

Curriculum Vitae: Robert Bailey

Personal details

Robert Francis Bailey, M.Math. (Hons.) *Leeds*, Ph.D. *London*

Citizenship: British and Canadian

Address

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Education

September 2002–December 2005: Ph.D. in Mathematics, Queen Mary, University of London, UK.

Thesis: *Permutation groups, error-correcting codes and uncoverings*.

Supervisor: Prof. P. J. Cameron; second supervisor: Prof. R. A. Bailey.

September 1998–June 2002: University of Leeds, UK, except for September 2000–April 2001 spent at University of Waterloo.

Degree awarded: M.Math. (Honours Class I), Mathematics (North America), University of Leeds, 2002. (This was an extended undergraduate programme which culminated in the award of a Masters' degree.)

Dissertation: *Distance-transitive graphs*, supervisor Prof. H. D. Macpherson.

Career History

May 2024–present: Interim Dean, School of Science and the Environment (Mathematics), Grenfell Campus, Memorial University.

September 2020–present: Associate Professor (tenured), School of Science and the Environment (Mathematics), Grenfell Campus, Memorial University; cross-appointed to Department of Mathematics and Statistics, St. John's campus, since February 2023.

August 2018–August 2020: Assistant Professor (tenure-track), School of Science and the Environment (Mathematics), Grenfell Campus, Memorial University.

August 2015–July 2018: Assistant Professor (limited term), Division of Science/School of Science and the Environment (Mathematics), Grenfell Campus, Memorial University.

August 2013–April 2014/September 2014–April 2015: Visiting Assistant Professor (limited term), Division of Science (Mathematics), Grenfell Campus, Memorial University.

September 2012–August 2013: Postdoctoral Fellow and Instructor, Department of Mathematics, Ryerson University (now Toronto Metropolitan University), Toronto.

September 2009–August 2012: Postdoctoral Fellow, Department of Mathematics and Statistics, University of Regina. (PIMS Postdoctoral Fellow for September 2009–August 2011.)

September 2007–August 2009: Postdoctoral Fellow and Instructor, School of Mathematics and Statistics, Carleton University, Ottawa.

Research Interests

In the area of algebraic combinatorics, studying combinatorial and algebraic structures and the links between them. My main interests are in the following areas:

- algebraic graph theory;
- combinatorial design theory;
- error-correcting codes;
- permutation groups.

Other combinatorial topics (including association schemes, enumeration, hypergraphs, matroids, finite geometries, and combinatorial matrix theory) are also of interest.

Publications

Papers published in refereed journals

1. R. F. Bailey, *Uncoverings-by-bases for base-transitive permutation groups*, Designs, Codes and Cryptography **41** (2006), 153–176.
2. R. F. Bailey and J. P. Dixon, *Distance enumerators of permutation groups*, Communications in Algebra **35** (2007), 3045–3051.
3. R. F. Bailey and J. N. Bray, *Decoding the Mathieu group M_{12}* , Advances in Mathematics of Communications **1** (2007), 477–487.
4. R. F. Bailey and P. J. Cameron, *On the single-orbit conjecture for uncoverings-by-bases*, Journal of Group Theory **11** (2008), 845–850.
5. R. F. Bailey, *Error-correcting codes from permutation groups*, Discrete Mathematics **309** (2009), 4253–4265.
6. R. F. Bailey and B. Stevens, *Hamiltonian decompositions of complete k -uniform hypergraphs*, Discrete Mathematics **310** (2010), 3088–3095.
7. R. F. Bailey and P. J. Cameron, *Base size, metric dimension and other invariants of groups and graphs*, Bulletin of the London Mathematical Society **43** (2011), 209–242.
8. R. F. Bailey and B. Stevens, *Uncoverings on graphs and network reliability*, Australasian Journal of Combinatorics **50** (2011), 219–231.
9. R. F. Bailey, A. C. Burgess, M. S. Cavers and K. Meagher, *Generalized covering designs and clique coverings*, Journal of Combinatorial Designs **19** (2011), 378–406.
10. R. F. Bailey and K. Meagher, *On the metric dimension of Grassmann graphs*, Discrete Mathematics and Theoretical Computer Science **13:4** (2011), 97–104.
11. R. F. Bailey and T. Prellberg, *Decoding generalised hyperoctahedral groups and asymptotic analysis of correctable error patterns*, Contributions to Discrete Mathematics **7:1** (2012), 1–14.
12. R. F. Bailey, J. Cáceres, D. Garijo, A. González, A. Márquez, K. Meagher and M. L. Puertas, *Resolving sets for Johnson and Kneser graphs*, European Journal of Combinatorics **34** (2013), 736–751.
13. R. F. Bailey and A. C. Burgess, *Generalized packing designs*, Discrete Mathematics **313** (2013), 1167–1190.
14. R. F. Bailey, M. W. Newman and B. Stevens, *A note on packing spanning trees in graphs and bases in matroids*, Australasian Journal of Combinatorics **59:1** (2014), 24–38.
15. R. F. Bailey, *The metric dimension of small distance-regular and strongly regular graphs*, Australasian Journal of Combinatorics **62:1** (2015), 18–34.
16. R. J. R. Abel, R. F. Bailey, A. C. Burgess, P. Danziger and E. Mendelsohn, *On generalized Howell designs with block size three*, Designs, Codes and Cryptography **81** (2016), 365–391.
17. R. F. Bailey, *On the metric dimension of imprimitive distance-regular graphs*, Annals of Combinatorics **20** (2016), 641–659.

