

# Dan McQuillan, Ph.D.

Department of Mathematics  
Norwich University  
Northfield Vermont, USA 05663

## EXPERIENCE

**Norwich University** – 2008 to present  
Associate Professor, Department of Mathematics

**Norwich University** – 2002 to 2008  
Assistant Professor, Department of Mathematics

**Southern Illinois University at Carbondale** – 2001 to 2002  
Lecturer, Department of Mathematics

**Lakehead University** – 2000 to 2001  
Visiting Assistant Professor, Department of Mathematics

**University of Western Ontario** – 1996 to 1999  
Instructor (part-time)

**University of Western Ontario** – 1991 to 1996  
Teaching Assistant (10 hours per week)

**Carleton University** – 1990 to 1991  
Teaching Assistant (10 hours per week)

## REFEREED JOURNAL PUBLICATIONS

D. McQuillan, “A technique for constructing magic labelings of 2-regular graphs”, *J. Combin. Math. Combin. Comput.*, to appear.

J. Holden, D. McQuillan and J. M. McQuillan, “A conjecture on strong magic labelings of 2-regular graphs”, *Discrete Math.*, 309 (2009), pp. 4130-4136.

D. McQuillan and J. M. McQuillan, “Magic labelings of triangles”, *Discrete Math.*, 309 (2009), pp. 2755-2762.

D. McQuillan, “Edge-magic and vertex-magic total labelings of certain cycles”, *Ars Combin.*, 91 (2009), pp. 257-266.

D. McQuillan and K. Smith, “Vertex-magic total labeling of multiple complete graphs”, *Congr. Numer.*, 180 (2006), pp. 201-205.

D. McQuillan and K. Smith, “Vertex-magic total labeling of odd complete graphs”, *Discrete Math.*, 305 (2005), pp. 240-249.

D. McQuillan, “Vertex magic cubic graphs”, *J. Combin. Math. Combin. Comput.*, 48 (2004), pp. 103–106.

D. McQuillan and R. B. Richter, “On 3-regular graphs having crossing number at least 2”, *J. Graph Theory*, 18 (1994), pp. 831–839.

D. McQuillan and R. B. Richter, “Equality in a result of Kleitman”, *J. Combin. Theory, Ser. A*, 65 (1994), pp. 330–333.

D. McQuillan and R. B. Richter, “On the crossing numbers of certain generalized Peterson graphs”, *Discrete Math.*, 104 (1992), pp. 311–320.

#### OTHER PUBLICATIONS

D. McQuillan, “Edge-magic and vertex-magic labeling of regular graphs of degree 2”, Charles A. Dana Fall Semester Fellowship Report, January 2008.

D. McQuillan, “Vertex-magic total labelings of certain 2-regular graphs”, Charles A. Dana Summer Fellowship Report, July 2006.

D. McQuillan, “Magic labelings of graphs”, Charles A. Dana Summer Fellowship Report, July 2004.

D. McQuillan, “Quadratic forms and Galois theory”, Ph.D. Thesis, University of Western Ontario, July 1998.

D. McQuillan, “A few structural results in finite mathematics”, Honours Project, Carleton University, 1991.

#### COURSES TAUGHT

##### **Norwich University**

Senior Seminar MA411  
Number Theory MA421  
Algebraic Structures MA309  
Mathematical Problem Solving MA399  
Modern Geometry MA308  
Discrete Mathematics MA306  
Linear Algebra MA310  
Calculus II MA122  
Calculus I MA121  
Mathematics, a Liberal Art II MA102  
Mathematics, a Liberal Art I MA101  
Precalculus MA107  
College Algebra MA103

**Southern Illinois University of Carbondale**

College Algebra  
Finite Mathematics for Business Students  
Calculus for Business Students

**Lakehead University**

Complex Analysis  
Applied Analysis (Linear Algebra)  
Discrete Mathematics for Engineers  
Discrete Mathematics for Computer Science Students

**University of Western Ontario**

Introductory Calculus  
Introductory Algebra and Geometry

AWARDS AND SCHOLARSHIPS

Norwich University Summer Research Fellowship, 2009.

Independent Study Leave awarded for research, Spring 2009.

Charles A. Dana Fall Semester Fellowship, 2007.

Charles A. Dana Summer Fellowship, 2006.

Category I Charles A. Dana Professor, 2005-2006.

Charles A. Dana Summer Fellowship, 2004.

NASA Faculty/Student Summer Research Fellowship, 2003.

Postdoctoral Fellowship, Mathematical Sciences Research Institute, 1999-2000.

Ontario Graduate Scholarship, 1997.

NSERC Post Graduate Scholarship, 1993-1996.

