
GRADY DEWAYNE BULLINGTON

Department of Mathematics
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EDUCATION:

Ph.D. in Mathematics, The University of Tennessee, Knoxville, TN, 1999. Dissertation, *On the expected number of generators of a submodule of a free module over a finite principal ideal ring*, directed by David E. Dobbs.

M.A. in Mathematics, Western Kentucky University, Bowling Green, KY, 1994.

B.S. (summa cum laude) in Mathematics and Computer Science, Western Kentucky University, 1993.

POSITIONS HELD:

Associate Professor, University of Wisconsin-Oshkosh, Fall 2007-Present.

Assistant Professor, University of Wisconsin-Oshkosh, Fall 2001-Spring 2007.

Assistant Professor, Huntingdon College, Fall 1999-Spring 2001.

Graduate Teaching Associate, The University of Tennessee, 1994-1999.

Graduate Teaching Assistant, Western Kentucky University, 1993-1994.

Math Laboratory Tutor, Computer Lab Assistant, and VAX Mainframe Operator, Western Kentucky University, 1991-1993.

Grader and Proctor, Volunteer State Community College, Summers 1991-1993.

PUBLISHED PAPERS (Peer-refereed):

- Bullington Grady D., Peg Solitaire: “Burn the bridges, build one” *Congr. Numer.* 223 (2015)
- Grady Bullington, Linda Eroh, Steven J. Winters, and Garry L. Johns, “Knights Tours on Rectangular Chessboards Using External Squares,” *Journal of Discrete Mathematics*, vol. 2014, Article ID 210892, 9 pages, 2014. doi:10.1155/2014/210892
- “Prisoners and guards,” co-authored with L. Eroh and S.J. Winters, *Journal of Integer Sequences*, Vol. 17(2014) Article 14.8.1.
- “Generalizing Sperner’s Lemma to a free module over a special principal ideal ring,” *Journal of Commutative Algebra*, Vol. 4 No. 3, 2012.
- “Closed k -stop distance in graphs,” co-authored with L. Eroh, R. Gera, and S. J. Winters, *Discuss. Math. Graph Theory*, 31 (2011), 533-545.
- “Variations on the knight’s tour for rectangular chessboards on alternative surfaces”, co-authored with L. Eroh, G. Johns, and S.J. Winters, *Congr. Numer.* 206(2010), 199-213.
- “ γ -labelings of complete bipartite graphs,” *Discuss. Math. Graph Theory*, co-authored with L. Eroh and S.J. Winters, 30(1)(2010).
- “Bounds concerning the alliance number,” *Mathematica Bohemica*, co-authored with L. Eroh and S. Winters, 134(2009), No. 4, 387-398.
- “Path and cycle decomposition numbers,” co-authored with L. Eroh, H. Moghadam, K. McDougal, and S.J. Winters, *The Australasian Journal of Combinatorics*, 39(2007), pg. 89-102.
- “The Connell sum sequence,” *Journal of Integer Sequences* **10** (2007), Article 07.2.6 (<http://www.cs.uwaterloo.ca/journals/JIS/vol10.html>).
- In relation, eight sequences A122793-A122800 contributed to the *Online Encyclopedia of Integer Sequences*. (<http://www.research.att.com/~njas/sequences/index.html>).
- “Stability of alliance number in graphs,” co-authored with L. Eroh and S.J. Winters, *Congr. Numer.* 177, 89-100 (2005).
- “The tour numbers of a graph,” co-authored with L. Eroh, G. Johns, and S.J. Winters, *Congr. Numer.* 166 (2004).
- “Sums and intersections of submodules of a free module over a finite special principal ideal ring,” *International Journal of Commutative Rings*, Vol. 1, Issue 3 (2002) and the book entitled *Trends in Commutative Ring Research*, Nova Science, New York (2004), pp. 107-137, ISBN: 1-59033-926-6.
- “On the expected number of generators of a submodule of a free module over a finite special principal ideal ring,” *Rend. Circ. Mat. Palermo, Serie II, Tomo LI* (2002), pp. 5-50.
- “How many random submodules of a free module should be summed to yield the free submodule?,” coauthored with David E. Dobbs, *Comm. Algebra*, 29(11), pp. 4883-4918 (2001).
- “On the expected number of generators of a submodule of a free module over a finite principal ideal ring,” *Rend. Circ. Mat. Palermo, Serie II, Tomo L* (2001), pp. 5-46.

