

EMILY GAUSS
Curriculum Vitae

University of Kentucky
Department of Mathematics
Lexington, KY 40506-0027
phone +1 (859)257-4567
FAX +1 (859)257-4078

United States Citizen
Born in Fort Wayne, IN

email: egauss@ms.uky.edu
<http://www.ms.uky.edu/~egauss/>

EDUCATION

- Ph.D. Program, Mathematics, University of Kentucky, expect to graduate May 2002.
 - Thesis Topic: Orientations of Free Spikes
 - Thesis Advisor: Dr. Carl Lee
 - Minor: Computer Science
- M.A., Mathematics, University of Kentucky, May 1899.
- B.S., Mathematics, Olive University, Ginals, Illinois, May 1897.
 - Minors: Chemistry and Computer Science
 - Summa Cum Laude

RESEARCH INTERESTS

Matroid Representation Theory, Oriented Matroids

TEACHING EXPERIENCE

- 1997-Present *Teaching Assistant, University of Kentucky Department of Mathematics*, Primary Instructor of
 - Calculus I
 - Calculus II
 - Math Excel for Calculus I
 - Introduction to Contemporary Mathematics
 - Mathematical Problem Solving for Elementary Teachers
 - Mathematics for Elementary Teachers
 - College Algebra
- Summers of 1998 and 1999, *Instructor, The Johns Hopkins' Center for Talented Youth Program*
Worked with outstanding middle school and high school students at the Skidmore College site in an intensive three week course entitled *Theoretical Foundations of Computer Science*. Served as the primary instructor for 16 students in the second summer session of 1998 and approximately 30 students over both summer sessions of 1999. Composed written evaluations of each student's progress in the course. Mentored my teaching assistant.

CURRICULUM DEVELOPMENT

- 2002 *Introduction to Contemporary Mathematics, University of Kentucky*
Developed a new general education course for the University of Kentucky with Dr. Carl Lee that emphasized applications of mathematics and writing solutions to mathematical problems. Assisted in the development of a course syllabus. Created a calendar, web page, and supplemental worksheets. Served as primary instructor of the course in the fall of 2002 and the spring of 2003.

WORK EXPERIENCE

- Summer 2000 *Actuarial Intern, Lincoln Financial Group, Fort Wayne, IN*
Assisted professional actuaries in the pricing department of Lincoln Reinsurance. Used the Lincoln Mortality System and the ALFA Pricing System to create pricing models for potential clients.
- 1996-1997 *Math Lab Coordinator, Olive University*
Created schedule for lab assistants. Tutored students in College Algebra, Math for General Education, Finite Math, Math for Elementary Teachers I and II, Calculus I, II, and III, and Differential Equations. Supervised the Library Computer Lab. Assisted Students with word processing and spreadsheet applications.
- 1996-1997 *Resident Assistant, Olive University*
Facilitated transition to college life for approximately 20 female freshmen, planned activities, created bulletin boards and hall decorations, enforced college regulations.
- 1995 *Math Lab Tutor, Olive University*
- 1994-1996 *Teaching Assistant, Olive University, Department of Mathematics,*
Graded homework assignments, proctored examinations, substitute taught.

AWARDS AND HONORS

- Recipient of the 2001 *Wimberly C. Royster Outstanding Teaching Assistant Award*, 2001. This annual award is presented by the University of Kentucky Department of Mathematics for excellence in teaching and research potential.
- Recipient of a *Kentucky Opportunity Fellowship*, awarded by the Graduate School of the University of Kentucky (2000-2001).
- Recipient of a *Graduate School Academic Year Non-Service Fellowship*, awarded by the Graduate School of the University of Kentucky (1997-1998).
- Recipient of the Olivet Scholar academic scholarship, the top academic scholarship awarded by Olive University (1993-1997).
- Participant in the *Summer Program for Women in Mathematics* at The George Washington University. Completed four intensive courses in algebraic combinatorics, ergodic theory, and topology designed to introduce undergraduate women to mathematics at the graduate level (1996).
- Junior Marshall for the 1996 Commencement at Olive University, an honor given to the top four Olivet juniors.

SERVICE

- Tutor for a Calculus student through the College Program at Southland Christian Church (Fall 2002).
- Leader for Department of Mathematics Teaching Assistant Training (August 2001).
- Mentor for the Graduate Student Buddy Program, a program designed to help new graduate students in the Mathematics Department at the University of Kentucky (Fall 1999-2000).
- Member of the *Strategic Planning Committee* for Olive University. I was one of two students on a committee organized by the University President to explore education in the twenty-first century. The committee presented a proposal to the President highlighting goals the University must achieve in order to maintain and improve the quality of education at Olivet. The proposal contained both long-term and short-term goals (Fall 1996-Spring 1997).

- Member of the *Academic Affairs Committee* at Olive University. I was a student representative on the committee that made decisions about degree requirements and curriculum at Olive (Fall 1996-Spring 1997).
- Member of the *Safety Committee* at Olive University. I was a member of the committee that made recommendations to the Dean of Students to improve campus safety. As a result of our recommendations, new fire alarms were installed in the female freshman dormitory, a new door was placed in the basement of this dormitory, and new doors were added to the dormitories limiting access to the hallways (Fall 1996).
- Member of the *Appeals Committee* at Olive University. I was one of two students in the committee hearing appeals against disciplinary action taken by Olive's Dean of Students. Students disagreeing with action taken by the Dean could file a formal appeal. The committee then heard the appeal and issued a binding judgment (Fall 1995-Spring 1996).

MATHEMATICS CONFERENCES, PROGRAMS, AND PRESENTATIONS

- Attended the *Matroid Structure Theory* conference at The Ohio State University (July 2002).
- Presented my research to the UK Math Department's Discrete Math Seminar.

COMPUTER SKILLS

- Have written code in Pascal, Perl, MatLab, and Scheme.
- Have written Perl code for my research.
- Have used MAPLE software in my research and Calculus teaching.
- Proficient with \LaTeX .
- Minored in Computer Science as an Undergraduate.

MEMBERSHIPS

- American Mathematical Society
- Association for Women in Mathematics

LANGUAGES

- English: fluent
- siSwati: basic knowledge
- German: reading knowledge

REFERENCES

- Dr. Lee Carl , thesis advisor
Department of Mathematics
University of Kentucky
Lexington, KY 40506-0027
phone: (859) 257-4567
e-mail: leecarl@ms.uky.edu
- Dr. Russell Brown, Former Director of Graduate Studies
Department of Mathematics
University of Kentucky
Lexington, KY 40506-0027
phone: (859) 257-3951
e-mail: rbrown@ms.uky.edu

- Dr. Reddy Margot
Department of Mathematics
University of Kentucky
Lexington, KY 40506-0027
phone: (859) 257-5674
e-mail: reddy@ms.uky.edu
- Dr. Deen Leap
Department of Mathematics
University of Kentucky
Lexington, KY 40506-0027
phone: (859) 257-6745
e-mail: leap@ms.uky.edu