

Thomas L. Fitzkee

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Educational Background

Ph.D. in Mathematics - George Washington University, May 1998, Tiling Dynamical Systems under Dr. E. Arthur Robinson, Jr.

M.S. in Mathematics - Virginia Tech, December 1991

B.S. in Mathematics with a concentration in Computer Science - Salisbury (MD) State University, May 1989

Professional Experience

Department Chairman, July 2006 - Present, *Department of Mathematics, Francis Marion University, Florence, SC*
Professor of Mathematics, August 2010 - Present, *Department of Mathematics, Francis Marion University, Florence, SC*

Associate Professor of Mathematics, August 2004 – August 2010, *Department of Mathematics, Francis Marion University, Florence, SC*

Assistant Professor of Mathematics, August 1998 - July 2004, *Department of Mathematics, Francis Marion University, Florence, SC*

Business Support Specialist, May 1986 - August 1998, *Boeing/McDonnell Douglas Aerospace, Goddard Space Flight Center, Greenbelt, MD*

Graduate Teaching Assistant, August 1993 - May 1998, *Department of Mathematics, George Washington University, Washington, DC*

Graduate Teaching Assistant, August 1989 - May 1993, *Department of Mathematics, Virginia Tech, Blacksburg, VA*

Other Experience to Discipline

MAA Committee on Minicourses Member, January 2011 – Present, Mathematical Association of America.

Advanced Placement Calculus Reader, June 2007, 2008, 2009, 2010, 2011, 2012, 2013 Educational Testing Service.

Institute Director, June 2010, 2011, 2012, 2013, Advanced Placement Calculus Summer Teacher.

National Competition Judge, January 2009, 2011, 2012, 2013 High School Mathematical Competition in Modeling (HiMCM), supported by COMAP.

Regional Competition Judge, December 2002, 2003, 2005, 2006, 2007, 2008, 2009, 2011, 2012, 2013, High School Mathematical Competition in Modeling (HiMCM), supported by COMAP.

MAA-SE State Director for South Carolina, July 2006 – 2009, Mathematical Association of America – Southeastern Section.

Presentation Judge, March 2010, Undergraduate Papers Session, MAA-SE Sectional Meeting, Elon (NC) University
Internship Supervisor, Summer 2008, William Putnam, EQA Partners, LP, a start-up hedge fund company in Stamford, CT

Presentation Judge, March 2007, Undergraduate Papers Session, MAA-SE Sectional Meeting, Georgia Southern University, Statesboro, GA.

MAA-SE Departmental Liaison, December 2004 – July 2006, Mathematical Association of America – Southeastern Section.

Presentation Judge, March 2006, Undergraduate Papers Session II: Graph Theory and Geometry, MAA-SE Sectional Meeting, Auburn University, Auburn, AL.

Faculty Advisor, December 2005, William Putnam Competition.

Faculty Advisor, January 2000, 2003, 2004, February 2005, Mathematical Competition in Modeling (MCM), supported by COMAP.

Faculty Advisor, October 2002, Virginia Tech Regional Mathematics Contest, hosted by the Department of Mathematics at Virginia Tech.

Panelist for Panel Discussion on "What is Project NExT?", March 2001, 80th Annual Meeting of the Southeastern Section of the Mathematical Association of America, Huntingdon College, Montgomery, AL.

Courses Taught

Francis Marion University

Math 521 AP Calculus BC Certification for Teachers

Math 520 AP Calculus AB Certification for Teachers

Math 497 Special Topics (Student Internship and Actuarial Mathematics)

