Martin W. Montgomery

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Positions

Visiting Assistant Professor of Mathematics Bates College	Aug. 2014-present
Faculty Lecturer of Mathematics University of Kentucky	Aug. 2012-June 2014
Visiting Assistant Professor of Mathematics Sam Houston State University	Aug. 2010-May 2012
Visiting Adjunct Transylvania University	Jan. 2010-May 2010
Assistant Professor of Mathematics Piedmont College	2006-2009
Graduate Teaching Fellow University of Oregon	1999-2006

Education

Ph.D.	***University of Oregon***, Dept. of Mathematics, Eugene, OR Dissertation "Dimension of Certain Cleft Binomial Rings" Adviser: Frank W. Anderson	2006
M.S.	***University of Oregon***, Dept. of Mathematics, Eugene, OR	2001
B.A.	***Humboldt State University***, Arcata, CA Magna Cum Laude	1999

Teaching Experience

Bates College

Calculus II, Instructor	Fall 2014
Multivariable Calculus, Instructor	Fall 2014

University of Kentucky

Contemporary Mathematics, Instructor/Course Coordinator	Eight Sections
Business Calculus, Instructor	Fall 2012
Matrix Algebra, Instructor	Spring 2013
Number Theory, Instructor	Spring 2014

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Sam Houston State University

Differential Equations, Instructor	Fall 2011
Calculus I, Instructor	Spring 2012
Calculus II, Instructor	Fall 2011
Abstract Algebra, Instructor	Spring 2011
Operations Research, Instructor	Fall 2010
College Mathematics, Instructor	Five Sections

Transylvania University

Elementary Statistics, Instructor	Two Sections

Piedmont College

Abstract Algebra, Instructor	Two Sections
Advanced Probability and Statistics, Instructor	Two Sections
Calculus I (Differential), Instructor	Two Sections
Calculus II (Integral), Instructor	Three Sections
Calculus III (Multivariable), Instructor	Six Sections
College Geometry, Instructor	Two Sections
Differential Equations, Instructor	One Section
Elementary Statistics, Instructor	Two Sections
Mathematical Modeling, Instructor	One Section
Number Theory, Instructor	One Section
Real Analysis (Independent Study), Instructor	One Section

University of Oregon

Business Calculus II, Teaching Assistant	One Section
Calculus I, Instructor	Four Sections
Calculus II, Instructor	Three Sections
Calculus III, Instructor	Four Sections
College Algebra, Instructor	Seven Sections
Differential Equations, Instructor	One Section
Trigonometry, Instructor	Five Sections
University Mathematics, Instructor	One Section

As Course Coordinator: Trained, managed, and mentored section instructors; wrote course content, online homework questions, and exam templates; acted as liaison between mathematics department and other university bodies.
As Instructor: Complete responsibility for the course. As Teaching Assistant: Led four tutorial/review sessions per week, held office hours, graded quizzes and exams.

Research Interests

Noncommutative, Associative Rings and Algebras; Leavitt Path Algebras

Journal Articles

Square-Free Rings and their Automorphism Groups, *Comm. Algebra* **38** (10) 2010 3767-3789.
Non-Stable K-Theory For Leavitt Path Algebras (with D. Hay, M. Loving, E. Ruiz, and K. Todd), *To Appear in the Rocky Mountain Journal of Mathematics.*

Square-Free Rings With Local Units, *Preprint.*

Academic Service (External)

Editor for Special Issue on Writing and Editing, May, June 2014
Reviewed and edited Volume 24, Issues 6 & 7 for *PRIMUS*,
a magazine devoted to undergraduate mathematics education.

MathFest 2012 Contributed Papers Session Organizer, August 2012
(with Ryan Stuffelbeam of Transylvania University)
Incorporating Writing and Editing into Mathematics Classes.

MathFest 2011 Contributed Papers Session Organizer, August 2011
(with Ryan Stuffelbeam of Transylvania University)
Novel Ways to Incorporate Writing into Mathematics Classes.