18. R. F. Bailey, *On the metric dimension of incidence graphs*, Discrete Mathematics **341** (2018), 1613–1619.
19. R. F. Bailey and I. G. Yero, *Error-correcting codes from k -resolving sets*, Discussiones Mathematicae Graph Theory **39** (2019), 341–355.
20. R. F. Bailey and R. Craigen, *On orthogonal matrices with zero diagonal*, Electronic Journal of Linear Algebra **35** (2019), 307–318.
21. R. F. Bailey and D. R. Hawtin, *On the 486-vertex distance-regular graphs of Koolen–Riebeek and Soicher*, Electronic Journal of Combinatorics **27** (2020), P3.13 (12pp).
22. R. F. Bailey and D. R. Hawtin, *On the classification of binary completely transitive codes with almost-simple top-group*, European Journal of Combinatorics **107** (2023), 103604 (28pp).
23. R. F. Bailey and P. Spiga, *Metric dimension of dual polar graphs*, Archiv der Mathematik (Basel) **120** (2023), 467–478.
24. R. F. Bailey and I. Darijani, *Block colourings of star systems*, Discrete Mathematics **346** (2023), 113404 (14 pp).
25. R. F. Bailey and K. B. Nicholson, *Decoding twisted permutation codes*, Australasian Journal of Combinatorics **88** (2024), 144–159.

Papers submitted to refereed journals

26. *Induced paths in strongly regular graphs* (with A. K. Rowsell); arXiv:2307.14493.

Non-refereed publications

27. www.distanceregular.org, an online database of distance-regular graphs, 2016–present (developed with assistance from F. L. Bosquet, C. M. Bowers, A. D. M. Jackson, D. R. O'Neill, A. J. Pardy, A. K. Rowsell and C. H. Weir).

Research talks

I have given colloquium/seminar talks about my research at the following universities:

California Institute of Technology; Carleton University; Imperial College London; Memorial University (Grenfell Campus); Memorial University (St. John's campus); Portland State University; Queen Mary, University of London; Ryerson University; Simon Fraser University; Universität Bayreuth, University of Auckland; University of New South Wales; University of Ottawa; University of Regina; University of Rijeka; University of St. Andrews; University of Waterloo (online seminar); University of Winnipeg.

I have given talks about my research at conferences in: Canada (36; 2 online); United Kingdom (17; 1 online); Italy (6); Slovenia (3); Australia (2; 1 online); Germany (2); United States (2); New Zealand (1); Malta (1); Portugal (1); Netherlands (1); Croatia (1); Russia (1 online).