Math 411 Topology

Math 370 Geometry for Elementary Teachers

Math 311 Transitions to Higher Mathematics

Math 301 Ordinary Differential Equations

Math 270 Survey of Mathematics for Early Childhood and Elementary Teachers II

Math 203 Calculus III

Math 202 Calculus II

Math 201 Calculus I

Math 170 Survey of Mathematics for Early Childhood and Elementary Teachers I

Math 137 Precalculus

Math 134 Probability and Statistics

Math 132 Trigonometry

Math 111 College Algebra II

Math 105 College Algebra I

George Washington University

Math 3 College Algebra

Virginia Tech

Math 1015 Elementary Calculus with Trigonometry I

Presentations

National and International

- *Podcasting Mathematics Lectures Using Notebook and Apreso Software Dynamical Systems Workshop* in the *Discrete Emerging Technologies Session*, March 2008, 20th Annual International Conference on Technology in Collegiate Mathematics, San Antonio, TX.
- *Discrete Dynamical Systems Workshop*, March 2006, 18th Annual International Conference on Technology in Collegiate Mathematics, Orlando, FL.
- *Implementing Miniature "Conferences" in the Now-Standard Bridge-to-Higher-Mathematics Course*, January 2005, Joint Mathematics Meetings, Atlanta, GA.
- *Can you beat the South Carolina Tuition Prepayment Plan?*, November 2000, 13th Annual International Conference on Technology in Collegiate Mathematics, Atlanta, GA.
- *A weakly mixing tiling dynamical system with a smooth model*, July 1998, Dynamical Systems Conference, From Crystals to Chaos: Centre International de Recontres Mathematiques, Luminy University, Marseille, France.
- *A weakly mixing tiling dynamical system with a smooth model*, January 1998, AMS/MAA/SIAM Joint Meetings, Baltimore, MD.
- *R-action of tilings which are determined by flows across surfaces*, October 1997, Semi-Annual Dynamical Systems Workshop, Penn State University, State College, PA.

Local and Regional

- *Why Sunshades Fold Oddly*, April 2011, Annual Meeting of the Southeastern Section of the Mathematical Association of America, University of Alabama, Tuscaloosa, AL.
- *Why Sunshades Fold Oddly*, December 2010, Invited Address at the Pee Dee Regional High School Mathematics, Francis Marion University, Florence, SC
- *Maple Projects in Calculus Courses*, March 2005, Annual Meeting of the Southeastern Section of the Mathematical Association of America, Raleigh, NC.
- *Weather Forecasts: How good are they?*, November 2003, National Council of Teachers of Mathematics Southern Regional Conference, Charleston, SC.
- *Using Trigonometry and Physics to analyze the dangers of Bridge Swinging*, October 2002, 5th Carolinas Conference, Charlotte, NC.
- *Using Trigonometry and Physics to analyze the dangers of Bridge Swinging*, March 2002, MAA/AMS Southeastern Section Spring Meeting, Georgia Institute of Technology, Atlanta, GA
- *Railroads and the Foundation of Florence (SC)*, February 2002, ScienceSouth Think Tank, Francis Marion University, Florence, SC .
- *Can you beat the South Carolina Tuition Prepayment Plan?*, March 2001, 80th Annual Meeting of the Southeastern Section of the Mathematical Association of America, Huntingdon College, Montgomery, AL.
- *Game show probability*, October 2000, 24th Annual Meeting of the South Carolina Council of Teachers in Mathematics, Myrtle Beach, SC
- *Mathematical modeling with discrete dynamical systems*, October 2000, 24th Annual Meeting of the South Carolina Council of Teachers in Mathematics, Myrtle Beach, SC.
- *Baseball math*, February 2000, 2nd Annual Conference of the Pee Dee Council of Teachers in Math, Francis Marion University, Florence, SC.
- *Aperiodic tiling dynamical systems*, March 1998, MD/VA/DC Sectional Meeting of the MAA, Virginia State University, Petersburg, VA.

Publications

Articles

- *Modeling with Discrete Dynamical Systems*, Electronic Proceedings of the 18th Annual International Conference on Technology in Collegiate Mathematics, (2006).
- *Weakly mixing tiling dynamical systems with a smooth model*, Theoretical Computer Science, Vol. 303,(2003), pp.447-462.
- *Tuition Prepayment Plan*, UMAP, Vol. 24, (2003), pp. 53-78.
- *Bridge Swinging - Interdisciplinary Lively Application*, (submitted to Project INTERMATH, 2003).
- *Can you beat the South Carolina Tuition Prepayment Plan?*, U.S. Department of Education Educational Resources Information Center (ERIC) database (2002).
- *Tuition Prepayment Plan - Interdisciplinary Lively Application*, Project INTERMATH (2001).
- *One-dimensional numerical search algorithms: Using spreadsheets to approximate roots of non-polynomial functions*, Computers in Education, Vol. XI (2001), pp. 2-7.
- *Instructor's Manual: A modeling approach of activities used in mathematics content courses designed for early childhood and elementary pre-service teachers* (2000).

