

Antonio Mastroberardino

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EDUCATION

- **University at Buffalo**, Buffalo, NY
Ph.D. in Mathematics, 2008
Advisor: Brian Spencer
- **SUNY Brockport**, Brockport, NY
M.A. in Mathematics, 2002
- **Cornell University**, Ithaca, NY
B.S. in Mechanical & Aerospace Engineering, Cum Laude, 1996

EMPLOYMENT

- Assistant Professor of Mathematics, Penn State Erie
July 2008-present
- Mathematics Instructor, University at Buffalo
July 2006-June 2008
- Research Assistant, University at Buffalo
August 2005-August 2007
- Mathematics Instructor, SUNY Brockport
January 2003-December 2005
- Mathematics Instructor, Monroe Community College
July 2003-August 2005
- Teaching Assistant, University at Buffalo
August 2003-May 2005

RESEARCH INTERESTS

Fluid mechanics, differential equations, mathematical modeling, numerical analysis.

PUBLICATIONS

1. Mastroberardino, A., Mahabaleswar, U.S., *Mixed convection in viscoelastic flow due to a stretching surface in a porous medium*, in preparation.
2. Mastroberardino, A., *Series solutions for annular axisymmetric stagnation flow on a moving cylinder*, submitted.

3. Mastroberardino, A., *Homotopy analysis method applied to electrohydrodynamic flow*, Communications in Nonlinear Science and Numerical Simulation, **16**, no. 7 (2011) 2730-2736.
4. Mastroberardino, A., Paullet, J.E., *Existence and a priori bounds for steady stagnation flow toward a stretching cylinder*, Journal of Mathematical Analysis and Applications, **365**, no. 2 (2010), 701-710.
5. Mastroberardino, A., Spencer, B.J., *Three-dimensional equilibrium crystal shapes with corner energy regularization*, IMA Journal of Applied Mathematics, **75**, no. 2 (2010), 190-205.

INVITED PRESENTATIONS

- Symposium on Biomathematics and Ecology: Education and Research, Illinois State University, Normal, IL, September 2010
- Mathematics Seminar, Allegheny College, February 2010
- Mathematics Seminar, Edinboro University, October 2009
- Mathematics Colloquium, Niagara University, February 2008
- Mathematics Seminar, Penn State Erie, February 2008
- Mathematics Colloquium, Alfred University, January 2008

CONTRIBUTED PRESENTATIONS

- Joint Mathematics Meetings, Boston, MA, January 2012
- Mathematics Seminar, Penn State Erie, November 2011
- AMS Section Meeting, Cornell University, September 2011
- New York Conference on Applied Mathematics, University at Buffalo, April 2011
- MAA Seaway Section Meeting, Nazareth College, April 2011
- Mathematics Seminar, Penn State Erie, March 2011
- Joint Mathematics Meetings, New Orleans, LA, January 2011
- Southeastern-Atlantic Regional Conference on Differential Equations, Virginia Tech, October 2010
- Session on Open and Accessible Problems in Applied Mathematics, MathFest, Pittsburgh, PA, August 2010
- MAA Seaway Section Meeting, SUNY Oswego, April 2010
- Mathematics Seminar, Penn State Erie, March 2010
- Joint Mathematics Meetings, San Francisco, CA, January 2010

- Mathematics Seminar, Penn State Erie, December 2009
- MAA Seaway Section Meeting, SUNY Fredonia, October 2009
- Mathematics Seminar, Penn State Erie, September 2009
- Mathematics Seminar, Penn State Erie, April 2009
- MAA Seaway Section Meeting, Rochester Institute of Technology, April 2009
- Joint Mathematics Meetings, Washington, D.C., January 2009
- Mathematics Seminar, Penn State Erie, October 2008
- Graduate Student Math Modeling Competition, University at Buffalo, March 2008
- Applied Mathematics Seminar, University at Buffalo, October 2007
- Graduate Student Math Modeling Camp, Rensselaer Polytechnic Institute, June 2006

CONFERENCES ATTENDED

- Joint Mathematics Meetings, San Diego, CA, January 2008.
- Probabilistic and Analytical Perspectives on Contemporary Partial Differential Equations, Carnegie-Mellon University, June 2006.
- Nonlinearity and Randomness in Complex Systems, University at Buffalo, April 2006.