Special University Scholarship, University of Western Ontario, 1992-1996.

NSERC Undergraduate Scholarship (summer research awards), 1989-1991.

Dr. F. Mohr Scholarship, Carleton University, 1987-1989.

Mathematics Department Entrance Award, Carleton University, 1987.

TEACHING AWARD NOMINATION

Nominated for the Norwich University Homer L. Dodge teaching award, 2009.

## UNDERGRADUATE RESEARCH SUPERVISION

Addie Armstrong, Weintz Research Fellowship for Summer Research 2009.

Project title: Vertex-magic total labeling of even complete graphs.

Kenneth Stephens, Senior Seminar MA411, Norwich University, fall 2008.

Project title: Radio labeling of graphs.

Jeremy Holden, Norwich University Summer Research Fellowship, summer 2008.

Project title: Edge-magic and vertex-magic labeling of regular graphs.

Victoria Wilson, Senior Seminar MA411, Norwich University, spring 2008.

Project title: Crossing numbers of Peterson graphs and complete bipartite graphs.

Jeremy Holden, Norwich University Summer Research Fellowship, summer 2007.

Project title: Edge-magic and vertex-magic labeling of regular graphs of degree 2.

Presentations by Jeremy Holden:

1. "Edge-magic and vertex-magic labeling of regular graphs of degree 2", Spuyten Duyvil Undergraduate Mathematics Conference, Manhattan College, Riverdale, NY, April 5, 2008.

Mathew Burger and John Walthour, Summer Research Fellowship, summer 2006.

Project title: Vertex-magic total labelings of 2-regular graphs and bipartite graphs.

Min-Hsiu Cheng, Senior Seminar MA411, Norwich University, fall 2006.

Project title: Vertex-magic total labeling of graphs.

Guan-Chung Chang, Senior Seminar MA411, Norwich University, fall 2005.

Project title: Vertex-magic total labelings of prisms.

Katy Smith, Senior Seminar MA411, Norwich University, fall 2005.

Project title: Vertex-magic total labelings of multiple complete graphs.

Karthik Raman, Norwich University Summer Research Fellowship, summer 2004.

Project title: Vertex magic total labeling and totally magic labeling of graphs.

Presentations by Karthik Raman:

1. "Vertex magic total labelings of bipartite graphs", Norwich University Student Research Fellows Symposium, Norwich University, February 17, 2005.
2. "Vertex magic total labelings of bipartite graphs", Northeast Section of the Mathematical Association of America Fall 2004 Meeting, Worcester, MA, November 19, 2004.

Katy Smith and Aaron Thurston, NASA Summer Research Fellowship, summer 2003.

Project title: Magic labelings of regular graphs.

Presentations by Katy Smith:

1. "Vertex magic total labelings", Poster session, Annual Joint Meetings of the American Mathematical Society, Phoenix, AZ, January 9, 2004.
2. "Vertex magic total labelings", presented at the Northeast Section of the Mathematical Association of America Meeting, Wellesley College, Wellesley, MA, November 21, 2003.

## CONFERENCE PRESENTATIONS

“Strong vertex-magic total labelings of 2-regular graphs”, 2<sup>nd</sup> Canadian Discrete and Algorithmic Mathematics Conference, Centre de Recherches Mathematiques, University of Montreal, Montreal Quebec, May 26, 2009.

“Vertex-magic 2-regular graphs”, 40<sup>th</sup> Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton Florida, March 4, 2009.

“Magic labeling of 2-regular graphs”, winter meeting of the Canadian Mathematical Society, London Ontario, December 9, 2007.

“Vertex-magic total labeling of regular graphs”, Ottawa-Carleton Discrete Mathematics Workshop 2007, Carleton University, Ottawa Ontario, May 26, 2007.

“Vertex-magic and edge-magic total labelings of 2-regular graphs”, 20<sup>th</sup> Midwest Conference on Combinatorics, Cryptography and Computing, Wichita State University, Wichita Kansas, October 5, 2006.

“Vertex-magic total labelings of multiple complete graphs”, 37<sup>th</sup> Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton Florida, March 8, 2006.

“Vertex-magic total labeling of regular graphs”, Graph Theory Day Fifty, St. Lawrence University, Canton New York, November 12, 2005.

“Vertex-magic cycles, edge magic cycles”, Franco-Canadian Workshop on Combinatorial Algorithms, McMaster University, Hamilton Ontario Canada, August 20, 2005.

“An undergraduate research project”, Northeastern Section of the Mathematical Association of America Fall 2004 Meeting, Worcester Massachusetts, November 20, 2004.

