - Secretary
 - Ad Hoc Short-List Hiring Committee
 - Mathematics Subcommittee
 - Mathematics Curriculum Review Committee
- StFXAUT Contract and Benefits Committee, St. Francis Xavier University, 2015 - 2017
 - Chair, StFXAUT Contract and Benefits Committee, St. Francis Xavier University, 2016 - 2017
- Adhoc Copyright Committee, St. Francis Xavier University, 2015 - 2016
- Heaps Summer Internship, Scholarships, and Graduation Prize Committee, St. Francis Xavier University, 2014 - 2015
- StFXAUT Treasurer, St. Francis Xavier University, 2013 - 2015
- StFXAUT Salary and Benefits Committee, St. Francis Xavier University, 2009 - 2011
 - Chair, StFXAUT Salary and Benefits Committee, St. Francis Xavier University, 2010 - 2011
- Mathematics Representative for the Atlantic Provinces Council on the Sciences, St. Francis Xavier University, 2009 - 2011
- Academic Computing Committee, St. Francis Xavier University, 2008 - 2011

- Academic Computing Moodle Subcommittee, St. Francis Xavier University, 2009 - 2011
- Faculty Development Committee, St. Francis Xavier University, 2008 - 2011
 - Technology Subcommittee
 - Academic Computing Committee Liaison
- Organizer, St. Francis Xavier University Math League, 2008 - 2018
- Faculty academic advisor of incoming undergraduate students, St. Francis Xavier University, 2007 - 2009
- Secretary, Faculty of Science, St. Francis Xavier University, 2007 - 2008
- Organizer, campus wide St. Francis Xavier University Mathematics Competition, 2005 - 2006
- Graduate Representative Department of Mathematics and Statistics, University of Victoria, 2000 - 2003
- Committee to Appoint and Review the Chair of the Mathematics and Statistics Department, University of Victoria, 2002 - 2003
- Appeals Committee: Health and Dental, University of Victoria, 2002 - 2003
- Senate Committee: Academic Appeals, University of Victoria, 2002 - 2003
- Senate Committee: Graduate Fee Reduction and Appeals, University of Victoria, 2002-2003
- Vice-President Graduate Society of Mathematics, Dalhousie University, 1999

OTHER PROFESSIONAL ACTIVITIES

Administrative & External Committee Positions

- Board of Directors, Canadian Mathematics Society, 2019 - 2023
- NSERC Mathematics-Statistics Liaison Committee, (CMS), 2020 - 2022
- Chair, Science Atlantic: Mathematics & Statistics Committee, 2016 - 2018
- Mathematics Committee Secretary, Atlantic Provinces Council on the Sciences, 2009 - 2011

Editorial Positions

- Special Guest Editor: Journal of Combinatorial Mathematics and Combinatorial Computing (issue in honour of Gary MacGillivray), 2020
- Editor-in-Chief: Utilitas Mathematica, 2016 - 2019
- Managing Editor: Utilitas Mathematica, 2016 - 2019
- Special Guest Editor: Journal of Combinatorial Mathematics and Combinatorial Computing (issue in honour of Kieka Mynhardt), 2013

Referee and Reviewer

- Reviewer for Mathematical Reviews, a division of the American Mathematical Society
- Referee for various journals; Natural Sciences and Engineering Research Council Discovery Grants; National Sciences Foundation Awards

Professional Memberships

- Canadian Mathematics Society
- Society for Industrial and Applied Mathematics
- The Institute for Combinatorics and its Applications

PROFESSIONAL COMMUNITY INVOLVEMENT & OUTREACH

- Steering Committee Member, Atlantic Canada Research Group Centered on Social Networks 2017 - 2018
- Science Atlantic Undergraduate Mathematical Competition Exam Marker, various years through 2009 - 2018
- Science Atlantic Undergraduate Mathematical Presentation Competition Referee, various years through 2009 - 2018
- Regional Coordinator, Nova Scotia Math League, various years through 2006 - 2018
- Organizing Member, Games and Graphs Atlantic Association for Research in the Mathematical Sciences (AARMS) Collaborative Research Group, 2013 - 2014
- Problem Solving High School Outreach, Presentation with T. Taylor, Canso Academy, Canso, NS, 2013
- Mentor for the Day, Dr. John Hugh Gillis High School, 2007
- *Problem Solving Techniques*. A two-part lecture series for teachers at the Grade 7-12 level, Regional Professional Development Day, Mulgrave Professional Development Centre, 2006

COMMUNITY INVOLVEMENT

- Head Coach, StFX Women's Field Hockey Team, 2009 - 2016
- Judge, Dr. Moses Coady Debating Competition, various years
- Umpire & Player, Highland Touch Football League, 2006 - 2018
- Player, Pylons Ice Hockey League, 2006 - present