Douglas J. Drinen

University of the South
Department of Mathematics
735 University Avenue
Sewanee, TN 37383-1000
(931) 598 - 0105

doug.drinen@gmail.com
http://ddrinen.sewanee.edu

Education:

Ph.D., Mathematics, August 1999, Arizona State University.

M.A., Mathematics, December 1997, Arizona State University.

B.A., Mathematics and Economics, May 1993, Trinity University (Texas). Cum laude.

Teaching Experience:

Assistant (2001–2007) / Associate (2007–present) Professor of Mathematics, Sewanee: The University of the South. Teaching responsibilities include teaching three courses per semester. Courses:

- Calculus I
- Calculus II
- Multi-dimensional calculus
- Differential equations
- Discrete structures (this is our Introduction To Proofs course)
- Abstract algebra I and II
- Mathematical modeling
- Probability/Statistics (for majors)
- Mathematics for economists
- Algebraic number theory
- Partial differential equations

Virtually all courses include significant use of *Mathematica*. Other teaching-related activities include: administering oral comprehensive exams; developing written comprehensive exams; supervising senior talks and student talks for the Sewanee-Rhodes-Hendrix Symposium (an undergraduate math/CS conference); installing and maintaining WeBWorK, a computer-based homework collection system for my classes.

Instructor, Sewanee Summer Bridge Program in Math and Science, 2004–2008. A summer program for talented minority high school students. I was in charge of all aspects of the math component of the program.

John Wesley Young Instructor, Dartmouth College, September 1999 – July 2001. Teaching responsibilities include teaching four courses per year. Courses: Calculus II (Honors), Calculus III (Honors), Differential equations, Complex analysis, Multivariable analysis, Functional analysis.

Graduate Teaching Assistant, Arizona State University, 1993–1999.

Instructor, Arizona State University Summer Bridge Program, 1995–1999. An intensive summer program for at-risk incoming first-year students.

Publications:

D. Drinen, K.G. Kennedy, and W.M. Priestley, *An optimization problem with a surprisingly trivial solution*, The American Mathematical Monthly, **116** (2009), no. 4, 328–341.

J.C. Bradbury and D. Drinen, *Pigou at the plate: externalities in Major League Baseball*, Journal of Sports Economics, **9** (2008), no. 2, 211–224.

J.C. Bradbury and D. Drinen, *Crime and punishment in Major League Baseball: the case of the designated hitter and hit batters*, Economic Inquiry, **45** (2007), no. 1, 131–144.

J.C. Bradbury and D. Drinen, *The designated hitter, moral hazard and hit batters: new evidence from game-level data*, Journal of Sports Economics, **7** (2006), no. 3, 319–329.

D. Drinen and M. Tomforde, *The C^*-algebras of arbitrary graphs*, Rocky Mountain Journal of Mathematics, **35** (2005), 105–135.

D. Drinen and M. Tomforde, *Computing* **K***-theory and Ext for graph C^*-algebras*, Illinois Journal of Mathematics, **46** (2002), 81–91.

D. Drinen and N. Sieben, *C^*-equivalences of graphs*, Journal of Operator Theory, **45** (2001), no. 1, 209–229.

D. Drinen, *Viewing AF-algebras as graph algebras*, Proceedings of the American Mathematical Society, **128** (2000), no. 7, 1991–2000.

Undergraduate research supervised:

An optimization problem with a surprisingly trivial solution (cited above) was co-authored with undergraduate student K.G. Kennedy.

A multi-dimensional optimization problem, written by undergraduate student Thu Le under my supervision, has been submitted for publication.

Mathematically-generated fife tunes. This independent study project by undergraduate student Annie Tracy won first prize at Sewanee's 2009 undergraduate research exhibition (which includes research projects from all disciplines).

I have directed six student talks that have been presented at the annual Sewanee-Rhodes-Hendrix undergraduate research symposium.

Honors and Awards:

Named Sewanee's **Teacher of the Year** by the Society of Sewanee Scholars, a group consisting of students with merit scholarships to the University of the South.

Sewanee's 2007 and 2008 nominee for the CASE/Carnegie Foundation State Professor of the Year Award.