Conference presentations (2013-present)

- *A new construction of the Biggs-Smith distance-regular graph*, 30th British Combinatorial Conference, Queen Mary University of London, UK, 5 July 2024.
- *Distance-regular and strongly regular graphs from affine permutation groups*, Combinatorial Constructions Conference, Dubrovnik, Croatia, 11 April 2024.
- *Block-colourings of e -star systems*, Cross-Campus Combinatorics Conference, Memorial University, St. John's, 21 August 2023.
- *Block-colourings of e -star systems*, Rijeka Conference on Combinatorial Objects and their Applications (RICCOTA 2023), Rijeka, Croatia, 6 July 2023.

- *Some open questions on distance-regular graphs with primitive automorphism groups*, 10th Slovenian Conference on Graph Theory (invited to speak in session on "Association Schemes and Related Algebras"), Kranjska Gora, Slovenia, 19 June 2023.
- *Decoding twisted permutation codes*, Combinatorics in Digital Communication, TuE Eindhoven, Netherlands, 19 April 2023.
- *Distance-regular graphs with primitive automorphism groups* (invited talk), Al@Bicocca Flash Workshop, University of Milan-Bicocca, Milan, Italy, 27 February 2023.
- *Cataloguing strongly regular graphs with primitive automorphism groups*, Canadian Mathematical Society Winter Meeting 2022 (session on "Spectral Graph Theory"), Toronto, 5 December 2022.
- *Cataloguing distance-regular graphs with primitive automorphism groups*, KolKom (Colloquium on Combinatorics) Universität Paderborn, Germany, 19 November 2022.
- *A mystery graph on 136 vertices*, East Coast Combinatorics Conference, University of Prince Edward Island, 18 August 2022 (talk delivered online).
- *On strongly regular graphs with 136 vertices*, Combinatorics 2022, Mantua, Italy, 3 June 2022.
- *On strongly regular graphs with 136 vertices*, 43rd Australasian Combinatorial Conference, University of Melbourne, Australia (online conference), 13-17 December 2021.
- *On the 486-vertex distance-regular graphs of Koolen–Riebeek and Soicher*, 28th British Combinatorial Conference, Durham University, UK (online conference), 5 July 2021.
- *On the 486-vertex distance-regular graphs of Koolen–Riebeek and Soicher*, Canadian Mathematical Society Winter Meeting 2020 (invited to speak in session on "Graph Theory"), McGill University (online conference), 4 December 2020.
- *On the 486-vertex distance-regular graphs of Koolen–Riebeek and Soicher*, 2020 Ural Workshop on Group Theory and Combinatorics, Ural Federal University, Yekaterinburg, Russia (online conference), 24 August 2020.
- *On distance-regular graphs on 486 vertices*, East Coast Combinatorics Conference, St. Francis Xavier University, 13 August 2019.
- *On distance-regular graphs on 486 vertices*, 9th Slovenian Conference on Graph Theory, Bled, Slovenia, 24 June 2019.
- *Orthogonal matrices with zero diagonal*, Canadian Mathematical Society Summer Meeting 2019 (invited to speak in session on "Matrix Theory"), University of Regina, 10 June 2019.
- *Metric dimension of dual polar graphs*, Combinatorics 2018, Arco, Italy, 6 June 2018.
- *Orthogonal matrices with zero diagonal*, East Coast Combinatorics Conference, Dalhousie University, 8 May 2018.
- *On the metric dimension of incidence graphs*, 5th International Combinatorial Conference, Monash University, Melbourne, Australia, 7 December 2017.
- *Base size and orbital dimension for permutation groups* (invited talk), All Kinds of Mathematics Remind Me of You (in honour of P. J. Cameron), Universidade de Lisboa, Lisbon, Portugal, 25 July 2017.
- *A database of distance-regular graphs*, 26th British Combinatorial Conference, University of Strathclyde, Glasgow, UK, 3 July 2017.
- *Orthogonal matrices with zero diagonal*, 2nd Malta Conference in Graph Theory and Combinatorics, Qawra, Malta, 27 June 2017.
- *Metric dimension of incidence graphs*, East Coast Combinatorics Conference, Mount Saint Vincent University, 18 July 2016.
- *Metric dimension of incidence graphs*, Canadian Mathematical Society Summer Meeting 2016 (invited to speak in session on "Algebraic Graph Theory"), University of Alberta, 25 June 2016.
- *Generalized Howell designs*, Prairie Discrete Mathematics Workshop 2016, University of Manitoba, 16 May 2016.