“Vertex magic total labelings of cycles and complete bipartite graphs”, 18<sup>th</sup> Midwest Conference on Combinatorics, Cryptography and Computing, Rochester Institute of Technology, Rochester New York, October 29, 2004.

“A spectrum problem for odd complete graphs”, 35<sup>th</sup> Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, Boca Raton Florida, March 11, 2004.

“Labelings of 3-regular graphs”, DIMACS Connect Institute on Graph Theory and its Applications, Rutgers University, Piscataway, NJ, July 17, 2002 (invited talk).

## OTHER PRESENTATIONS

“Kotzig arrays and magic labelings”, Tutte Seminar, University of Waterloo, April 24, 2009.

“Strong magic labelings and Kotzig completion”, SMC/UVM Joint Combinatorics Seminar, University of Vermont, February 11, 2009.

“Conjectures and proofs and graph labeling problems”, Department of Mathematics Colloquium Series, Norwich University, November 7, 2007.

“Don’t get too cross with my graph Dr. Peterson!”, Department of Mathematics Colloquium Series, Norwich University, April 17, 2007.

“The William Lowell Putnam mathematical competition”, DANA Lecture Series, Norwich University, January 18, 2006.

“Mathematics with pictures”, with student co-presenters Mike Martell and Rachel Smith, Department of Mathematics Colloquium Series, Norwich University, February 2, 2005.

“Recent results in vertex magic total labelings of graphs”, SMC/UVM Joint Combinatorics Seminar, University of Vermont, October 13, 2004 (invited talk).

“Looking for good luck and finding it”, based on work with students Katy Smith and Aaron Thurston, Department of Mathematics Colloquium Series, Norwich University, April 7, 2004.

“Recent progress in labelings of graphs”, Celebration of Faculty Research, Kreitzberg Library, Norwich University, March 19, 2004.

“Magic graphs and tic-tac-toe”, Department of Mathematics Colloquium Series, Norwich University, April 2, 2003.

“The Chinese Remainder Theorem”, Norwich University, March 2002 (invited talk).

## COMMITTEES

### **University**

Faculty Senate Library Committee, Math/Sciences Division Representative, 2004 to 2008.  
Chair from fall 2006 to 2008.

Academic Integrity Committee, 2004 to 2007.

Student Life Committee, 2004 to 2006.

Honors College Proposal Committee 2008 to present.

### **Math/Sciences Division**

Admissions Committee, fall 2006 to 2008.

Chair from 2007 to 2008.

### **Department**

Mathematics Department Search Committee, spring 2006, spring 2004, spring 2003.

various ad-hoc Mathematics Department committees

### **Other Professional Service**

Founder, coordinator and coach of the Norwich University Putnam Team, fall 2002 to present.

Administration of the William Lowell Putnam Mathematical Competition, 2002 to present.

Representative, Mathematics Department, Norwich University Open Houses: November 2008, September 2008, April 2008, March 2008, November 2007, October 2007, March 2007, October 2005, April 2005, March 2005, November 2004, October 2004, April 2004, March 2004, April 2003.

Representative, Mathematics Department, Math/Sciences Division Showcase, April 2006, November 2005.

Judge, Vermont State Science Fair, Norwich University April 9, 2005, April 3, 2004.

Representative, Mathematics Department, Academic Excellence Parade, Shapiro Field House, Norwich University, January 7, 2006, February 11, 2005.

Member, Math Transition Committee, Northfield High School, August 2005 to May 2007.

Presenter, "Olympic Glory and the Derivative", Expanding Horizons Program, St. Johnsbury Academy, St. Johnsbury, VT, February 15, 2005 Bellows Falls High School, Bellows Falls, VT, December 20, 2002.

Academic Advising of Students (currently 12 students).

## REFEREEING

AKCE International Journal of Graphs and Combinatorics

Ars Combinatoria

Australasian Journal of Combinatorics

Discrete Mathematics

Electronic Journal of Combinatorics

Far East Journal of Applied Mathematics

Journal of Combinatorial Mathematics and Combinatorial Computing

Utilitas Mathematica

External reader for Ph.D. thesis, University of Newcastle, Newcastle Australia

Reviewer for Vermont EPSCoR Baccalaureate College Development (BCD) Faculty Support Proposals

## EDUCATION

**University of Western Ontario** – 1998

Ph.D. Mathematics

Advisor: Ján Mináč

**University of Western Ontario** – 1992

M.Sc. Mathematics

**Carleton University** – 1991

B.A. Mathematics

Honours Project Advisor: R. Bruce Richter

## PROFESSIONAL AFFILIATIONS

Institute of Combinatorics and its Applications

Canadian Mathematical Society

American Mathematical Society

Mathematical Association of America