TEACHING EXPERIENCE

- **Penn State Erie**
 Numerical Analysis 1, Matrices, Fall 2011
 Applied Ordinary Differential Equations, Spring 2011
 Ordinary and Partial Differential Equations, Calculus 3, Fall 2010
 Numerical Analysis 2, Honors Calculus 2, Spring 2010
 Numerical Analysis 1, Differential Equations, Matrices, Fall 2009
 Applied Ordinary Differential Equations, Honors Calculus 2, Spring 2009
 Numerical Analysis 1, Differential Equations, Fall 2008
- **University at Buffalo**
 Linear Algebra, Summer 2008
 Calculus 3, Calculus 2 for the Social Sciences, Spring 2008
 Business Calculus, Fall 2007
 Calculus 3, Summer 2007
 Introduction to Differential Equations, Summer 2006
- **SUNY Brockport**
 Calculus 1, Business Calculus, Fall 2005
 Discrete Math, Calculus 2, Calculus 1, Spring 2003

- **Monroe Community College**
Intermediate Algebra, Summer 2005
Applied Calculus, Summer 2004
Discrete Math, Calculus 3, Summer 2003

PROFESSIONAL DEVELOPMENT

- Harnessing the Power of Hybrid & Online Teaching and Learning, Schreyer Institute (PSU), May 2011.
- Rigor in the Classroom, Schreyer Institute (PSU), March 2011.
- ProjectNExT course: Applying for Grants from the National Science Foundation/Getting Your Research Off to a Good Start, MathFest, August 2010.
- Integrated Course Design for Significant Learning, Schreyer Institute (PSU), May 2010.
- Seaway Section NExT, SUNY Oswego, April 2010.
- Seaway Section NExT, Rochester Institute of Technology, April 2009.
- Teaching and Educational Technologies Workshop, Penn State Erie, March 2009.

ADVISING OF UNDERGRADUATE RESEARCH

- Clayton Schuman, Fall 2011
Analysis of predator-prey systems.
- Justin Carbonara, Spring 2011
Analysis of the Falkner-Skan equation.
- Clayton Schuman and Kartik Darapuneni, Spring 2011
Equilibrium crystal shapes with corner energy regularization.
- Terrance Watterson, Spring 2011
Homotopy analysis method applied to the Lane-Emden equation.
- Geoffrey Sanko, Spring 2010
Annular stagnation flow on a moving cylinder.

SERVICE

- Referee for Acta Mechanica, Applied Mathematics and Computation, Chemical Engineering Communications, International Journal for Computational Methods in Engineering Science & Mechanics, International Journal of Heat and Mass Transfer.
- Mathematics Lecturer Search Committee, Penn State Erie, 2011-2012.
- College Committee on Student Life, Penn State Erie, 2011-present.
- School Committee on Academic Programs, Penn State Erie, 2011-present.
- School Committee on Research, Penn State Erie, 2009-present.

- Organizer, Mathematics Seminar, Penn State Erie, 2009-present.
- Chair for AMS session on Mechanics and Fluid Mechanics, Joint Math Meetings, 2011.
- College Committee on Athletics, Penn State Erie, 2009-2011.
- Volunteer for Math Options Career Day, Penn State Erie, May 2010, 2011.
- MAA Undergraduate Student Poster Session Judge, Joint Math Meetings, 2010.
- Mathematics Education Faculty Search Committee, Penn State Erie, 2009-2010.
- Judge for Pennsylvania Junior Academy of Sciences competition, 2009, 2010.
- President, Math Graduate Student Association, University at Buffalo, 2007-2008.

AWARDS

- Nominated for Council of Fellows Excellence in Teaching Award, Penn State Erie, 2011.
- Who's Who in North American Education, 2010-2011.
- Who's Who Among Executives & Professionals, 2009-2010.
- Who's Who Among Students in American Universities & Colleges, 2008.
- Graduate Fellowship, University at Buffalo, August 2003-May 2007.
- Research Assistantship, University at Buffalo, June 2005-May 2007.
- Nominated for Excellence in Teaching Award, University at Buffalo, Fall 2004.
- Teaching Assistantship, University at Buffalo, August 2003-May 2005.
- Teaching Assistantship, SUNY Brockport, Fall 2002.
- Donald Henn Andrew White Scholarship, Cornell University, August 1995-May 1996.
- All-Ivy Academic, Cornell University, Fall 1994.

INDUSTRY EMPLOYMENT

- Project Engineer, Tyco Electronics, Rochester, NY
June 2000-September 2002
- Project Engineer, Schlegel Systems, Inc., Rochester, NY
August 1996-August 1999

MEMBERSHIPS

- Society for Industrial and Applied Mathematics.
- Mathematical Association of America.

SKILLS

- Windows, OS X, Linux, MATLAB, Maple, Mathematica, L^AT_EX, WeBWorK, XPPAUT.