**Stephen Michael Finbow**

Department of Mathematics & Statistics

St. Francis Xavier University

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 902.867.5235 o | 902.318.8338 c | 902.735.2922 h

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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, effective July 2020 - July 2022
* Chair, Department of Mathemactics & 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**

* 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**

1. D. Huang, J. Qi, W. Wang, S. Finbow, *DP-coloring for Planar Graphs of Diameter Two,* Discrete Mathematics, Discrete Applied Mathematics, submitted 2020.
2. **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.
3. D. Huang, X. Zhang, W. Wang, S. Finbow, *Adjacent Vertex Distinguishing Edge Coloring of Planar Graphs without 3-Cycles,* Discrete Mathematics, Algorithms and Applications, submitted 2019.
4. 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, submitted 2019.
5. S. Finbow, **R. MacIssac**, **C.M. van Bommel**, *A Note on the Existence of Infinite Sequences of $Ggamma$-Graphs of Graphs,* Discrete Applied Mathematics, submitted 2019.

**Papers in Refereed Journals**

1. Y. Wang, D. Huang, S. Finbow, *On the Vertex Partition of Planar Graphs into Forests with Bounded Degree*, Applied Mathematics and Computation, 374, accepted 2020.
2. S. Finbow, M.F. van Bommel, *The Eternal Domination Number for 3 × n Grid Graphs,* Australasian Journal of Combinatorics, Volume 76(1), (2020) 1–23.
3. S. Finbow, **C.M. van Bommel**, $\gamma$-Graphs on Trees, Algorithms, 12(8), 153; 2019. Doi:10.3390/a12080153.
4. 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.
5. 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.
6. S. Finbow, **D. Marchand**, **C. M. van Bommel**, **B. Yu**, *Equality Throughout the Domination Chain*, Ars Combinatoria, accepted 2016.
7. 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.
8. S. Finbow, M.E. Messinger, M.F. van Bommel, *Eternal Domination on 3 X n Grid Graphs*, Australasian Journal of Combinatorics 61(2) (2015), 156-174.
9. S. Finbow, **C.M. van Bommel,** *Triangulations and Equality in the Domination Chain*, Discrete Applied Mathematics 194 (2015), 81-92.
10. Y. Bu, S. Finbow, D. Liu, X. Zhu, *List Backbone Colouring of Graphs*, Discrete Applied Mathematics 167 (2014), 45-51.
11. N.E. Clarke, S. Finbow, G. MacGillivray, *A Simple Method of Computing the Catch Time*, Ars Mathematica Contemporanea 7 (2014), 353-359.
12. W. Wang, S. Finbow, **J. Kong,** *The 2-Surviving Rate of Planar Graphs Without 6-Cycles*, Theoretical Computer Science 518 (2014), 22-31.
13. 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.
14. 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.
15. 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.
16. **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.
17. **I. Beaton**, S. Finbow, **J.A. MacDonald**, *Eternal Domination Numbers of 4 X n Grid Graphs*, Journal Combinatorial Mathematics and Combinatorial Computing85 (2013), 33-48.
18. W. Wang, S. Finbow, P. Wang, *An Improved Bound on Parity Vertex Colourings of Outerplane graph*s, Discrete Mathematics 312 (2012), 2782–2787.
19. W. Wang, S. Finbow, P. Wang, *The Surviving Rate of an Infected Network*, Theoretical Computer Science 411 (40-42) (2010), 3651-3660.
20. 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.
21. S. Finbow, G. MacGillivray, *The Firefighter Problem: A Survey,* Australasian Journal of Combinatorics 43 (2009), 57-78.
22. 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.
23. 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.
24. 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.
25. S. Finbow, *A Lower Bound for the CO-Irredundance Number of a Graph*, Discrete Mathematics 295 (2004), 49-62.
26. E. Cockayne, S. Finbow, *Generalized Irredundance in Graphs: Nordhaus-Gaddum Bounds,* Discussiones Mathematicae Graph Theory 24 (2004), 147-160.
27. 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.
28. 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**