Academic Service (Internal)

Lecturer Hiring Committee, Fall 2013–Spring 2014
Assisted in the hiring process for several Lecturer positions.

Salary Committee for the Mathematics Department, Fall 2013
Reviewed Lecturer performance and made salary recommendations.

Officer on Disciplinary Hearing Panels, Fall 2013–Spring 2014
Trained to serve on UK Disciplinary Hearing Panels.

Faculty Meetings Scribe, Fall 2013–Spring 2014
Took minutes during Department Faculty Meetings.

Visiting Lecturer Hiring Committee, Spring 2013
Assisted in the hiring process for three Visiting Lecturers.

Critical Thinking Faculty Development Subcommittee, Budget Officer, 2007–2009
Assisted in development and implementation of critical thinking guidelines across campus at Piedmont College.

Faculty Governance Council, Assistant Secretary, 2007–2008
Investigated and reported on issues concerning faculty at Piedmont College. Facilitated orderly discussion during full faculty meetings.

Premier Piedmont, Faculty Representative, 2007
Organized and participated in campus visits for potential students.

Ring Theory Seminar, Organizer, 2003–2005
Set speaker schedule for a seminar accessible to graduate students in algebra.

Graduate Affairs Committee, Representative, 2002–2003
Oriented incoming graduate students and represented graduate students in departmental decisions.

Research Talks and Presentations

Properties of Square-Free Rings, SHSU Algebra Seminar (3 talks), October 2011.

The Cartan Determinant Conjecture for Square-Free Rings, Sam Houston State University, April, 20 2011.

Diagram Algebras and Square-Free Rings, Sam Houston State University, February 19, 2010.

Square-Free Rings and Their Automorphism Groups, JMM, Washington, D.C., January 5, 2009.

Classification of Square-Free Rings, JMM San Diego, CA, January 9, 2008.

Algebraic Structure from Diagrams, University of Georgia Algebra Seminar, October 8, 2007.

A Naive Approach Towards Calculating Global Dimension, University of Georgia Algebra Seminar, March 5, 2007.

Projective Resolutions for Cleft Binomial Rings, JMM, San Antonio, TX., January 13, 2006.

Various Topics (Nine Talks Total), University of Oregon Ring Theory Seminar, May 2002–May 2005 .

Undergraduate Talks and Presentations

The Basel Problem and Transformations, Sam Houston State University, October 29, 2010.

Diagram Algebras and Square-Free Rings, Transylvania University, March 8, 2010.

Integration Using Partial Fractions, Thomas More College, February 25, 2010.

Finding the sum $1 + 1/4 + 1/9 + 1/16 + \ldots$, Georgetown College, February 5, 2010.

Infinite Sums and a Million Dollar Question, Piedmont College, September 19, 2008.

Algebras, Diagrams, Projections, and People (Oh My!), North Georgia College & State University, November 14, 2007.

Algebras, Diagrams, Projections, and People (Oh My!), Piedmont College, November 12, 2007.

The Art of Albrecht Dürer and Magic Squares, Piedmont College, October 6, 2006.

Fellowships and Awards

Project NExT Fellow, 2007–2008
Project NExT (New Experiences in Teaching) is a competitive national professional development program of the Mathematical Association of America for new mathematics faculty.

Mu Alpha Theta Contest, First Prize, Category B, 1999
An annual mathematics competition at Humboldt State University. Students have three hours to complete two sections of challenging problems. Category B is for more advanced students of mathematics.

Mu Alpha Theta Contest, Second Prize, Category B, 1998
An annual mathematics competition at Humboldt State University. Students have three hours to complete two sections of challenging problems. Category B is for more advanced students of mathematics.

Mu Alpha Theta Contest, Third Prize, Category A, 1997
An annual mathematics competition at Humboldt State University. Students have three hours to complete two sections of challenging problems. Category A is for beginning students of mathematics.

COMAP Mathematical Modeling Competition, Honorable Mention, 1998
A national competition in mathematical modeling for high school and college students. School-sponsored teams of up to three students seek innovative mathematical solutions to real-world problems.

Affiliations

AMS, MAA, Project NExT