

**JASON S. HOWELL**

**Assistant Professor**  
**Department of Mathematics**  
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**Citizenship: U.S.A.**

**66 George St.**  
**College of Charleston**  
**Charleston, SC 29424**  
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**EDUCATION:**

- **Ph.D., Mathematical Sciences, Clemson University, Clemson, SC, August 2007.**  
 Advisors: Vincent J. Ervin and Hyesuk Lee.  
 Thesis: *Numerical Approximation of Shear-Thinning and Johnson-Segalman Viscoelastic Fluid Flows.*
- **M.S., Mathematical Sciences, Clemson University, Clemson, SC, May 1998.**  
 Advisor: Shuhong Gao.  
 Project: *The Index Calculus Algorithm for Discrete Logarithms.*
- **B.S., Mathematics, College of Charleston, Charleston, SC, December 1996. (Summa Cum Laude)**

**ACADEMIC AND PROFESSIONAL POSITIONS:**

- **Assistant Professor, Department of Mathematics, College of Charleston, Charleston, SC**  
 August 2012 - present. (Courtesy appointment June 2012 - August 2012.)
- **Assistant Professor, Department of Mathematics, Clarkson University, Potsdam, NY**  
 August 2010 - June 2012. Faculty Affiliate, Clarkson University Institute for a Sustainable Environment,  
 September 2010 - June 2012.
- **Postdoctoral Associate, Center for Nonlinear Analysis, Department of Mathematical Sciences, Carnegie Mellon University, Pittsburgh, PA**  
 September 2007 - July 2010. Mentor: Noel J. Walkington.
- **Summer Scholar, Institute for Scientific Computing Research, Lawrence Livermore National Laboratory, Livermore, CA**  
 May 2004 - August 2004, May 2005 - September 2005, May 2006 - June 2006.
- **Graduate Research Assistant, Department of Mathematical Sciences  
 Clemson University, Clemson, SC**  
 August 2004 - August 2007.
- **Graduate Teaching Assistant, Department of Mathematical Sciences, Clemson University, Clemson, SC**  
 January 1997 - May 1999, August 2003 - May 2004.
- **Visiting Instructor, Department of Mathematical Sciences, Clemson University, Clemson, SC**  
 August 2002 - August 2003.
- **Research Associate/Database Administrator, Clemson Apparel Research, Pendleton, SC**  
 May 1999 - August 2002.

**RESEARCH INTERESTS:**

- **Current Activities:** Undergraduate Research in the Mathematical Sciences; Finite Element Methods for Fluids and Structures; Applications of Differential Equations in the Natural and Social Sciences; Direct Solution Methods for Large Sparse Linear Systems; Numerical and Computational Analysis of Arterial Blood Flow; Numerical Methods for Coupled Multiscale Problems in Fluid/Fluid and Fluid/Structure Interaction.
- **General Interests:** Numerical and Computational Analysis; Numerical Solution of Partial Differential Equations; Computational Fluid Dynamics; Finite Element Methods; Saddle Point Problems; Inf-Sup Conditions; Temporal Integration Methods for Systems of Ordinary Differential Equations; Operator-Splitting Methods; Defect Correction Methods; Continuation Methods; Newtonian and Non-Newtonian Fluid Flow; Reaction-Diffusion Equations; Flow in Porous Media; Iterative Linear and Nonlinear Solvers.