Dissertation

- *R-action of tilings which are determined by flows across surfaces*, Doctoral Dissertation, George Washington University (1998).

Awards/Recognition

- **Advanced Placement Calculus Summer Teacher Institute Grant**, June 2010, 2011, 2012, 2013 *South Carolina Department of Education*
- **Quality Enhancement Plan Grant**, January 2013, *Student participation at the MAA-SE conference at Winthrop University, Francis Marion University*
- **Quality Enhancement Plan Grant**, August 2008, *Forecasting of Presidential Elections, Francis Marion University*

- **Quality Enhancement Plan Grant**, January 2008, *Implementation of Calculus Recitations, Francis Marion University*
- **Institutional Technology Grant**, December May 2007, *Maple 11 Software Grant, Francis Marion University*
- **2005-06 Undergraduate Mathematics Conference Grant**, April 2006, *Mathematical Association of America (supported by grant DMS-0241090 from the National Science Foundation)*
- **Institutional Technology Grant**, December 2005, *Smart Classroom Grant, Francis Marion University*
- **2004-05 Undergraduate Mathematics Conference Grant**, April 2005, *Mathematical Association of America (supported by grant DMS-0241090 from the National Science Foundation)*
- **Senior Survey Recognition**, December 2002, *Office of Counseling and Testing, Francis Marion University*
- **Curriculum Development Award**, May 2001, *Preparing Tomorrow's Teachers to use Technology (PT3) Grant, Francis Marion University*
- **Project NExT-SE Fellow**, March 2000, *Mathematical Association of America - Southeastern Section*

Professional and Academic Memberships

Phi Kappa Phi Collegiate Honor Society
 Kappa Mu Epsilon Mathematics Honor Society
 Mathematical Association of America (MAA)
 American Mathematical Society (AMS)

University Service

Francis Marion University

Committee Member, Fall 2008 - Present, *Admissions, Advising, and Retention Committee*
Committee Member, Fall 2007 – Fall 2010, *Academic Freedom and Tenure Grievance Committee*
Chair of Chairs and Deans, Fall 2007 – Spring 2009, *Deans and Chairs Committee*
Math Club Faculty Advisor, Fall 1998 - Spring 2007, *Department of Mathematics*
Committee Member, Fall 2005 – Spring 2007, *Promotion and Tenure Committee, College of Liberal Arts*
Committee Member, Fall 2004 - Spring 2006, *Academic Support Committee*
Committee Chairman, Fall 2001 - Spring 2004, *Academic Support Committee*
Committee Member, Fall 2001 - Spring 2004, *University Budget Committee*
Committee Member, Fall 1999 - Spring 2001, *Academic Support and Computers Committee*
Webmaster, Fall 1998 - Spring 2001, *Department of Mathematics*

George Washington University

Graduate Student Liaison, Fall 1996 - Spring 1998, *Department of Mathematics*

Community Service

Science Fair Judge, March 2000-07 and 2013 *Sandhills Regional Science Fair, Florence, SC*
Deacon, July 2011-Present, *Calvary Baptist Church, Florence, SC*
Stewardship Committee Member, April 2004 - May 2006, *First Baptist Church, Florence, SC*
Scientist, February 2002, 2004, *ScienceSouth Think Tank meeting, Francis Marion University*
Arts Alive Participant, April 2000, 2001, 2002, 2003, and 2004, *Francis Marion University*
Math Fair Leader, March 2000, *Wallace Middle/Elementary School, Wallace SC*
Instructor, Fall 1999, *West Florence High School, Florence, SC*