

Curriculum Vitae

Dr. Sarah Barreto

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EDUCATION:

Ph.D. Mathematics, (May 2015) North Carolina State University, Raleigh, NC
27695

Dissertation Title: Conjugacy classes of maximal k -split tori invariant under
an involution of $SL(n, k)$

Dissertation Committee Chair: Dr. A. G. Helminck

M.S. Applied Mathematics, (May 2010) Western Carolina University, Cullowhee,
NC 28723

B.S. Traditional Mathematics, (May 2008) Western Carolina University,
Cullowhee, NC 28723

UNIVERSITY TEACHING EXPERIENCE:

Virginia Tech

Mathematics Instructor, Fall 2015-Present

- Responsibilities: Preparing and presenting all lectures; writing exams and quizzes, grading weekly assigned homework, tests, and quizzes; holding office hours; setting up courses in Scholar, Canvas, MyMathLab and

WebAssign; determining students' final grades; acting as primary advisor for math majors.

- Courses:
 - Math 1225: Calculus I* (Fall 2015, 2 sections, 40 students per section; Fall 2016, 3 sections, 35 students per section)
 - Math 2114: Introduction to Linear Algebra* (Fall 2015, 40 students; Spring 2016, 2 sections, 45 students per section; Summer 2016, 10 students; Spring 2017, 2 sections, 45 students per section; Summer 2017, 20 students; Spring 2018, 3 sections, 40 students per section, Summer 2018 30 students; Fall 2018, 2 sections, 45 students per section; Spring 2019, 3 sections, 40 students per section; Summer 2019, 15 students)
 - Math 1226: Calculus II* (Spring 2016, 65 students; Fall 2017, 50 students)
 - Math 2204: Multivariable Calculus* (Fall 2017; 2 sections, 60 students per section; Spring 2018, 40 students; Fall 2018, 2 sections, 55 students per section; Spring 2019, 40 students)
 - Math 2984: Sequences and Series Online Course* (Spring 2017, 10 students)

North Carolina State University

Course Instructor, Summer 2013-Summer 2015

- Responsibilities: Preparing and presenting all lectures; writing and grading exams, quizzes, and/or guiding appointed graduate student graders; holding office hours; setting up courses in MyMathLab, WebAssign, and/or Moodle; determining students' final grades.
- Courses:
 - MA 121: Elements of Calculus (Summer 2015, 4 students)
 - MA 114: Introduction to Finite Mathematics with Applications (Spring 2015, 150 students)
 - MA 111: Pre-calculus, Algebra and Trigonometry (Fall 2014, 50 students) (Summer 2014, 20 students) (Fall 2013, 50 students) (Summer 2013, 15 students)

Recitation Leader, Fall 2011-Spring 2014

- Responsibilities: Holding office hours; grading tests; attending all lectures; preparing and presenting recitations/problem sessions; holding online problem sessions.
- Courses:
 - MA 241: Calculus II (Spring 2014; 160 students)
 - MA 231: Calculus for Life and Management Sciences B (Spring 2013; 240 students)
 - MA 141: Calculus I (Fall 2012; 100 students)
 - MA 341: Applied Differential Equations (Spring 2012; 100 students)
 - MA 107: Precalculus I (Fall 2011; 240 students)

Tutor in the Mathematics Department Multimedia Center, Fall 2011-May 2015

- Responsibilities: Provide help for undergraduate students in all lower-level mathematics courses; give guided assistance on students' assignments, tests, reviews, and online WebAssign and/or MyMathLab homework.

Western Carolina University

Course Instructor, Fall 2010

- Responsibilities: Preparing and presenting all lectures; writing exams, quizzes, and homework; grading tests, quizzes, and homework; holding office hours; determining students' final grades.
- Courses:
 - MA 130: College Algebra (Spring 2010; 50 students)

Tutor in the Mathematics Department Multimedia Center, Fall 2008-May 2010

- Responsibilities: Provide help for undergraduate students in all lower-level mathematics courses; give guided assistance on students' assignments, tests, reviews, and homework.

PROFESSIONAL EXPERIENCE:

Whizard Academy, July 2012-May 2013

- Responsibilities: Tutoring middle school and high school students, SAT preparation, creating lessons and homework for the students.

RESEARCH EXPERIENCE:

- Research for Early Graduates; Summer 2011: Lie algebras and Leibniz algebras
- Research for Early Graduates; Summer 2012: Representation Theory

RESEARCH INTERESTS:

- Algebraic groups
- Generalized Symmetric spaces
- Lie algebra
- Representation theory

REFERENCES:

- Dr. Aloysius Helminck; Professor and Department Head, North Carolina State University.
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(919) 515-7720
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- Dr. E. L. Stitzinger; Professor, Administrator of Graduate Program, North Carolina State University.
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Department of Mathematics, Campus Box 8205
- Dr. John Griggs; Teaching Associate Professor; Assistant Department Head, North Carolina State University.
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