**PUBLICATIONS:** \* = undergraduate student co-author

23. J. S. Howell, M. R. Roesing\*, and D. S. Boucher. *A functional approach to solubility parameter computations*. Submitted to Journal of Mathematical Chemistry, July 2016.
22. C. A. Fletcher\* and J. S. Howell. *Dynamic modeling of nontargeted and targeted advertising strategies in an oligopoly*. Submitted to Journal of Dynamics and Games, May 2016.
21. J. S. Howell. *Prestructuring sparse matrices with dense rows and columns via null space methods*. In revision for Numerical Linear Algebra and Applications, November 2016.
20. D. S. Boucher and J. S. Howell. *Solubility characteristics of PCBM and C<sub>60</sub>*. J. Phys. Chem. B, 120 (44), 2016, 11556-11566.
19. N. Kuthirummal, G. Smith, L. Lopez\*, R. Podila, J. S. Howell, C. Dun, and A. M. Rao. *Synthesis and characterization of Ar-annealed zinc oxide nanostructures*. AIP Advances, 6, 095225 (2016).
18. J. S. Howell, I. Lasiecka, and J. T. Webster. *Quasi-stability and exponential attractors for a non-gradient system—applications to piston-theoretic plates with internal damping*. Evolution Equations and Control Theory, 5(4), 2016, 567–603.
17. J. S. Howell, M. Neilan, and N. J. Walkington. *A dual-mixed finite element method for the Brinkman problem*. SMAI J. Comput. Math., 2, 2016, 1–17.
16. J. S. Howell and D. S. Boucher. *Temperature dependence of the convex solubility parameters of organic semiconductors*. J. Polym. Sci. Part B: Polym. Phys., 54(1), 2016, 81–88.
15. J. S. Howell, B. O. Stephens\*, and D. S. Boucher. *Convex solubility parameters for polymers*. J. Polym. Sci. Part B: Polym. Phys., 53(16), 2015, 1089–1097.
14. J. S. Howell, H. Lee, and S. Xu. *Finite element approximation of viscoelastic flow in a moving domain*. Elect. Trans. Numer. Anal., 41, 2014, 306–327.
13. J. S. Howell, H. Lee, and S. Xu. *Numerical study of a viscoelastic flow in a moving domain*. Proceedings of the 8th International Conference on Scientific Computing and Applications, Contemp. Math. Series no. 586, Amer. Math. Soc., 2013, 181–188.
12. J. S. Howell and N. J. Walkington. *Dual-mixed finite element methods for the Navier-Stokes equations*. ESAIM: Mathematical Modelling and Numerical Analysis, 47, 2013, 789–805.
11. J. M. Connors, J. S. Howell, and W. J. Layton. *Decoupled timestepping methods for fluid-fluid interaction*. SIAM J. Numer. Anal. 50(3), 2012, 1297–1319.
10. J. M. Connors and J. S. Howell. *A fluid-fluid interaction method using decoupled subproblems and differing time steps*. Numer. Methods PDE 28(4), 2012, 1283-1308.
9. J. S. Howell and N. J. Walkington. *Inf-sup conditions for twofold saddle point problems*. Numer. Math. 118(4) 2011, 663–693.
8. J. S. Howell. *Approximation of generalized Stokes problems using dual-mixed finite elements without enrichment*. Inter. J. Numer. Meth. Fluids 67(2) 2011, 247-268.
7. J. M. Connors, J. S. Howell, and W. J. Layton. *Partitioned timestepping for a parabolic two domain problem*. SIAM J. Numer. Anal. 47(5) 2009, 3526–3549.
6. J. S. Howell. *Dual-mixed finite element approximation of Stokes and nonlinear Stokes problems using trace-free velocity gradients*. J. Comput. Appl. Math. 231(2) 2009, 780–792.
5. J. S. Howell. *Computation of viscoelastic fluid flows using continuation methods*. J. Comput. Appl. Math. 225(1) 2009, 187–201.
4. V. J. Ervin, J. S. Howell, and I. Stanculescu. *A dual-mixed approximation method for a three-field model of a nonlinear generalized Stokes problem*. Comput. Meth. Appl. Mech. Engrg. 197(33–40) 2008, 2886–2900.
3. V. J. Ervin, J. S. Howell, and H. Lee. *A two-parameter defect-correction method for computation of steady-state viscoelastic fluid flow*. Appl. Math. Comput. 196(2) 2008, 818–834.
2. S. Gao, J. S. Howell. *A general polynomial sieve*. Designs and codes—a memorial tribute to Ed Assmus. Des. Codes Cryptogr. 18 (1999), no. 1-3, 149–157.

1. S. Gao, J. S. Howell, D. Panario. *Irreducible polynomials of given forms*. Finite fields: theory, applications, and algorithms (Waterloo, ON, 1997), 43–54, Contemp. Math., 225, Amer. Math. Soc., Providence, RI, 1999.