PAPERS IN PROGRESS:

- “ $\{1, 4\}$ -Leaper Tours on Rectangular Boards,” co-authored with L. Eroh, and S.J. Winters.
- “Forbidden subgraph edge colorings,” co-authored with L. Eroh, H. Moghadam, S. Stalder, and S.J. Winters.
- “Probabilities involving sums and intersections of finite subspaces.”
- “Probabilistic moments involving sums and intersections of submodules of a free module over a finite SPIR.”
- “The duel: a game based on the Mayan dice game, Bul,” a teaching note on absorbing Markov chains.

RESEARCH PRESENTATIONS:

- “Another Variation of Peg Solitaire,” a 15-minute talk at the 46th Southeastern International Conference on Combinatorics, Graph Theory, and Computing at Florida Atlantic University in Boca Raton, FL, Mar. 2015.
- “Closed tours of the $\{1, 4\}$ -leaper,” a 25-minute talk at the 2014 Spring MAA-Wisconsin Section Meeting, University of Wisconsin-Whitewater, Apr. 2014.
- Closed knight’s tours that go off the Chessboard,” a 25-minute talk at the 2011 Spring MAA-Wisconsin Section Meeting, University of Wisconsin-Stout, WI, Apr. 2011.
- “Generalizing Sperner’s Lemma to a free module over an SPIR,” a 30-minute talk at the 2005 Fall AMS-Southeastern Section Meeting, Eastern Tennessee State University, Johnson City, TN, Oct. 2005.
- “Alliance Edge- and Vertex-Stability in Graphs,” a 15-minute talk at the 36th Southeastern International Conference on Combinatorics, Graph Theory, and Computing at Florida Atlantic University in Boca Raton, FL, Mar. 2005.
- “The tour numbers of a graph,” a 15-minute talk at the 35th Southeastern International Conference on Combinatorics, Graph Theory, and Computing at Florida Atlantic University in Boca Raton, FL, Mar. 2004.
- “The duel: a game based on the Mayan dice game, Bul”, a 40-minute talk at the Wisconsin-Section MAA meeting in Wausau, WI, Apr. 2003.
- “Forbidden subgraph edge colorings,” a 15-minute talk at the 34th Southeastern International Conference on Combinatorics, Graph Theory, and Computing at Florida Atlantic University in Boca Raton, FL, Mar. 2003.
- “Probabilities involving sums and intersections of finite vector subspaces,” a 10-minute talk at the Joint AMS/MAA Meetings in Baltimore, MD, AMS Session on Combinatorics, Jan. 2003.
- “What can you expect from unions and intersections?,” a 50-min. talk at the MAA Wisconsin Section Spring Meeting, Ripon College, WI, Apr. 12-13, 2002.
- “Sums and intersections of submodules in a finitely generated free module over a finite special principal ideal ring,” a 40-minute talk Second International Meeting on Integer-Valued Polynomials, CIRM (Luminy, France), May-June 2000.

“How many random submodules of a free module should be summed to yield the free module?,” a 20-minute talk at the AMS Southeastern Conference in Charlotte, NC, in the Special Session on Commutative Rings, Oct. 1999.

“On the expected cardinality of minimal generating sets for submodules of free modules over principal ideal rings,” a 10-minute talk at the Joint AMS/MAA Meetings in San Antonio, Texas, AMS Session on Commutative Rings, Jan. 1999.