- *Generalized Howell designs*, East Coast Combinatorics Conference, Mount Allison University, 28 July 2015.
- *On the metric dimension of imprimitive distance-regular graphs, II*, 25th British Combinatorial Conference, University of Warwick, UK, 6 July 2015.
- *Metric dimension of imprimitive distance-regular graphs*, 8th Slovenian Conference on Graph Theory, Kranjska Gora, Slovenia, 26 June 2015.
- *Metric dimension of distance-regular graphs: a triennial update*, Canadian Mathematical Society Summer Meeting 2015 (session on “Graphs, Designs and Hypergraphs”), University of Prince Edward Island, 6 June 2015.
- *Metric dimension of imprimitive distance-regular graphs, II*, Discrete Mathematics Days and Ontario Combinatorics Workshop, University of Ottawa, 24 May 2015.
- *Metric dimension of graphs and metric spaces*, Science Atlantic Mathematics, Statistics & Computer Science Conference, University of New Brunswick Saint John, 4 October 2014.
- *Computing the metric dimension of distance-regular graphs*, Combinatorics 2014, Gaeta, Italy, 3 June 2014.
- *On the metric dimension of imprimitive distance-regular graphs*, 24th British Combinatorial Conference, Royal Holloway University of London, UK, 1 July 2013.
- *Generalized packing designs with block size five*, CanaDAM 2013 (invited to speak in mini-symposium in honour of E. Mendelsohn), Memorial University, St. John’s, 10 June 2013.
- *Generalized packing designs with block size five*, 21st Ontario Combinatorics Workshop, Nipissing University, 16 May 2013.
- *Metric dimension of imprimitive distance-regular graphs*, Ottawa–Carleton Discrete Mathematics Days, University of Ottawa, 10 May 2013.

Grants and awards

- 2024: AARMS (Atlantic Association for Research in the Mathematical Sciences) Conference Fund, to support 16th East Coast Combinatorics Conference (with R. G. Milley), C\$8394.
- 2016–23: NSERC Discovery Grant, to support *Graphs, Designs, Codes and Groups: Topics in Algebraic Combinatorics*, C\$18,000/year for seven years (including 1-year Early Career Researcher extension and 1-year COVID-19 extension).
- 2019–20: MUCEP Research Grant (Memorial University), to support an undergraduate research assistant for 40 hours’ work (C\$600 approx.).
- 2018–present: Cross-Campus Initiatives Fund (Memorial University), to support *Cross-Campus Combinatorics* project (with D. A. Pike), C\$3,500.
- 2018–19: MUCEP Research Grant (Memorial University), to support an undergraduate research assistant for 40 hours’ work (C\$600 approx.).
- 2017–19: Seed, Bridge & Multidisciplinary Grant (with R. P. Gallant and T. M. Ngatched), Memorial University, C\$10,000.
- 2016–19: Startup Grant, Memorial University, C\$10,000, plus C\$15,000 to support a postdoctoral fellow.
- 2016–17: MUCEP Research Grant (Memorial University), to support an undergraduate research assistant for 40 hours’ work (C\$600 approx.).
- 2015: AARMS (Atlantic Association for Research in the Mathematical Sciences) grant, to support *Graphs, Designs and Hypergraphs* session at 2015 Canadian Mathematical Society Summer Meeting (with A. C. Burgess and M.-E. Messinger), C\$3000.
- 2014: Vice-President’s Research Fund (Grenfell Campus, Memorial University), to support *Generalizations of Combinatorial Designs* research project, C\$1055.
- 2009–11: PIMS Postdoctoral Fellowship, C\$20,000/year for two years.

- 2004: London Mathematical Society Scheme 1 grant, to support 15th Postgraduate Combinatorial Conference, £1648.
- 2004 Ann Cook Prize (School of Mathematical Sciences, Queen Mary, University of London), for an essay/poster competition for Ph.D. students in mathematics (book prize).
- 2002–05: EPSRC CASE studentship (Co-operative Awards in Science and Engineering), part-sponsored by UK Government Communications Headquarters (GCHQ), £14,000/year for three years, plus £4200 travel allowance.