**ARTICLES IN PREPARATION:** \* = undergraduate student co-author

- J. S. Howell, R. M. Neilan, and T. Perini\*. *Mathematical modeling of popularity dynamics*.
- D. S. Boucher, J. S. Howell, and M. R. Roesing\*. *Functional solubility parameters of P3HT*.
- J. S. Howell, K. Huneycutt\*, J. T. Webster, and S. Wilder\*. *Numerical simulation of fluttering cantilevered beams*.
- J. S. Howell, D. Toundykov, and J. T. Webster. *Analysis and computation of an extensible nonlinear beam with a piston-theoretic model of fluid-structure interaction*.
- J. S. Howell and M. Neilan. *Low-order dual-mixed finite element methods for the Navier-Stokes equations on general meshes*.
- J. S. Howell. *Condition estimates for a class of null basis matrices*.

**RESEARCH ACTIVITIES WITH UNDERGRADUATE STUDENTS:**

- Spencer Wilder (Math & Chemistry Major), numerical methods for aeroelastic flutter, May 2016-present (with J. Webster).
- Katelynn Huneycutt (Math & Physics Major), numerical methods for aeroelastic flutter, May 2016-present (with J. Webster).
- Miranda Roesing (Chemistry & Biochemistry Major), computation of functional solubility parameters for polymers, January 2016-present (with D. Boucher).
- Ben Stephens (Chemistry & Biochemistry Major), solubility parameters for polymers, January 2015-May 2015 (with D. Boucher).
- Tyler Perini (Math Major), modeling social trends using differential equations, January 2014-May 2016.
- Danielle Massé (Math & Physics Major), computational analysis of blood flow in abdominal aortic aneurysms, May 2014-May 2016.
- Chloe Fletcher (Data Science Major), modeling and analysis of advertising strategies using differential equations, January 2014-May 2015.
- Allison Conger (Math Major), computational analysis of blood flow in intracranial aneurysms, May 2014-August 2014.

**COURSES TAUGHT:** (As Instructor of Record, \* indicates graduate course, ° indicates new course)

**Department of Mathematics, College of Charleston**

<u>COURSE</u>	<u>SEM/YR</u>
MATH 111 (Pre-Calculus Mathematics)	S13
MATH 120 (Introductory Calculus)	F12(2), F13(3), F14, F15, S16, F16
MATH 207 (Discrete Structures I)	S13(2), S14, Su14
MATH 229° (Vector Calculus with Chemical Applications)	F14, S15, F15, S16
MATH 245 (Numerical Methods and Mathematical Computing)	F16
MATH 246 (Mathematical Computing and Programming Laboratory)	F16
HONS 280° (Applied Differential Equations)	F13
MATH 399 (Tutorial/Undergraduate Research)	F14, S15
MATH 470 (Mathematical Modeling)	S15
MATH 480/580*° (Special Topics: Introduction to Cryptography)	S15

**Department of Mathematics, Clarkson University**

<u>COURSE</u>	<u>SEM/YR</u>
MA131 (Calculus I)	F10
MA231 (Calculus III)	S11
MA311 (Abstract Algebra)	F11
MA330 (Advanced Engineering Mathematics)	F11
MA339 (Applied Linear Algebra)	S12
MA346 (Applied Algebra and Discrete Structures)	S11
MA511* (Algebraic Structures)	S12
MA571* (Numerical Methods for Differential Equations)	S11
MA572* (Finite Element Methods)	F11

**Department of Mathematical Sciences, Carnegie Mellon University**

<u>COURSE</u>	<u>SEM/YR</u>
21-120 (Differential and Integral Calculus)	S10
21-123 (Calculus of Approximation)	F08
21-126 (Introduction to Mathematical Software)	F08(3)
21-127 (Concepts of Mathematics)	S08
21-236 (Mathematical Studies II)	S09
21-369 (Numerical Methods)	F07, F08(Indep. Study)
21-762* (Finite Element Methods)	F09

**Department of Mathematical Sciences, Clemson University**

<u>COURSE</u>	<u>SEM/YR</u>
MTHSC 106 (Calculus I)	F97, F98(2)
MTHSC 108 (Calculus II)	S98, S99, F02(2), S03(2), Su03
MTHSC 206 (Multivariate Calculus)	F02, S03, F03
MTHSC 208 (Ordinary Differential Equations)	S04

