Mary Clair Thompson
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Curriculum Vitae

Work Experience

2013-2014   - Visiting Assistant Professor, Lafayette College

2007-2013   - Graduate Teaching Assistant, Auburn University

Education

Degrees

2013   - Ph.D. in Mathematics, Auburn University
          - Dissertation: Asymptotic Results in Noncompact Semisimple Lie Groups

2010   - M.S. in Mathematics, Auburn University
          - Thesis: On the Conjugacy Theorems of Cartan and Borel Subalgebras

2007   - B.S. in Mathematics, Delta State University

Awards

2011   - Haynesworth Fellowship, Auburn University
          - Mazey Fellowship
2010   - COSAM Dean's Research Award
          - Outstanding Master's Student Award
          - Mathematics Department Outstanding Teaching Award
          - Society for Women in Mathematics and Science Fellowship
2008   - Baskerville Fellowship
2007   - First Diploma, Delta State University
          - Arthur Dean Memorial Mathematics Award

Research

Research Interests

Semisimple Lie groups and Lie algebras, representation theory, matrix theory

Research (continued)

Publications

2013   - *The Convergence of the Bruhat Iteration,*
- Submitted for publication

2012   - *Convergence of Aluthge Iteration in Semisimple Lie Groups,*
- To appear, Journal of the Mathematical Society of Japan

2012   - *Determinants of Sums of Two Real Matrices,*
- To appear, Linear and Multilinear Algebra 60 (2013), Ky Fan Special Issue, 1409-1431

2011   - *Determinant of Sum of Orbits Under Compact Lie Groups,*
- Linear Algebra and its Applications 436 (2012), 1644-1650

2010   - *Determinant and Pfaffian of Sum of Skew Symmetric Matrices,*
- Linear Algebra and its Applications 433 (2010), 412-423

Teaching

- Calculus I, II, III
- Honors Calculus I
- Business Calculus I
- Finite Mathematics
- Math for Elementary Education I, III

Presentations and Experiences

2013   - AWM Research Symposium
- Presented Poster *Asymptotic Results in Noncompact Representation Theory*

2013   - MSRI Connections for Women Workshop
- Presented Poster *Asymptotic Results in Noncompact Representation Theory*

2013   - MAA/AMS Joint Mathematics Meetings
- Presented *The Convergence of the Bruhat Iteration*

2012   - Mathematics Research Communities Summer School in Geometric Representation Theory
- Participant

2012   - Southern Regional Algebra Conference
- Presented *The Convergence of the Iterated Aluthge Sequence*

2012   - MAA/AMS Joint Mathematics Meetings
- Presented *The Convergence of the Iterated Aluthge Sequence*

2011   - Nebraska Conference for Undergraduate Women in Mathematics

Presentations and Experiences (continued)

- Invited Participant

2011   - MAA/AMS Joint Mathematics Meetings
- Presented *Determinant of Sums of Orbits Under Compact Lie Groups*

2010   - Southern Regional Algebra Conference
- Presented *Determinant and Pfaffian of Sum of Skew Symmetric Matrices*

2010   - Lie Theory and Representation Theory Summer School
- Participant

Memberships

- American Mathematical Society
- The Association for Women in Mathematics
- International Linear Algebra Society