Training of Highly Qualified Personnel

Supervision of postdoctoral fellows

- September 2021–August 2022: Iren Darijani.
- January 2018–March 2019: Daniel R. Hawtin.

Supervision of students (paid research assistants)

- May–August 2024: Daniel R. O'Neill, undergraduate research assistant (full-time).
- November 2023–April 2024: Daniel R. O'Neill, MUCEP* research assistant (part-time).
- May–August 2022: Alaina J. Pardy, NSERC USRA.
- May–August 2022: Abigail K. Rowsell, NSERC USRA.
- May–August 2021: Aaron G. Dwyer, NSERC USRA.
- May–August 2021: Alaina J. Pardy, NSERC USRA.
- May–August 2021: Abigail K. Rowsell, NSERC USRA.
- May–August 2020: Dylan P. Ruth, NSERC USRA.
- January–April 2020: Fabien L. Bosquet, MUCEP* research assistant (part-time).
- January–April 2019: Cindy M. Bowers, MUCEP* research assistant (part-time).
- January–April 2019: Keenan B. Nicholson, NSERC USRA.
- May–August 2018: Brittany E. Pittman, NSERC USRA.
- October 2016–March 2017: Courtney H. Weir, MUCEP* research assistant (part-time).
- May–August 2016: Adam D. M. Jackson, undergraduate research assistant (full-time).

**MUCEP: Memorial Undergraduate Career Enhancement Program*

Supervision of students (enrolled in Math 4950 project course)

- January–April 2022: Alaina J. Pardy
- January–April 2022: Abigail K. Rowsell
- May–August 2019: Keenan B. Nicholson
- January–April 2019: Aaron K. W. Elgar
- January–April 2018: Jamie L. Pennell

Examination of graduate student theses

- January 2016: Robert Luther, M.Sc. thesis, Department of Mathematics and Statistics, Memorial University.
- July 2010: Alison M. Purdy, M.Sc. thesis, Department of Mathematics and Statistics, University of Regina.

Organization of Research Events

- Co-organizer of 16th *East Coast Combinatorics Conference*, Grenfell Campus, Corner Brook, 13–14 May 2024 (with R. G. Milley).
- Co-organizer of workshop *Symmetry Breaking in Discrete Structures*, Casa Matemática Oaxaca, Oaxaca, Mexico, 16–21 September 2018 (with D. L. Boutin, W. Imrich and T. W. Tucker).
- Co-organizer of *FLIRT* (Friday Light Informal Research Talks), Grenfell Campus, January–December 2017 (with D. Nadolny).
- Co-organizer of minisymposium *Graphs, Designs and Hypergraphs* at Canadian Mathematical Society Summer Meeting, Charlottetown, 5–8 June 2015 (with A. C. Burgess and M.-E. Messinger).
- Co-organizer of *Graphs, Designs and Algebraic Combinatorics*, University of Regina, 18–21 July 2011, and *Prairie Discrete Mathematics Workshop 2011*, University of Regina, 22–23 July 2011 (with S. M. Fallat and K. Meagher).
- Co-organizer of *Ottawa–Carleton Combinatorics and Optimization Seminar*, September 2008–April 2009 (with R. Naserasr).
- Co-organizer of *From Higman–Sims to Urysohn: Peter Cameron’s 60th birthday conference*, University of Cumbria, Ambleside, UK, 23–26 August 2007 (with H. D. Macpherson, S. E. Rees and L. H. Soicher).
- Organizer of 15th *Postgraduate Combinatorial Conference*, Queen Mary, University of London, 20–22 April 2004.
- Organizer of *QuIPS* (Queen Mary Internal Postgraduate Seminar), January–December 2003.