**HONORS AND AWARDS:**

- College of Charleston Award for Outstanding Service to First-Year Students, 2013-2014.
- College of Charleston Award for Outstanding Service to First-Year Students, 2012-2013.
- Clarkson University Phalanx Commendable Service Award, 2011-2012.
- Clarkson University Office of Accommodative Services RESPECT Award nomination, Fall 2011.
- SIAM Student Travel Grant, February 2007.
- Outstanding Citizenship Award 2006-2007, Department of Mathematical Sciences, Clemson University.
- Outstanding Graduate Student Presentation, Joint Meeting of the MAA Southeastern Section and the SIAM Southeast Atlantic Section, Auburn, AL, March 31 - April 1, 2006.
- Clemson University Graduate Student Government Travel Award, April 2006.
- Outstanding Citizenship Award 2005-2006, Department of Mathematical Sciences, Clemson University.
- Outstanding Service to the Department Award 2003-2004, Department of Mathematical Sciences, Clemson University.
- Graduate Teaching Assistant of the Year 1998-1999, College of Engineering and Science, Clemson University.
- Outstanding Service to the Department Award 1998-1999, Department of Mathematical Sciences, Clemson University.
- Dean's Scholar Fellowship, College of Engineering and Science, Clemson University, 1998-1999.
- Outstanding Master's Student 1997-1998, Department of Mathematical Sciences, Clemson University.
- Graduation honor *Summa Cum Laude*, College of Charleston, 1996.
- Ewa Wojcicka Mathematics Award (Outstanding Mathematics Major) 1995-1996, Department of Mathematics, College of Charleston.

**FUNDED AND UNFUNDED GRANT PROPOSALS:**

- NSF CAREER Grant Proposal, "CAREER: Compatibility Conditions and Solvers for Dual-Mixed Finite Element Methods with Applications in Fluids and Structures," Submitted July 2016, pending.
- College of Charleston SURF Grant Proposal, "Numerical Methods for Aeroelastic Flutter," Submitted February 2016, funded, \$6000.
- College of Charleston RPG Grant Proposal, "Newtonian and Non-Newtonian Fluid Dynamics in Abdominal Aortic Aneurysms," Submitted October 2014, funded, \$250.
- College of Charleston RPG Grant Proposal, "Analysis of nontargeted and targeted advertising strategies in an oligopoly setting," Submitted September 2014, funded, \$450.
- NSF CAREER Grant Proposal, "CAREER: Compatibility Conditions and Solvers for Dual-Mixed Finite Element Methods with Applications in Continuum Mechanics," Submitted July 2014, unfunded.
- Howard Hughes Medical Institute Summer Undergraduate Research Grant Proposal, "Computational analysis of wall shear stress in arterial aneurysms," Submitted March 2014, funded, \$6000.
- College of Charleston SURF Grant Proposal, "Computational analysis of wall shear stress in arterial aneurysms," Submitted February 2014, funded, \$4000.
- Simons Foundation Travel Grants for Mathematicians Proposal, "Numerical Methods for Coupled Multi-scale Problems in Fluid Dynamics," Submitted January 2014, unfunded.
- College of Charleston Honors College New Course Development Stipend, May 2013, \$750.
- College of Charleston Faculty R&D Grant Proposal, "Numerical Methods for Hemodynamical Flows," Submitted January 2013, funded, \$4000.
- Simons Foundation Travel Grants for Mathematicians Proposal, "Numerical Methods for Coupled Multi-scale Problems in Fluid Dynamics," Submitted January 2013, unfunded.
- NSF Single Investigator Grant Proposal, "Numerical Approximation of Non-Newtonian Flows with Applications to Hemodynamics," Submitted December 2011, unfunded.
- NSF Single Investigator Grant Proposal, "Accurate Approximation of Newtonian and Non-Newtonian Fluid Stresses Using Dual-Mixed Finite Element Methods," Submitted December 2010, unfunded.
- NSF Single Investigator Grant Proposal, "Analysis of Dual-Mixed Finite Element Methods for Nonlinear Problems in Continuum Mechanics," Submitted December 2009, unfunded.

