

Peng(Paul) Feng

Department of Physical Sciences
and Mathematics
Florida Gulf Coast University
10501 FGCU Blvd South
Ft. Myers, FL 33965-6565

RESEARCH INTERESTS Singular formation in Partial Differential Equations, Mathematical Biology, Free Boundary Problem

EDUCATION 1999-2005 **Ph.D., Applied Mathematics**
Michigan State University, East Lansing, MI

1998-1999 Rensselaer Polytechnic Institute, Troy, NY

1994-1998 **B.A., Computational and Applied Mathematics**
Peking University, Beijing, P.R. China

PROFESSIONAL EXPERIENCE 2005-Present **Assistant Professor**
Department of Physical Sciences and Mathematics
Florida Gulf Coast University

1999-2005 **Teaching Assistant**
Department of Mathematics
Michigan State University

MEMBERSHIP 1999-2004 Member of American Mathematical Society

2000-2004 Member of Society of Industry and Applied Mathematics

PROFESSIONAL MEETINGS AND TALKS

- March 5, 2003, Seminar talk on *Radial Symmetry in a Parabolic System*, PDE Seminar, Michigan State University
- May 23, 2003, IMA Travel Grant for Symposium on Analysis and PDEs, Purdue University
- June 11, 2003, Travel Grant for 2003 International Conference on Non-linear Evolutions and Applications, Northwestern University
- Aug 14, 2003, 30 minutes talk, Conference on Partial Differential Equations and Applications, University of Notre Dame
- Sept 29, 2003, Seminar talk on *Support Property of Solutions to Degenerate Parabolic Equations Arising in Biology and Physics: An Exposition*, PDE Seminar, Michigan State University

- Nov 17, 2003, Travel Grant for Workshop on Mathematical Challenges Arising in Cancer Models, Mathematical Biology Institute, Ohio State University
- April 13, 2004, Seminar talk on *Study on Pattern Formation Far From Equilibrium*, Mathematical Biology Seminar, Michigan State University
- June 7, 2004, IMA Travel Grant for Second Symposium on Analysis and PDEs, Purdue University
- May 13-14, 2005, 30 minutes talk, The Sixth Mississippi State - UAB Conference on Differential Equations and Computational Simulations, Mississippi State University
- January 12-15, 2006, Give talk on AMS Joint Mathematical Meeting, San Antonio, TX
- April 1-2, 2006, 30 minutes talk, AMS Sectional Meeting, Florida International University, Miami, FL
- December 16-18, 2006, 30 minutes talk, 5th International Conference on Differential Equations and Dynamical Systems, University of Texas, Pan American, TX

PUBLICATIONS

- Peng Feng, *Modelling Periodic Oscillations During Somitogenesis*, to appear in *Mathematical Biosciences and Engineering*
- Peng Feng, *Remarks on large solutions of a class of semilinear elliptic equations*, submitted to *Discrete and Continuous Dynamical Systems Series A*
- Peng Feng, *Global and Blow up Solution in a Mutualistic Model*, to appear in *Nonlinear Analysis Theory: Method and Applications*
- Peng Feng, *On the Blow-up Rate of Large Solutions for a Porous Media Logistic Equation*, Vol. 329, Issue 1, May 2007, pp. 347-356 *Mathematical Analysis and Applications*
- Peng Feng and ZhengFang Zhou, *Multiplicity and Symmetry Breaking of Positive Radial Solutions for a Semilinear Elliptic Equation Modelling MEMS on Annular Domain*, Vol. 2005(2005), No. 146, pp. 1-14 *El. J. Diff. Eqns.*
- Peng Feng, ZhengFang Zhou, *Existence of Finite Travelling Wave Solutions in a Degenerate Cross-Diffusion System*, Vol.6, No.4, 2007, pp.1145-1165 *Communications on Pure and Applied Analysis*
- Peng Feng, ZhengFang Zhou, *Existence and Instability of Finite Travelling Wave Front in a Parabolic System Modelling Bacteria Colony Pattern*, preprint
- Peng Feng, T.W. Park, *Minimal Travelling Wave Speed for a Degenerate Diffusion-Convection Equation*, submitted to *Physics A: General Mathematics*
- Peng Feng, *Pattern Formation in Equilibrium and Nonequilibrium System*, Ph.D. thesis

AWARDS

- 1999-2004, Teaching Assistantship, Michigan State University
- Spring 2004, Research Enhancement Award, Michigan State University

SERVICE

Fall 2004, Member of Mathematics Graduate Student Committee, Michigan State University

Fall 2005, Member of Interdisciplinary Faculty, Florida Gulf Coast University

Fall 2005, Faculty Advisor, Mathematics Club, Florida Gulf Coast University

Since Fall 2005, Associate Graduate Faculty, Florida Gulf Coast University

Since Fall 2005, Interdisciplinary Faculty Member, Florida Gulf Coast University

Since Summer 2006, Reviewer for Mathematical Review, AMS

Since Summer 2006, Reviewer for E.J.D.E

TEACHING
EXPERIENCE

Assistant Professor, Department of Physical Sciences and Mathematics, Florida Gulf Coast University, August 2006-Present

Visiting Assistant Professor, Department of Physical Sciences and Mathematics, Florida Gulf Coast University, August 2005-May 2006

- Calculus II and III
- Linear Operators and Differential Equations
- Precalculus, Foundation of Applied Mathematics III

Graduate Assistant, Department of Mathematics, MSU

Taught three or six hours a week, wrote and graded exams and quizzes, assigned final grades. Courses taught:

- College Algebra (1999, 2000, 2001)
- Applied Calculus 1&2 (2002, 2003, 2004)
- Calculus 1&2 (2002, 2004)

Instructor, Department of Mathematics, MSU

Fully responsible for developing the syllabus, writing exams and quizzes and assigning final grades.

- Calculus 2 (Summer 2004)