

William W. Miles

440 N. Kentucky Avenue
DeLand, Florida
386-740-8119
wmiles@stetson.edu

EDUCATION

Clemson University, Clemson, South Carolina
Doctor of Philosophy, December 2002
Dates of Attendance: August 1997 – December 2002
Concentration: Computational Analysis
Specialty: Fluid Dynamics
Grade Point Ratio: 4.00/4.00
Advisor: Dr. Vincent J. Ervin

Virginia Commonwealth University, Richmond, Virginia
Master of Science, May 1991
Dates of Attendance: August 1989 – May 1991
Major: Applied Mathematics
Grade Point Ratio: 4.00/4.00
Advisor: Dr. John Schmeelk

Presbyterian College, Clinton, South Carolina
Bachelor of Science, May 1986 (summa cum laude)
Dates of Attendance: August 1982 – May 1986
Major: Mathematics
Minor: Computer Science
Grade Point Ratio: 3.75/4.00

Winthrop College, Rock Hill, South Carolina
Attended: January 1987 – December 1988
Concentration: Business Core Courses
Grade Point Ratio: 4.00/4.00

WORK EXPERIENCE**August 2003 - Present: Assistant Professor**

Stetson University, DeLand, Florida

Teaching undergraduate mathematics. Continuing to conduct research pertaining to fluid dynamics. Advising seniors in undergraduate research projects. Advising students through their academic programs. Organizing the departmental colloquium series. Serving on departmental and university committees.

January 2003 - July 2003: Visiting Assistant Professor

University of South Carolina in Spartanburg, Spartanburg, South Carolina

Taught undergraduate mathematics. Conducted research pertaining to multicomponent fluid flow.

December 1998 - December 2002: Graduate Research Assistant
Clemson University - Center for Advanced Engineering Fibers and Films,
 Clemson, South Carolina

Developed models for multi-component fluid flow. Worked with interdisciplinary research teams in mechanical engineering, chemical engineering, and mathematics. Derived theoretical results and implemented computational simulations of multi-component flows.

August 1997 - December 1998: Graduate Teaching Assistant
Clemson University Mathematical Sciences Department, Clemson, South Carolina

Taught two sections of Calculus I per semester. Organized lectures. Wrote and graded tests.

January 1996 - August 1997: Mathematics Department Head
Tri-County Technical College, Pendleton, South Carolina

Taught first and second year college math courses. Recruited adjunct faculty and arranged teaching schedules. Evaluated full-time mathematics faculty. Served on college committees. Advised students. Revised curriculum including the writing of grants for curriculum reform.

August 1992 - December 1995: Visiting Instructor
Randolph-Macon College, Ashland, Virginia

Taught all levels of undergraduate mathematics. Served on departmental committees. Acted as a faculty advisor to freshman and sophomore students.

June 1992 - August 1992: Programmer/Analyst
Alpha Software, Inc., Midlothian, Virginia

Designed and programmed application software.

July 1991 - June 1992: Programmer and Project Leader
Advanced Data Systems, USA, Richmond, Virginia

Maintained schedules for all projects assigned to the custom software group. Analyzed and designed inventory systems. Assigned tasks to available resources in the group. Interacted with clients to ensure correctness of design and satisfaction with final product. Wrote programs for both PCs and hand-held barcode scanners including radio frequency equipment. Worked primarily with compiled BASIC.

1989 - 1991 Academic Years: Graduate Teaching Assistant
Mathematics Department, Virginia Commonwealth University, Richmond, Virginia

Taught freshmen-level mathematics and supervised graduate engineering classes.

June 1986 - August 1989: Special Projects Administrator
Rock Hill Telephone Company, Rock Hill, South Carolina

Promoted from Administrative Assistant to Special Projects Administrator. Conducted research into new policies and products in the telecommunications industry. Designed proforma business plans and other analytical tools using LOTUS 123. Wrote PC-based computer programs and worked with IBM System 38 terminal. Acted as local area network administrator and critiqued software packages.

SPECIAL RESEARCH INTERESTS

Computational Analysis

Development of existence proofs and apriori error estimates for solutions to discrete approximating systems.

Fluid Dynamics

Development of models for multicomponent fluid flow, dealing with interfacial phenomena.

CREATIVE PRODUCTS

Refereed Papers

L.J. Rebholz and W.W. Miles, *Computing NS- α with greater physical accuracy and increased convergence rates*, **submitted for publication**, (2007).

V.J. Ervin and W.W. Miles, *Approximation of Time-Dependent, Multi-Component, Viscoelastic Fluid Flow*, **Comput. Methods Appl. Mech. Engrg.**, Vol. 194, pp 2229-2255, (2005).

V.J. Ervin and W.W. Miles, *Approximation of Time-Dependent, Viscoelastic Fluid Flow: SUPG Approximation*, **SIAM J. Numer. Anal.**, Vol. 41, No. 2, pp 457-486, 2003.

Scientifically Reviewed Conference Proceedings

W.W. Miles, *Approximation of Multicomponent Fluid Flows with a Varying Coefficient of Interfacial Tension*, **Computational Methods in Multiphase Flow II**, edited by A.A. Mammoli and C.A. Brebbia, WIT Press, 2004.