**SERVICE ACTIVITIES:****Department and School**

- College of Charleston Department of Mathematics Committees:
  - Calculus Committee, 2012-present.
  - Math 111 Committee, 2012-2013.
  - Faculty Research and Development Committee, 2013-present.
  - Student Activities and Major Recruitment Committee, 2012-2016 (chair 2013-2016).
  - Assessment Committee, 2013-present.
  - Faculty Recruitment Committee, 2013-2014.
  - Committee on the Major, 2014-present.
- Co-webmaster of the department website, 2012-present.
- Volunteer, College of Charleston Math Meet high school mathematics competition, 2013, 2014, 2015, 2016.
- Exhibitor, School of Science and Mathematics STEM Education Day activities, April 2014 (Charleston Riverdogs), February 2015 (Lady Cougars), February 2016 (Lady Cougars).
- Exhibitor, Charleston STEM Festival, February 2015.
- Member, School of Science and Mathematics Scholarship Committee, Spring 2013, Spring 2014.
- Undergraduate major advisor (currently 13 students), Department of Mathematics, College of Charleston, 2013-present.
- Faculty Advisor, Clarkson University SIAM Student Chapter, Spring 2012.

- Ph.D. advisor, Jay Appleton, Department of Mathematics, Clarkson University, 2011-2012.
- Undergraduate major advisor (5 students), Department of Mathematics, Clarkson University, 2011-2012.
- Organizer and speaker, Numerical Analysis Seminar, Clarkson University Department of Mathematics, Fall 2011.
- Member, Undergraduate Committee, Calculus Subcommittee, Mathematics Department, Clarkson University 2010-2012.
- Speaker, Clarkson University Math Club Seminar, Clarkson University Department of Mathematics Applied Mathematics Seminar, Fall 2010.
- Co-organizer, Center for Nonlinear Analysis Working Group on Recent Advances in Analysis and Approximation of Fluids, Carnegie Mellon University, Fall 2009.
- Speaker, Carnegie Mellon University Department of Mathematical Sciences Undergraduate Colloquium, Fall 2008, Fall 2009.
- Co-organizer, Graduate Student Seminar 2003-2004, Department of Mathematical Sciences, Clemson University.
- Treasurer, Clemson University SIAM Student Chapter 1997-1998.

### College/University

- Senator (School of Sciences & Mathematics at-large), Faculty Senate, Fall 2016-Spring 2018.
- Member, Presidential Advisory Committee, Fall 2016-Spring 2017 (Secretary).
- Member, General Education Assessment Reading Group in Math/Logic, Fall 2013-Fall 2015.
- Member, College of Charleston General Education Committee, 2015-2016.
- Member, College of Charleston Committee on the Assessment of Institutional Effectiveness, 2013-2015 (Secretary 2013-2014).
- Volunteer, Organized Chaos Student Move-In Program, College of Charleston, August 2013, August 2014.
- Parent Group Facilitator, Family Orientation, College of Charleston, June-August 2013, July-August 2014, August 2015 (12 orientation sessions).
- Facilitator, Convocation, College of Charleston, August 2013, August 2014, August 2015, August 2016.
- Faculty Advisor, Clarkson University chapter of Omega Lambda Tau service fraternity 2010-2012.
- Senator, Graduate Student Government 2006-2007, Clemson University. Member, Finance Committee, Constitution Committee, Parking Review Board.
- Member, organization and examination committees, Clemson Calculus Challenge (high school mathematics competition) 2003, 2004, Clemson University.