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

**CONFERENCE CONTRIBUTIONS**

**Invited Lectures**

* *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, Portugual, 2010
* *Eternal Domination, Gamma Forever!* SIAM Conference on Discrete Mathematics, Dominating Sets and Domination Games Mini-Symposium, Austin, Texas, 2010
* *Firefighting on K4 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 Angle 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-organziers A. Bonato, E. Meger), Toronto, ON, 2019
* Guest Lecture: Matthew van Bommel, *NBA Sports Analytics*, St. Francis Xavier University, Antigonish, NS, 2019
* East Coast Combinatorial Conference,(Co-organziers 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**

* 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](http://www.mathstat.dal.ca/~caan2007/), 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) | * 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 | * Jan - April 2018
* Sept - Dec 2016
* Jan - April 2016
* Sept - Dec 2015
 |
| Calculus: I, Math 111 | * Sept - Dec 2013
* Sept - Dec 2007
* Sept - Dec 2006
* Sept - Dec 2005
 |
| Calculus: II, Math 112 | * Jan - April 2014
	+ 2 sections
* Jan - April 2008
* Jan - April 2007
* Jan - April 2006
 |
| Linear Algebra for Engineers, Engr 123 | Math 223 | * Sept - Dec 2016
 |
| Elementary Statistics, Stat 201 | * 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 | * Sept - Dec 2014
 |
| Calculus III for Engineers, Math 222 | Engr 222 | * Jan - April 2013
 |
| Matrix Algebra, Math 253 | * Sept - Dec 2010
* Sept - Dec 2005
 |
| Linear Algebra, Math 254 | * Jan - April 2018
 |
| Discrete Structures, Math 277 | * Sept - Dec 2019
* Sept - Dec 2015
* Sept - Dec 2012
* Summer 2010 (reading)
* Sept - Dec 2009
* Sept - Dec 2008
* Sept - Dec 2007
* Sept - Dec 2006
 |
| Combinatorics, Math 347 | * Sept - Dec 2016
* Jan - April 2013
* Jan - April 2011
* Jan - April 2009
* Jan - April 2007
 |
| Theory of Numbers, Math 372 | * Sept - Dec 2013
* Sept - Dec 2009
 |
| The Number Games, Math 399 | * Jan - April 2016
 |
| Complex Variables, Math 462 | * Jan - April 2011
* Jan - April 2009
 |
| Senior Seminar, Math 491 | * Sept - April 2020
 |

**University of Victoria**

|  |  |
| --- | --- |
| Calculus: I, Math 100 | * May - June 2005
 |
| Calculus: II, Math 101 | * Jan - April 2005
 |
| Calculus for Biological and Social Sciences, Math 102 | * May - June 2004
* Jan - April 2004
 |
| Mathematics for Economics, Math 103 | * July - Aug 2004
* Jan - April 2004
 |
| Finite Mathematics, Math 151 | * Sept - Dec 2004
* Sept - Dec 2003
 |
| Discrete and Combinatorial Mathematics, Math 222 | * Sept - Dec 2003
 |

**TRAINING OF HIGHLY QUALIFIED PERSONNEL SUPERVISION**

* 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 Peacable 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 Triangulisations*, 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**

* Co-Chief Grievance Officer, St. Francis Xavier University, 2019 - 2020
* Chair, Department of Mathematics & Statistics, St. Francis Xavier University, 2019-2022
* University Senate, St. Francis Xavier University, 2019-2022
* 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 advising 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 Positions**

* Board of Directors, Canadian Mathematics Society, 2019-2023
* Chair, Science Atlantic: Mathematics & Statistics Committee, 2016 - 2018
* Mathematics Committee Secretary, Atlantic Provinces Council on the Sciences, 2009 - 2011

**Editorial Positions**

* Editor-in-Chief: Utilitas Mathematica, 2016 – present
* Managing Editor: Utilitas Mathematica, 2016 – present
* 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