Other Papers

W.W. Miles, *Modeling Liquid Oxygen Flow Within a Highly Pressurized Dewar*, NASA Technical Report, July 2004.

Doctoral Thesis

Miles, William W., *Modeling Time-Dependent, Multicomponent, Viscoelastic Fluid Flow*, Clemson University, (2002).

Master's Thesis

Miles, William W., *Integral Transforms of Generalized Functions*, Virginia Commonwealth University, (1991).

Undergraduate Research/Projects

Hagerman, Keri, *Optimization of Work Schedules Based on Circadian Rhythms*, Stetson University, (2008).

Deyo-Svendsen, Matthew, *The Evolution of Solutions to Boundary-Valued Problems Using Finite Elements and Genetic Algorithms*, Stetson University, (2007).

Litsch, Anthony, *An Analysis of TL Wimpout: A Probability Study and Examination of Game-Playing Strategies*, Stetson University, (2006).

Coates, April, *A Statistical Analysis of Student Athletes at Stetson University*, Stetson University, (December 2005).

Reott, Veronica, *Hurricanes and Disaster Declarations: A Statistical Analysis*, Stetson University, (May 2005).

Swango, Carolyn, *An Analysis of the Advanced Placement Calculus Exam as a Measure of Preparedness for Calculus II and a Regression Analysis of Precalculus Grades*, Stetson University, (May 2005).

PRESENTATIONS AT PROFESSIONAL MEETINGS

Using a Genetic Algorithm to Improve Finite Element Solutions of Differential Equations, presented at MathFest (MAA National Meeting), August 2007.

A NASA Summer Experience, presented at the Florida Section Meeting of MAA, February 2005.

What I Did On My Summer Vacation: A NASA Fellowship and Project NExT, presented at the Stetson Math and Computer Science Colloquium, Fall 2004.

Approximation of Multicomponent Fluid Flows with a Varying Coefficient of Interfacial Tension, presented at Multiphase Flow 2003, October 2003. (Published in the conference proceedings)

A Summary of Results Pertaining to Multicomponent, Viscoelastic Fluid Flow, presented at Joint Regional Meeting of SIAM-SEAS and MAA Southeastern Section, March 2003. (Presenter and Session Chairman)

Modeling Multicomponent Fluid Flow, presented at SIAM-SEAS, April 2002. Outstanding Paper Award

Modeling Interfacial Behavior, presented at SIAM-SEAS, March 2000. Outstanding Paper Award

Modeling the Advection of an Interface in a Two Phase Flow, presented at NSF-CBMS Regional Conference On Mathematical Analysis of Viscoelastic Flows, June 1999.

The Distributional Stieltjes Transformation, presented at the Mathematical Association of America (Maryland/D.C./Virginia Section) annual meeting, Spring 1991.

PROFESSIONAL ASSOCIATIONS

American Mathematical Society
 Society for Industrial and Applied Mathematics
 Mathematical Association of America

COURSES TAUGHT

Calculus I	Finite Mathematics	College Algebra
Calculus II	Discrete Mathematics	Linear Algebra
Calculus III (Multivariable)	Introductory Statistics	Ordinary Differential Equations
Calculus for Nonscience Majors	Probability	Mathematical Statistics

HONORS AND ACTIVITIES

Exxon Project NExT Fellowship (2004-2005)
 NASA Faculty Fellowship (Summer 2004)
 Outstanding Ph.D. Student in Mathematical Sciences (2002-2003)
 Outstanding Paper/Presentation Award (SIAM Sectional Meeting, April 2002)
 Honorable Mention, NSF CAEFF Third Annual Site Visit Poster Competition (2001)
 Member of the Student Leadership Council - CAEFF (2000-2001)
 Outstanding Paper/Presentation Award (SIAM Sectional Meeting, March 2000)
 Math Sciences Graduate Assistant Award for Excellence in Teaching (1997-1998)
 Member of Phi Kappa Phi Academic Honor Society

UNDERGRADUATE AWARDS

Who's Who Among Students in American Universities and Colleges; Omicron Delta Kappa Honor Society (President); Sigma Kappa Alpha Honor Society (Vice - President); Who's Who Among Men in College Fraternities; Senior Math Award; Junior Math Award; Dean's List (Every semester); Interfraternity Council (President; Secretary); Judicial Council (Vice-Chairman); Theta Chi Fraternity; Varsity Track (Three Letters); Alcohol Advisory Committee; Intramural Sports

COUNTRY OF CITIZENSHIP

United States of America

PERSONAL INTERESTS

Running, golf, music, home improvement.

REFERENCES

Dr. Vincent J. Ervin
Professor of Mathematical Sciences
Department of Mathematical Sciences
Clemson University
Clemson, South Carolina 29634-0975
Phone: 864-656-2193
Email: vjervin@clemson.edu

Dr. Christopher L. Cox
Professor of Mathematical Sciences
Department of Mathematical Sciences
Clemson University
Clemson, South Carolina 29634-0975
Phone: 864-656-5203
Email: clcox@clemson.edu

Dr. Joel V. Brawley
Alumni Distinguished Professor of Mathematical Sciences
Department of Mathematical Sciences
Clemson University
Clemson, South Carolina 29634-0975
Phone: 864-656-5199
Email: brawley@clemson.edu