### Professional

- Local organizer, AMS Southeastern Section Meeting, March 2017.
- NSF Computational Mathematics Panel Reviewer, March 2014.
- Session Chair, AMS/MAA Joint Mathematics Meetings, January 2014.
- Journal Reviewer/Referee:
  - Advances in Applied Mathematics and Mechanics
  - Advances in Numerical Analysis
  - AMS Mathematical Reviews
  - Applicable Analysis
  - Applied Mathematics and Computation
  - Applied Mathematical Modeling
  - Applied Numerical Mathematics
  - Computer Methods in Applied Mechanics and Engineering
  - Computers and Mathematics with Applications
  - International Journal of Computational Fluid Dynamics
  - Journal of Aerospace Engineering
  - Journal of Applied Mathematics
  - Journal of Complex Networks
  - Journal of Computational and Applied Mathematics
  - Mathematics in Computers and Simulation
  - Mathematics of Computation

- Numerical Algorithms
- Numerical Methods for Partial Differential Equations
- Numerische Mathematik
- SIAM Journal on Numerical Analysis

- Triage Judge, Moody's Mega Math Challenge, March 2011, March 2012.
- Reviewer: Prentice-Hall (3 calculus textbooks).
- Member, AMS (since 1998), SIAM (since 1997), SIAM Activity Group on Computational Science and Engineering.

## Community

- Math week content provider and teacher training, Engaging Creative Minds Summer 2014 STEAM Institute.
- Volunteer, Animal Rescue League of Western Pennsylvania, Pittsburgh, PA, September 2008-June 2010.
- Founder and President, Clemson Card Players Club (student organization at Clemson University, organized fundraising activities for Big Brother/Big Sisters, Anderson County (SC) Humane Society, American Cancer Society, Camp Happy Days), February 2004-June 2006.

## **PRESENTATIONS:**

34. *Where the Nonzero Things Are*, Colloquium, Department of Mathematics, College of Charleston, September 2016.
33. *Prestructuring sparse matrices with dense rows for direct solvers*, AMS Southeastern Sectional Meeting, Athens, GA, March 2016.
32. *Dual-mixed finite element methods for the Brinkman problem*, SIAM Conference on Computational Science and Engineering (CSE15), Salt Lake City, UT, March 2015.
31. *An early course on modeling and computation with differential equations*, AMS/MAA Joint Mathematics Meetings, Baltimore, MD, January 2014.
30. *Inf-sup conditions and mixed finite element methods*, Computational Mathematics Seminar, Clemson University, May 2013.
29. *To Be Continued...A Brief Introduction to Continuation Methods*, Colloquium, Department of Mathematics, College of Charleston, November 2012.
28. *Dual-mixed finite element methods for the Navier-Stokes Equations*, 8th International Conference on Scientific Computing and Applications (SCA2012), Las Vegas, NV, April 2012.
27. *Numerical analysis and computation of hemodynamical flows*, Colloquium, Department of Mathematics, College of Charleston, February 2012.
26. *Dual-mixed finite element methods for the Navier-Stokes equations*, Analysis and PDE Seminar, University of Delaware, Newark, DE, May, 2011.
25. *Dual-mixed finite element methods for the Stokes and Navier-Stokes equations*, Minisymposium on Algorithm Analysis, Design and Computation for Turbulent Flows, SIAM Annual Meeting (AN10), Pittsburgh, PA, July, 2010.
24. *Compatible dual-mixed finite element methods for fluids*, Computational and Applied Mathematics Seminar, University of Pittsburgh, Pittsburgh, PA, March 2010.
23. *Dual-mixed finite element methods for fluids*, Mathematics Colloquium, Clarkson University, Potsdam, NY, February 2010.
22. *Modeling and simulation of problems in fluid dynamics*, Colloquium, The Wilkes Honors College of Florida Atlantic University, Jupiter, FL, January 2010.
21. *Dual-mixed finite element methods for fluids*, Colloquium, Missouri University of Science & Technology, Rolla, MO, January 2010.
20. *Dual-mixed finite element methods for fluids*, Special Guest Lecture, Louisiana State University Center for Computation & Technology, Baton Rouge, LA, January 2010.
19. *Analysis and approximation of coupled fluid/elastic structure models arising in vascular fluid dynamics*, CNA Working Group on Recent Advances in Analysis and Approximation of Fluids, Carnegie Mellon University, Pittsburgh, PA, September 2009.