Peer review

- Referee for the following journals:
Advances in Geometry; *Aequationes Mathematicae*; *Applicable Analysis and Discrete Mathematics*; *Ars Combinatoria*; *Ars Mathematica Contemporanea*; *The Art of Discrete and Applied Mathematics*; *Australasian Journal of Combinatorics*; *Combinatorica*; *Communications in Algebra*; *The Computer Journal*; *Contributions to Discrete Mathematics*; *Discrete Applied Mathematics*; *Discrete Mathematics*; *Discrete Mathematics and Theoretical Computer Science*; *Electronic Journal of Combinatorics*; *European Journal of Combinatorics*; *Finite Fields and their Applications*; *Graphs and Combinatorics*; *IEEE Transactions on Information Theory*; *Information Processing Letters*; *International Journal of Computer Mathematics*; *Journal of Combinatorial Designs*; *Journal of Algebra*; *Journal of Combinatorial Theory (Series A)*; *Journal of Geometry and Physics*; *Journal of Group Theory*; *Optimization Letters*.
- Reviewer for *Mathematical Reviews*.
- Reviewer for ACM–SIAM Symposia on Discrete Algorithms (SODA19).
- Reviewer for NSERC Discovery Grant program.
- Reviewer for National Security Agency Mathematical Sciences Grant Program.
- Reviewer for Croatian Science Foundation.

Research visits

- University of Rijeka, Croatia, January–May 2023, 4 months. (Hosts: D. Hawtin, D. Crnković, A. Švob)
- University of Milan-Bicocca, Italy, February–March 2023, 1 week. (Host: P. Spiga)
- University of Brescia, Italy, November 2022, 1 week. (Host: T. Traetta)
- Universität Bayreuth, Germany, November 2022, 1 week. (Host: A. Wassermann)
- Vrije Universiteit Brussel, Belgium, November 2022, 1.5 weeks. (Host: J. De Beule)
- Memorial University (St. John’s campus), October 2022, 1 week. (Host: D. Pike)
- University of Waterloo, October 2022, 1 week. (Host: C. Godsil)
- University of Rijeka, Croatia, June 2022, 1 week. (Host: D. Hawtin)
- University of Rijeka, Croatia, July 2019, 1 week. (Host: D. Hawtin)

Teaching Experience

At Grenfell Campus, Memorial University

- Math 1000 *Calculus I* (2 occasions: Fall 2013; Winter 2015)
- Math 1001 *Calculus II* (5 occasions: Fall 2014; Winter 2014, 2016, 2017, 2021)
- Math 1052 *Mathematics for Business* (1 occasion: Fall 2016)
- Math 2000 *Calculus III* (4 occasions: Fall 2013, 2014, 2021, 2023)
- Math 2050 *Linear Algebra I* (3 occasions: Fall 2015, 2019; Winter 2019)
- Math 2320 *Discrete Mathematics* (3 occasions: Winter 2014, 2019, 2021)
- Math 3000 *Real Analysis I* (3 occasions: Winter 2015, 2017, 2018)
- Math 3240 *Applied Graph Theory* (5 occasions: Fall 2017, 2018, 2019, 2020, 2021)
- Math 3320 *Abstract Algebra* (1 occasion: Fall 2018)
- Math 4290/Math 4345 *Advanced Graph Theory* (4 occasions: Winter 2016, 2018, 2024; Fall 2024)
- Math 4950 *Senior Project* (3 occasions: Winter 2018, 2019; Spring 2019)
- Math 6340 *Graph Theory* (1 occasion: Winter 2024. Graduate course for students at Memorial University St. John's campus. Cross-listed with Math 4345.)
- Stat 2550 *Statistics for Science Students* (2 occasions: Fall 2015, 2017)
- SC 4000 *Senior Science Seminar* (1 occasion: Winter 2022)
- *On sabbatical leave September 2022—August 2023*

At Ryerson University

- MTH330 *Calculus and Geometry* (1 occasion: Fall 2012)

At University of Regina

- Math 122 *Linear Algebra I* (3 occasions: Fall 2009; Winter 2010, 2012)
- Math 890AL *Permutation Groups* (2 occasions: Winter 2011, 2012. Graduate course.)
- Stat 100 *Elementary Statistics for Applications* (2 occasions: Fall 2010, 2011)

At Carleton University

- Math 1009 *Calculus for Business and Economics* (2 occasions: Spring 2008; Fall 2008)
- Math 2107 *Linear Algebra II* (1 occasion: Spring 2009)
- Math 3107 *Linear Algebra III* (1 occasion: Winter 2008)