John Wesley Young Instructorship, Dartmouth College, 1999–2001. A two year post-doctoral position.

Excellence in Teaching Award, 1996. Awarded annually to two of approximately 80 teaching assistants in the Arizona State University math department.

Achievement Rewards for College Scientists Scholarship, 1998/1999. A $6000 scholarship awarded by the ARCS foundation to approximately 30 graduate students in Arizona.

Academic All-American, 1993. Baseball. College Division, second team.

Grants:

Fund for Innovative Teaching and Learning Grant, University of the South, summer 2009. I was the faculty sponsor for this grant, written by my student Thu Le, which funded the summer research that led to her research paper. Her paper has been submitted for publication.

Supplemental Instruction (SI) Grant, Consortium on High Achievement and Success (with Eric Benjamin and Deon Miles). SI is a specific set of procedures designed to decrease withdrawal rates and improve grades in "traditionally difficult" classes. Eric Benjamin, Deon Miles, and I implemented a pilot SI program at Sewanee during the 2003–2004 academic year in the math and chemistry departments.

Academic Initiatives Grant for the continuation of Supplemental Instruction (with Eric Benjamin and Deon Miles).

Grants from Academic Initiatives and the Center for Teaching for the development of WeBWorK (with Catherine Cavagnaro). WeBWorK is a freely available computer homework collection and grading system being developed at the University of Rochester. These grants were used to hire students to assist with installing and maintaining WeBWorK.

Service to the University and to the Profession:

Institutional research for The University of the South. In spring of 2008, I researched and wrote and extensive report on grade variation at the University. That is, how do differing levels of student schedule difficulty affect class rankings?

Co-organizer, MAA contributed paper session on Mathematics in Sports, 2004 Joint AMS/MAA Meetings in Phoenix and 2005 Joint AMS/MAA Meetings in Atlanta, 2006 Joint AMS/MAA meetings in San Antonio.

Research Grants Committee, 2005–present. Currently committee chair.

Student-Athlete Advisory Committee, 2009–present.

Pre-medical Advisory Committee, 2008–present.

College Nominating Committee, 2006–2009

Curriculum and Academic Policy Committee, 2005–2007

Degrees Committee, 2004–2005

Benefits Committee, 2005–present

Minority Affairs Committee, 2005–present

Math/CS Hiring Committee, 2003–2004

Advisor to a group of freshmen each year from 2002–2005 and 2007, and to the mathematics classes of 2004, 2007, and 2011.

Referee for *Illinois Journal of Mathematics*

Test-writer, 2005 TCTM state precalculus exam.

Public Presentations:

Grade variation: how much does the difficulty of your schedule affect your class rank?, a public talk at Sewanee, April 2008.

Paired comparison ranking systems: an old topic and a new application, Joint AMS/MAA Meetings, January 2006, San Antonio, TX.

The mathematics of the BCS computer ranking systems, a public talk at Sewanee, December 2005.

Pigou at the plate: externalities in Major League Baseball, Joint AMS/MAA Meetings, January 2005, Atlanta, GA.

Moral hazard on the mound: the economics of plunking, Joint AMS/MAA Meetings, January 2004, Phoenix, AZ.

An introduction to the C^*-algebras of directed graphs, Vanderbilt University analysis seminar, September 2003.

The C^*-algebras of arbitrary graphs, Great Plains Operator Theory Symposium, May 2001, University of New Hampshire.

Flow equivalence and graph groupoid isomorphism, special session on operator algebras, Joint AMS/MAA meetings, January 2000, Washington, D.C.

Flow equivalence and graph groupoid isomorphism, Great Plains Operator Theory Symposium, May 1999, Iowa State University.

Isomorphism of graph groupoids, Groupoidfest, November 1998, Arizona State University.

Primitive equivalence of graphs, Great Plains Operator Theory Symposium, May 1998, Kansas State University.

Viewing AF-algebras as graph algebras, joint meeting of the Canadian Operator Algebras Symposium and Great Plains Operator Theory Seminar, May 1997, Queen's University.

References:

Available upon request.