“Expected cardinalities of minimal generating sets,” two 50-minute talks to the Algebra Seminar at the University of Tennessee, Dec. 1998.

“Finite conductor rings, a paper by Sarah Glaz,” three 50-minute talks to the Algebra Seminar at the University of Tennessee, Fall 1997.

“The Seifert-Van Kampen theorem and its consequences,” three 50-minute talks to the Topology Seminar at the University of Tennessee, Spring 1996.

CONTRIBUTED SOLUTIONS TO PUBLISHED PROBLEMS:

Math Magazine proposals 1736,1737,1739.

GRANTS:

UW Oshkosh Faculty Development Research Grant, Summer 2002.

UNIVERSITY SERVICE:

Third-tier SAFE trainer, Spring 2016-present.

Queer Faculty/Staff Award Selection Committee Chair 2015-2016

STEM Certificate Program, Spring 2015

Member, LGBTQ Education and Advocacy Council, 2011-present. (co-chair with Rich Marshall, 2015-2017)

Member, UWO Compensation committee, 2010-present.

UWO Improvement of Instruction Committee, 2008-2010 (Chair 2010)

Member, New ERA, 2007-2010.

Regular participation in Preview Days and Mathfest since 2001. Participation in the Freshman Odyssey Program in Fall 2006.

Poster Judge for Celebration of Scholarship Day, Apr. 2004-2009 and Wisys Fall 2016.

Wisconsin Teaching Fellow alternate, 2003-2004.

Co-Chair, College Institutional Effectiveness Committee, Huntingdon College, 2000-2001.

Member, Institutional Effectiveness Committee, Huntingdon College, 1999-2000.

Member, Educational Committee for the 2000 SACS Accreditation, Huntingdon College.

DEPARTMENT SERVICE (curriculum committees unreported in most semesters):

CAPP Liaison for Multivariable Calculus and Precalculus 2015-2017

Member, Policies, Social, and General Education, Math Major, Core and Precalculus Committees, Math Dept, 2016-2017

Member, Library, Policies, Social, and General Education Committees, Math Dept, 2015-2016

Chair, Ad Hoc Department Student Opinion Survey Committee, serving with K. Price and L. Eroh, 2014-Present.

Member, Policies, Assessment, Social, Core, Pre-calculus Committees, Math Dept, 2014-2015.

Member, Ad Hoc Department Committee on Restructuring the Math Major, served with D. Penniston and Z. Benzaid, 2012-2014.

Member, Social and Core Committee, Math Dept, 2013-2014.

Member, Library, Social, Gen. Ed. Committees, Math Dept., 2012-2013.

Member, Library, Math Club Advising, Professional Development, Math Dept., 2011-2012.

Member, Library, Math Club Advising, Math Dept., 2009-2010, 2010-2011.

Member, Library, Math Club (chair), Executive committee, Math Dept. 2008-2009.

Member, Library, Social, Math Club, Math Dept., 2007-2008.

Member, UWO Student Discipline Board, 2008-2010.

Member, Library, Social, and Math Club committee (Chair), Math Dept., 2006-2007.

Member, UWO Diversity Council, 2005-2008.

Member, Social, Library, and Student Activities Administrative Committee, Math Dept., 2005-2006.

Chair, UWO Ad Hoc Department Student Opinion Survey Committee, Spr. 2005.

UWO Math Department Executive Committee, Fall 2004-Spring 2006.

Member, Social (Chair), Library, and Student Activities Administrative Committees, Math Dept., UWO, 2004-2005.

Math Club Advisor, UWO, 2002-2012.

Member, Social (Chair) and Student Activities Administrative Committees, Math Dept., UWO, 2003-2004.

Member, Library, Social, and Student Activities Administrative Committees, Math Dept., UWO, 2002-2003.

Member, Recruitment/Placement and Student Activities Administrative Committees, Math Dept., UWO, 2001-2002.

