

## VITA

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### PROFESSIONAL TRAINING

- Ph.D. 2006 Western Michigan University, Kalamazoo, MI  
Area: Mathematics
- M.A. 2001 Western Michigan University, Kalamazoo, MI  
Area: Mathematics
- B.A. 1999 Franklin College, Franklin, IN  
Areas: Pure Mathematics, Applied Mathematics (summa cum laude)

### PROFESSIONAL EXPERIENCES

- 2006-present: Assistant Professor, Salem State College
- 2005-2006: Visiting Instructor, Grand Valley State University
- 1999-2005: Graduate Teaching Assistant, Western Michigan University

### RESEARCH GRANTS / RESEARCH SUPPORT

- 2006-2007: R.L. Moore Project NExT Fellowship
- 2005: Graduate Student Travel Award, Western Michigan University
- 2003-2005: Research Assistantship, Western Michigan University
- 1997-98: Callon-Daub Research Fellowship, Franklin College

## HONORS / AWARDS

- Yousef Alavi Doctoral Student Award, Western Michigan University (*Presented to an outstanding doctoral student in mathematics or statistics in recognition of excellence in the student's field of study, covering graduate studies, doctoral examinations, and research activities including the doctoral dissertation.*)
- Graduate Student Teaching Effectiveness Award, Western Michigan University (*Presented to a graduate student in recognition of significant contributions to the teaching mission of the University.*)
- Charles H. Butler Excellence in Teaching Award, Western Michigan University (*Presented to graduate teaching assistants in recognition of excellence in teaching over an extended period.*)
- Phi Beta Kappa, Western Michigan University
- Chi Beta Phi Honorary Science Fraternity, Franklin College

## PAPERS

- "Light Bulb Presentations in a Mathematics for the Liberal Arts Course." (to appear in PRIMUS)
- "Nilpotent orbits associated to the classical groups." With Brian J. Parshall and Terrell L. Hodge (submitted to *Linear Algebra and its Applications*, October 2007)
- "A classification of nilpotent orbits in infinitesimal symmetric spaces." (submitted to *Journal of Algebra*, January 2007)
- "Results on the independence number for the generalized Petersen graphs." With Raluca Gera and Pantelimon Stanica (to appear in *Ars Combinatoria*)

## INVITED ADDRESSES

- "Groebner Bases and their Applications." Naval Postgraduate School, Monterey, CA, July 2007
- "Nilpotent Orbits in Lie Triple Systems." University of Massachusetts Boston Seminar Series, October 2006
- "A Classification of Nilpotent Orbits in Infinitesimal Symmetric Spaces." AMS-MAA Joint Mathematics Meetings, Special Session on Modular Representation Theory of Finite and Algebraic Groups, Atlanta, GA, January 2005
- "Hard Problems Made Easy by Groebner Bases." Franklin College colloquium, Franklin, IN, March 2004

## PRESENTATIONS

- “The Great Mathematical Formula Debate.” With L. Pedro Poitevin. Salem State College Mathematics Society, Salem, MA, January 2008.
- “Stuff from the Legacy of R.L. Moore Conference.” Salem State College math department seminar series, Salem, MA, April 2007.
- “A New Proof of a Result on the Closure Ordering of Nilpotent Orbits in Type A.” AMS-MAA Joint Mathematics Meetings, Contributed Paper Session, New Orleans, January 2007.
- “Algebraic Groups and Nilpotent Orbits.” MAA Northeast Section Meeting, November 2006.
- “Nilpotent Orbits on Infinitesimal Symmetric Spaces.” WMU Doctoral Defense, March 2006
- “Nilpotent Orbits Associated to Groups with Involutions.” GVSU Algebra Seminar, October 2005
- “Nilpotent Orbits.” WMU Algebra Seminar, April 2005
- “Crystallographic Groups.” WMU Algebra Seminar, October 2004
- “Nicolas Bourbaki.” WMU History of Mathematics Seminar, April 2004
- “A Theorem of Chevalley.” WMU Algebra Seminar, March 2004
- “Some Problems Related to the Study of Nilpotent Orbits on Infinitesimal Symmetric Spaces.” Doctoral Dissertation Proposal, March 2004
- “Reductive Algebraic Groups and Their Simple Modules.” University of Virginia Algebra Seminar, December 2003
- “The Parallel Postulate.” WMU History of Mathematics Seminar, October 2003
- “A Homotopy-Theoretic Definition of Lusternik-Schnirelmann Category.” WMU Topology Seminar, September 2003
- “Affine Varieties and Their Ideals.” WMU Algebra Seminar, September 2003
- “An Introduction to Lie Triple Systems.” WMU Algebra Seminar, March 2003
- “Cantor and Infinite Sets.” WMU History of Mathematics Seminar, February 2003
- “Explicit Resolutions.” WMU Topology Seminar, October 2002
- “Representation Theory: Basic Definitions and Examples.” WMU Algebra Seminar, March 2002
- “Lie Groups: Basic Definitions and Examples.” WMU Algebra Seminar, September 2001
- “Groups and Counting.” WMU Algebra Seminar, September 2000
- “An Introduction to Wavelets.” Franklin College Math Day, October 1998

## **SELECTED CONFERENCES ATTENDED**

- October 2007: Math at Work conference, Bentley College, Waltham, MA
- April 2007: Hudson River Undergraduate Mathematics Conference, Siena College, Loudonville, NY
- April 2007: The Legacy of R.L. Moore Conference, University of Texas
- September 2004: Algebraic Cycles, K-Theory, and Modular Representation Theory, Northwestern University
- May 2004: Infinite-Dimensional Aspects of Representation Theory and Applications, University of Virginia
- May 2003: Coding Theory and Quantum Computing, University of Virginia

## **PROFESSIONAL AFFILIATIONS**

- Mathematical Association of America
- Phi Beta Kappa

## **DEPARTMENT SERVICE**

- 2007: Salem State College Majors Fair, Mathematics Department representative
- 2007: Foundations of Excellence Task Force, Salem State College
- 2007: Undergraduate Curriculum Committee, Department of Mathematics, Salem State College
- 2007: School of Arts and Sciences Strategic Planning Committee, Salem State College
- 2006: Admissions Office Open House representative from math department, Salem State College
- 2006: School of Arts and Sciences Undergraduate Research Liaison, Salem State College
- 2006-present: Math Society co-advisor, Salem State College
- 2002-2005: served on WMU Math Department Undergraduate Committee
- 2004: organized Math History Seminar for WMU Math Department
- 1996: helped organize MAA Indiana Section Meeting at Franklin College

## **COURSES TAUGHT** (primary instructor with full responsibility for all courses listed)

*At Salem State College :*

- Real Analysis
- Abstract Algebra I and II
- Abstract Algebra (graduate course)
- Linear Algebra I
- Discrete Structures
- Calculus I and II
- Pre-calculus
- Mathematics for the Liberal Arts

*At Grand Valley State University :*

- Calculus I and II (These courses included a weekly computer lab component in which students made calculus explorations using *Maple*.)
- College Algebra
- Algebra I

*At Western Michigan University :*

- Linear Algebra
- Calculus I and II
- Pre-calculus
- Algebra I and II
- Excursions in Mathematics (math for non-science majors)