

# Ellen R. Peterson

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United States Citizen

EDUCATION ◇ **North Carolina State University**, Raleigh, NC

- M.S. in Applied Mathematics, May 2009
- Ph.D. in Applied Mathematics, anticipated 2010

◇ **Wittenberg University**, Springfield, OH

- B.S. in Mathematics (with Departmental Honors), summa cum laude, May 2006

RESEARCH INTERESTS PDE, numerical analysis, modeling, thin liquid films

EXPERIENCE ◇ **Graduate Research Assistant**, North Carolina State University, 2007 -present  
Advisor: Michael Shearer

◇ **Graduate Teaching Assistant**, North Carolina State University, Fall 2006

PUBLICATIONS E. Peterson, M. Shearer, T. Witelski, R. Levy, *Stability of Traveling Waves in Thin Liquid Films Driven by Gravity and Surfactant*, Proceedings, 12th International Conference on Hyperbolic Problems: Theory, Numerics, Applications, Hyp 2008, To appear.

A. Deines, E. Peterson, et al, *Robust Population Management Under Uncertainty for Structured Population Models*, Ecological Applications, Vol 12, No. 8, pp.2175-2183, 2007

TALKS/ POSTERS ◇ SIAM Annual Meeting, Denver, CO, *Insoluble Surfactant Spreading on a Horizontal Thin Liquid Film*, July 2009

◇ Triangle Soft Matter Workshop, North Carolina State University, *Thin Fluid Films with Surfactant*, poster and soundbite, May 2009

◇ SAS Hall Dedication, North Carolina State University, *Thin Fluid Films with Surfactant*, poster, May 2009

◇ Higher Order Geometric Evolution Equations: Theory and Applications from Microfluidics to Image Understanding, IMA-University of Minnesota, *Thin Fluid Films with Surfactant*, poster, March 2009

◇ North Carolina State Graduate Recruitment Day, *Shock Waves: Flow of Thin Liquid Films*, February 2009

◇ Thin Films Day, North Carolina State University, *Flow of Thin Films with Surfactant: Behavior of Perturbations*, January 2009

◇ EDGE Cluster Meeting, North Carolina State University, *Flow of Thin Films with Surfactant: Beginning Stability Analysis*, October 2008

◇ Applied Mathematics Graduate Student Seminar, North Carolina State University, current research talks, spring 2007, fall 2007, fall 2008, spring 2009

◇ National Conference of Undergraduate Research, UNC-Asheville, *Mathematical Modeling and Control of the Peregrine Falcon Population*, April 2006

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- ◇ Joint Mathematics Meeting, San Antonio, TX *Robustness Applied to Harvesting the Peregrine Falcon Population*, poster, January 2006
- ◇ Undergraduate Mathematics Day, University of Dayton, *Falcon Harvesting: Robustness and Transients Applied to Falcon Harvesting*, November 2005
- ◇ Wittenberg University Student Research Symposium, Wittenberg University *Robustness Applied to Harvesting the Peregrine Falcon Population*, poster, October 2005
- ◇ Mathematical Association of America Central Section Conference, Lincoln, NE *Falcon Harvesting: Robustness and Transients Applied to Falcon Harvesting*, October 2005

CONFERENCES/ Promoting Diversity at the Graduate Level in Mathematics: a National Forum, MSRI, October 2008

PROGRAMS

Enhancing Diversity in Graduate Education (EDGE) Reunion, Pomona College, June 2008, *Panelist*

MBI Summer Graduate Program: Patterns of multiallelic polymorphism maintained by migration and selection, The Ohio State University, summer 2006

Enhancing Diversity in Graduate Education (EDGE), New College of Florida, June 2006

NSF-REU Control Theory Techniques Applied to Biological Population Problems, University of Nebraska-Lincoln, summer 2005

AWARDS

- ◇ Preparing the Professoriate Fellow, August 2009-May 2010
- ◇ SIAM Student Chapter Representative, NCSU, SIAM Annual Meeting, July 2009
- ◇ NSF-RTG in Mathematics of Materials, Research Assistantship, January 2008-present
- ◇ Phi Beta Kappa National Honor Society, Inducted April 2006
- ◇ Richard A. Little Mathematics Award, April 2006
- ◇ Mortar Board Honor Society, spring 2006
- ◇ Joint Math Meetings Student Poster Winner, January 2006
- ◇ Order of Omega, spring 2005
- ◇ Omicron Delta Kappa, spring 2005
- ◇ Paul Hessler Mathematics Award, April 2005
- ◇ Alpha Lambda Delta, spring 2003