18. *Inf-sup conditions for twofold saddle point problems*, BCAM Seminar, Basque Center for Applied Mathematics, Derio, Spain, July 2009.
17. *Dual-mixed finite element methods for the steady Stokes problem using Arnold–Winther tensors*, Finite Element Circus, University of Delaware, Newark, DE, April 2009.
16. *Dual-mixed finite element approximation of Stokes and generalized Stokes problems*, SIAM Conference on Computational Science and Engineering, (CSE09), Miami, FL, March 2009.
15. *Low-order finite element approximation of nonlinear generalized Stokes problems*, 10th Copper Mountain Conference on Iterative Methods, Copper, CO, April 2008.
14. *Approximating the stress tensor in nonlinear generalized Stokes problems*, Finite Element Circus and Rodeo, Louisiana State University Center for Computation & Technology, Baton Rouge, LA, March 2008.
13. *Saddle point problems and inf-sup conditions*, US-Chile Workshop: New Developments in Partial Differential Equations II, Universidad de Chile, Santiago, Chile, January 2008.
12. *A brief introduction to viscoelastic fluids*, Center for Nonlinear Analysis Working Group on Complex Fluids and Transport, Carnegie Mellon University, Pittsburgh, PA, October 2007.
11. *Dual-mixed approximation of generalized Stokes problems*, Computational and Applied Mathematics Seminar, University of Pittsburgh, Pittsburgh, PA, September 2007.
10. *Computing viscoelastic fluid flows at high Weissenberg number*, SIAM Conference on Computational Science and Engineering, (CSE07), Costa Mesa, CA, February 2007.
9. *Cost of accuracy for coupled diffusion and reaction systems*, SIAM Conference on Computational Science and Engineering, (CSE07), Costa Mesa, CA, February 2007.
8. *Finite element approximation of partial differential equations using FreeFEM++*, USC SIAM Student Chapter Seminar, Columbia, SC, February 2007.
7. *Defect–correction methods for finite element computations of viscoelastic fluid flow*, AMS-MAA Joint Mathematics Meetings, New Orleans, LA, January 2007.
6. *Computing viscoelastic fluid flows at high Weissenberg number*, South Eastern Atlantic Mathematical Sciences Workshop (Cha-Cha Days), Charleston, SC, October 2006.
5. *Implementation and performance of a two-grid method for nonlinear reaction-diffusion equations*, Ninth Copper Mountain Conference on Iterative Methods, Copper, CO, April 2006.
4. *Iterative defect-correction strategies for viscoelastic fluid flow*, Joint Meeting of the MAA Southeastern Section and the SIAM Southeast Atlantic Section, Auburn, AL, April 2006.
3. *A defect-correction method for viscoelastic fluid flow*, CASC Work In Progress seminar, Center for Applied Scientific Computing, Lawrence Livermore National Laboratory, August 2005.
2. *Applying a defect correction method to viscoelastic fluid flow*, SIAM-Southeastern Atlantic Region Annual Meeting, Charleston, SC, March 2005.
1. *Irreducible polynomials of given forms,  $\mathbb{F}_{q^4}$*  - The Fourth International Conference on Finite Fields and Applications, Waterloo, ON, August 1997.

**OTHER CONFERENCES AND WORKSHOPS ATTENDED:** (\* indicates activities since June 2012)

- Finite Element Circus, University of Minnesota, Minneapolis, MN, October 2014.
- IMA Workshop on Structure-Preserving Discretizations of Partial Differential Equations, University of Minnesota, Minneapolis, MN, October 2014.
- Faculty Technology Institute, College of Charleston, March 2013.
- Finite Element Circus, University of Pittsburgh, Pittsburgh, PA, October 2012.
- AMS-MAA Joint Mathematics Meetings, Boston, MA, January 2011.
- Finite Element Circus, University of Minnesota, Minneapolis, MN, November 2010.
- IMA Workshop on Numerical Solutions of Partial Differential Equations: Novel Discretization Techniques, University of Minnesota, Minneapolis, MN, November 2010.
- AMS-MAA Joint Mathematics Meetings, San Francisco, CA, January 2010.
- Finite Element Circus, University of Tennessee, Knoxville, TN, October 2009.
- Workshop on Hybridization of Discontinuous Galerkin Methods, Basque Center for Applied Mathematics, Bilbao, Spain, July 2009.