

Stacy L. Beun

Department of Mathematics
North Carolina State University (NCSU)
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Education

Ph.D. Mathematics, Spring 2008 (Expected)
Thesis: *Orbits of Minimal Parabolic Subgroups Acting on Symmetric Varieties of $SL(n, k)$*
Advisor: Aloysius G. Helminck
North Carolina State University, Raleigh, NC

M.S. Mathematics, December 2004
North Carolina State University, Raleigh, NC

B.S. Mathematics, May 2002
University of Wisconsin-Platteville, Platteville, WI

Teaching Experience

Algebra Module Writer Department of Mathematics
NC State University August 2007 - Present
Working jointly with mathematics professor Dr. Michael Singer to create and write a module on resultants for MA 437 Applied Abstract Algebra.

Teaching Assistant Department of Mathematics
NC State University July 2003 - Present
Solely responsible for lectures, homework, exam evaluations, and final grades. Held office hours. Maintained course webpages. Implemented the computer homework grading software Webassign. Courses include:

- MA 103 Topics in Contemporary Mathematics (5 semesters)
- MA 108 Precalculus II (1 semester)
- MA 141 Calculus I for Engineers and Mathematics Majors (1 semester)
- MA 341 Applied Differential Equations I (1 semester)
- MA 407 Modern Algebra (1 semester as part of *Preparing the Professoriate*)

Research Experience

Doctoral Research 2004 - Present
Aloysius G. Helminck, Dept of Mathematics NC State University
Studying the action of minimal parabolic k -subgroups on symmetric k -varieties over $SL(n, k)$.

REU Graduate Student Mentor Summer 2006 and Summer 2007
Aloysius G. Helminck, Dept of Mathematics NC State University
Mentored ten undergraduates and one beginning graduate during two separate summer research program studying computational and theoretical aspects of posets in Weyl groups. Provided insight on the research, mathematics, and graduate school.

Research Assistant September 2005 - December 2005
Aloysius G. Helminck, Dept of Mathematics NC State University
Studying the action of minimal parabolic k -subgroups on symmetric k -varieties over $SL(n, k)$.

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Research Assistant

H.T. Banks, Dept of Mathematics

Collaborated on mathematical modeling of structured-treatment interruptions for HIV patients.

September 2002 - May 2003

NC State University

Honors/Awards

North Carolina State University

AWM Workshop Travel Grant Recipient for JMM in San Diego, January 2008

Participant, *Preparing the Professoriate*, August 2005 - May 2006

Awarded, *Outstanding Graduate Student Teaching Assistant*, March 2005

Nominated, Phi Kappa Phi Honor Society and Phi Mu Epsilon Honor Society

Sloan Family Leave Grant Recipient, March 2004

Statistical and Applied Mathematical Sciences Research Associate Sept 2002 - May 2003

National Science Foundation Fellow Summer 2002

University of Wisconsin Platteville

Member, Phi Kappa Phi Honor Society

Member, Alpha Lambda Delta Honor Society

Member, Phi Eta Sigma Honor Society

Phi Kappa Phi Scholarship Recipient

Wisconsin Academic Excellence Scholarship Recipient

Publications

S.L. Beun and A.G. Helminck, *On the Classification of Symmetric Varieties Acting on Flag Varieties of $SL(2, k)$* . In submission. Available on <http://www4.ncsu.edu/~srahber>.

S.L. Beun, et al. 2003, *Mathematical Models for Articular Cartilage: Molecular Diffusion in Photo-bleaching Experiments and Signal Transmission in a Chondron*. Proceedings of the 2002 Industrial Mathematics Modeling Workshop for Graduate Students. NCSU's Center for Research in Scientific Computation Technical Reports CRSC-TR03-37: 51.

Presentations

On the Classification of Minimal Parabolic k -Subgroups Acting on Symmetric k -Varieties of $SL(n, k)$. Invited Speaker for the AMS Special Session *Structure, Geometry, and Symbolic Computation of Algebraic Groups and Symmetric Spaces* at the 2008 Joint Mathematics Meeting in San Diego, CA. (Invited)

Poster: *On the Classification of Minimal Parabolic k -Subgroups Acting on Symmetric k -Varieties of $SL(n, k)$* . Invited presenter during the AWM Workshop at the 2008 Joint Mathematics Meeting in San Diego, CA. (Selected Participant)

On the Classification of Symmetric Varieties Acting on Flag Varieties of $SL(2, k)$. Presented April 2008 at the Mid-Atlantic Algebra Conference at North Carolina Central University, Durham, NC. (Contributed)

Introduction to Symmetric Spaces and p -adic Numbers. Presented February 2007 at the NCSU Mathematics Department Graduate Student Recruitment Weekend. (Invited)

Introduction to Symmetric Spaces and p -adic Numbers. Presented March 2006 at the NCSU Mathematics Department Graduate Student Recruitment Weekend. (Invited)

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On the Classification of Symmetric Varieties Acting on Flag Varieties of $SL(2, k)$. Invited speaker for the AMS Special Session *Algebraic Groups, Symmetric Spaces, and Invariant Theory* at the 2006 Joint Mathematics Meeting in San Antonio, TX. (Invited)

Mathematical Models for Articular Cartilage: Molecular Diffusion in Photobleaching Experiments and Signal Transmission in a Chondron. Presented at the 2002 Industrial Mathematics Modeling Workshop for Graduate Students at NCSU. (Contributed)

Workshops

Participant, *Association of Women in Mathematics Workshop for Women Graduate Students and Recent PhDs*, Joint Mathematics Meeting, San Diego, CA, January 9, 2008.

Participant, $SL(2, \mathbb{R})$ *Minicourse*, University of Utah, Salt Lake City, UT, May 21-June 2, 2006.

Participant, *Mathematics Department Graduate Student Spring Teacher Training*, NC State University, Raleigh, NC, May 15, 2003. Completed one day training course to facilitate the transition from leading recitations to teaching own course.

Participant, *2002 Industrial Mathematics Modeling Workshop for Graduate Students*, Center for Research in Scientific Computation, NC State University, Raleigh, NC, July 2002.

Computer Experience

C++ programming, Matlab, Maple, and LaTeX proficiency.

Professional Affiliations

Association of Women in Mathematics (AWM)
American Mathematical Society (AMS)

References

Dr. Aloysius Helminck, Professor/Department Head, Department of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695, (919)515-7720, loek@math.ncsu.edu

Dr. Ernest Stitzinger, Professor/Administrator of Graduate Program, Department of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695, (919)515-3258, stitz@math.ncsu.edu

Dr. Tom Lada, Professor, Department of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695, (919) 515-8773, lada@math.ncsu.edu

Dr. John Griggs, Lecturer Coordinator of Classroom Instruction, Department of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695, (919) 513-2288, jrgriggs@math.ncsu.edu