

## *Curriculum Vitae*

Laura R Ritter

Department of Mathematics

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### *Education*

**1999-2003:** Northwestern University, Evanston IL.

2003: PhD conferred Thesis title: On Initiation of Polymerization Waves in Thermal Free-Radical Frontal Polymerization

Advisors: V. A. Volpert and W. E. Olmstead

**1995-1999:** University of Texas at Dallas, Dallas TX.

1999: MS Applied Mathematics

1998: BS Summa Cum Laude Mathematical Science

### *Scholarships and Awards*

**2009:** Outstanding Faculty of the Year Award, Southern Polytechnic State University

**2003-2006:** NSF VIGRE Post-Doctoral Fellowship, Texas A & M University

**2000-2001, 2001-2002, 2002-2003:** Achievement Awards for College Scientists, Chicago Chapter of ARCS Foundation Inc.

**1999-2000:** Royal E. Cabell Fellowship, Northwestern University

### *Positions Held*

**August 2006-Present:** Assistant Professor of Mathematics, Southern Polytechnic State University, Marietta Georgia

**August 2003-May 2006:** Visiting Assistant Professor of Mathematics, Department of Mathematics Texas A & M University, College Station Texas

**January 2003-May 2003:** Teaching Assistant, Department of Engineering Science and Applied Mathematics, Northwestern University, Evanston Illinois

**September 2001-December 2002:** Tutor, McCormick School of Engineering and Applied Science, Northwestern University, Evanston Illinois

**September 2000 - May 2001 :** Teaching Assistant, Department of Engineering Science and Applied Mathematics, Northwestern University, Evanston Illinois

**June 1998 - August 1999:** Teaching Assistant, Department of Natural Science and Mathematics, University of Texas at Dallas, Dallas Texas

**June 1997 - May 1998:** Undergraduate Assistant, University of Texas at Dallas, Dallas Texas

## ***Publications***

INITIATION OF FREE-RADICAL POLYMERIZATION WAVES with W.E.Olmstead and V.A.Volpert, *SIAM J. on Appl. Math.* 63 (2003), pp. 1831–1848

A NUMERICAL ANALYSIS OF INITIATION OF POLYMERIZATION WAVES with A.Heifetz, V.A.Volpert and W.E.Olmstead, *Math. Comp. M.* **41** (2005), pp. 271–285

A MATHEMATICAL MODEL OF ATHEROGENESIS AS AN INFLAMMATORY RESPONSE with A.I. Ibragimov, C.J. McNeal, and J.R. Walton, *Math. Med. Biol.* **22** (2005), pp. 305–333

A DYNAMICAL MODEL OF ATHEROGENESIS AS AN INFLAMMATORY RESPONSE with A.I. Ibragimov, C.J. McNeal, and J.R. Walton, *DCDIS A Supplement, Advances in Dynamical Systems*, **Vol.14(S2)** (2007), pp. 185–189

STABILITY ANALYSIS OF A MODEL OF ATHEROGENESIS: AN ENERGY ESTIMATE APPROACH With A.I. Ibragimov, C.J. McNeal, and J.R. Walton, *J. Comp. Math. Meth. Med.* **Vol.9(2)** (2008) pp. 121–142

STABILITY ANALYSIS OF A MODEL OF ATHEROGENESIS: AN ENERGY ESTIMATE APPROACH II With A.I. Ibragimov, C.J. McNeal, and J.R. Walton, *J. Comp. Math. Meth. Med.* To Appear

STABILITY ANALYSIS USING AN ENERGY ESTIMATE APPROACH OF A REACTION DIFFUSION MODEL OF ATHEROGENESIS With A.I. Ibragimov, C.J. McNeal, and J.R. Walton, *Proceedings of the 7th AIMS International Conference* To Appear

TO DISCUSS OR NOT TO DISCUSS: INTEGRATING PEDAGOGIES FOR HONORS AND MATHEMATICS, with W. Griffiths and N. Reichert, *Honors in Practice* In Review

## ***Selected Colloquium Talks and Presentations***

**Title:** *Initiation of Free-Radical Polymerization Waves*  
(15 minute talk) The Joint Mathematics Meeting of the AMS, MAA, and SIAM  
January 2003, Baltimore Maryland.

**Title:** *Initiation of Polymerization Waves*  
(50 minute talk) Elmhurst College, Undergraduate Mathematics Colloquium,  
April 2003, Elmhurst Illinois.

**Title:** *Initiation of Free-Radical Polymerization Waves*  
(50 minute talk) Applied Mathematics Colloquium, Texas A & M University,  
November 2003, College Station Texas.

**Title:** *A Model of Atherogenesis: an Inflammatory Response*  
(20 minute talk) 2004 Texas PDE Conference,

March 2004, College Station Texas.

**Title:** *A Model of Atherogenesis: an Inflammatory Response*

(30 minute invited talk), Cardiovascular Research Institute Colloquium, Texas A & M University System Health Science Center

April 2004, Temple Texas.

**Title:** *A Model of Atherogenesis: an Inflammatory Response*

(20 minute talk) Texas/United Kingdom Collaborative Research Initiative,

April 2004, Houston Texas.

**Title:** *Modeling Atherogenesis as an Inflammatory Response*

(45 minute talk) 2005 Spring Central Section Meeting of the AMS

April 2005, Lubbock Texas.

**Title:** *A Mathematical Framework for the Modeling of Atherosclerosis*

(50 minute invited), University of Texas at Dallas

October 2005, Dallas Texas.

**Title:** *Mathematical Modelling of Cardiovascular Disease*

(50 minute), Southern Polytechnic State University

April 2007, Marietta Georgia.

**Title:** *Stability analysis of a model of atherogenesis: An energy estimate approach*

(10 minute), The Joint Mathematics Meeting of the AMS, MAA, and SIAM

January 2008, San Deigo California.

**Title:** *Stability analysis of a model of atherogenesis*

(25 minute), 7<sup>th</sup> Annual AIMS Conference on Differential Equations and Dynamical Systems

May 2008, Arlington TX.

**Title:** *Stability analysis of a model of atherogenesis*

(25 minute), 24<sup>th</sup> Annual Shanks Conference Mathematical Modelling in the Medical Sciences

May 2009, Nashville TN.

### ***Affiliations***

Sigma Xi, Northwestern University Chapter (Student Member) 1998-2003

Sigma Xi, Member at Large 2008–present

American Mathematical Society, 2002-present

SIAM, 2002

Association for Women in Mathematics, 2003

Mathematical Association of America, 2006-present

Reviewer for the Journal of Applied Mathematics and Computing, 2009-present

## *Referees*

Professor A.I. Ibragimov  
Department of Mathematics and Statistics  
Texas Tech University  
P.O. Box 41042, Lubbock, Texas 79409-1042  
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Professor V.A. Volpert  
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