At Queen Mary, University of London

- SEJ015 *Discrete Mathematics* (2 occasions: Spring 2006, 2007)

Teaching-related Professional Development

- March 2021: *Online Teaching Meet Up: Reflection & Check-in*, First-Year Mathematics & Statistics in Canada discussion group.
- Spring 2020: Numerous sessions devoted to remote/online teaching.
- September 2019: *Teaching in a Diverse Classroom*, Grenfell Campus.
- September 2018: *Becoming an Excellent Teacher: Keys to Mastery*, Grenfell Campus.
- March 2018: *Theatre Skills Teaching Workshop*, Grenfell Campus.
- September 2017: *Working with Intercultural Diversity in the Classroom*, Grenfell Campus.
- January–April 2014: *Teaching Skills Enhancement Program*, Distance Education, Learning and Teaching Support (DELTS), Memorial University.

Professional Service

Committee and Service Roles at Memorial University

- May 2024–present: Interim Dean, School of Science and the Environment.
- September 2019–August 2022, September 2023–May 2024: Program Chair, General Science program, School of Science and the Environment.
- September 2017–September 2019, October 2023–present: Secretary of Academic Council, School of Science and the Environment.
- October 2017–September 2022: Chair, Committee on Academic Programming, School of Science and the Environment.
- October 2017–September 2022: Senate Committee on Undergraduate Studies (*ex officio*).
- September 2016–July 2021: Senate Committee on Research.
- April–June 2020: COVID-19 Mathematics Bridging Program committee.
- October 2016–August 2017: Chair, Academic Planning Committee, Grenfell Campus.
- September 2016–March 2017: Constitution committee, School of Science and the Environment.

Search Committees at Grenfell Campus

- July 2024–present: Search Committee for Vice-President (Grenfell Campus).
- March 2024: Search Committee for Mathematics.
- April–May 2022: Search Committee for Physics.
- March 2022: Search Committee for Mathematics.
- October 2021–April 2022: Chair, Search Committee for Food Biochemistry/Food Chemistry.
- March–April 2021: Search Committee for Mathematics.
- April 2020: Search Committee for Mathematics.
- November 2018–May 2019: Search Committee for Mathematics.
- March–May 2018: Search Committee for Mathematics.
- May 2017: Search Committee for Mathematics.
- January–April 2017: Search Committee for Associate Vice-President (Grenfell Campus) Research and Graduate Studies.
- June–September 2016: Chair, Search Committee for Mathematics.
- August–December 2015: Search Committee for Computational Mathematics.

Elsewhere

- Judge for student presentation awards, Science Atlantic Mathematics, Statistics & Computer Science Conference (2 occasions; October 2017 and October 2019).
- Judge for student posters, Canadian Mathematical Society Summer Meeting (2 occasions; June 2016 and June 2019)
- May–August 2009: Secretary, Carleton University Postdoctoral Association.
- July 2003–May 2004: Student representative, British Combinatorial Committee.

Other Activities

Society Memberships

- 2020–present: American Mathematical Society.
- 2020–present: International Linear Algebra Society.
- 2017–present: Canadian Mathematical Society.
- 2017–present: Combinatorial Mathematics Society of Australasia.
- 2002–present: London Mathematical Society.

Schools Outreach

- Judge for *Let's Talk Science: Design Challenge*, each May from 2015 to 2019, and May 2024.
- Assisted with *Saskatchewan Mathematics Challenge* for Grade 7–10 students, March 2011.
- Devised a set of *Mathematics Challenge* quiz questions for Year 7 students, September 2007.
- Led or assisted with one-day courses for Year 11 and 12 students on graph theory, Ramsey theory and cryptography, 2005–2007.

Administrative Support Roles

- Course Administrator for MAS115 *Calculus I* and MAS125 *Calculus II* (responsible for implementation of *MyMathLab* web-based course management system), Queen Mary, University of London, September 2006–May 2007.
- Student recruitment/admissions assistant, Queen Mary, University of London, August–September 2004, August 2005, August–September 2006 and August 2007.

Referees

Names, addresses and contact information are available upon request.