Member, Committee in charge of developing objectives and recommending text for the math department's Calculus sequence, UWO, Spring 2002.

Academic Advisor to Math Majors at UWO, 2001-Present.

Academic Advisor to Math Majors, Huntingdon College, 1999-2001.

Capstone Research Project Advisor for three students at Huntingdon College, 1999-2001.

Assisted in developing departmental objectives for the calculus sequence at Huntingdon College, Spring 2001.

Organizer of the Senior Math/CS Assessment Exam, Huntingdon College, Spring 2001.

OTHER PROFESSIONAL ACTIVITIES:

Reader for the AP Calculus Exam, June 2000-2016, (2006-2015 Table Leader).

Question Team Member for the AP Calculus Reading, June 2011.

Senior Reviewer of the AP Audit of BC Calculus Syllabi, Dec. 2006-2015.

Referee of Mathematics Magazine, a publication of the Mathematics Association of America (MAA), since Fall 1999.

Project NExT Fellow, Wisconsin Section of the MAA, 2001-2007.

Received WDPI training for verifying Wisconsin's new Professional Development Plan, August 2005.

Wisconsin Teaching Program alternate, 2003-2004.

Coordinator and judge for event entitled *Metric Estimation* for the Alabama Science Olympiad, Huntingdon College, Apr. 7, 2001.

National Project NExT Fellow and Session Organizer, 2000-2001.

Project NExT Fellow, Southeast Section of the MAA, 2000-2001.

COMMUNITY INVOLVEMENT:

Received the 2015 Acanthus Award for appropriate maintenance, restoration, and repair efforts of a residence that enhances Oshkosh history and protects cultural resources

Urban Wildlife Advisory Committee, City of Oshkosh, WI, 2008-2011.

Landmarks Commission, City of Oshkosh, WI, 2006-2008.

PROFESSIONAL ORGANIZATIONS:

American Mathematical Society (AMS) since 1994.

Mathematical Association of America (MAA) since 1996.

National Council of Teachers of Mathematics (NCTM) from 1999 to 2001.

COMPUTER SKILLS:

Experience with Java, C, C++, Pascal, Fortran, Cobol, Assembler Language, Basic, UNIX, X-Windows, DOS, Macintosh, World-Wide Web, HTML, TI graphing calculators, Maple and LaTeX for scientific document typesetting; limited experience with MATLAB and Mathematica.

Six hours of computer science graduate course work completed.

HONORS:

Graduate Student Academic Achievement Award from the faculty at The University of Tennessee for outstanding academic performance, Spring 1999.

University of Tennessee Science Alliance Fellowship Award, 1994-1999.

College Heights Foundation Scholarship, merit scholarship at Western Kentucky University, 1991-1993.

Elected to Pi Mu Epsilon (National Honorary Math Society) and the following national academic honor societies: Phi Kappa Phi, Golden Key, and Phi Eta Sigma, 1990-1993.

ACM (Association of Computing Machinery) Outstanding Computer Science Award at Western Kentucky University, Spring 1992.

COURSES TAUGHT:

- Remedial Mathematics
- College Algebra
- Elementary Statistics
- Introduction of Modern Mathematics and its Applications
- Trigonometry
- Finite Mathematics
- Precalculus
- Business Calculus
- Brief Calculus
- Math Business Analysis II
- Calculus I, II, and III (Multivariable)
- Math for Computer Science
- Discrete Mathematics I and II
- Discrete Structures (graduate class)
- Topology (undergraduate and graduate)
- Abstract Algebra
- Numerical Analysis (undergraduate and graduate)
- Computer Theory (a course on finite automata and formal languages)
- Liberal Arts Symposium-Origins (a freshmen course on the origins of humankind)
- Liberal Arts Symposium-Justice (a freshmen course on justice in society)
- Differential Equations
- Problem-Based Inquiry Seminar (a liberal arts math course)
- Seminar in Mathematical Problem Solving