

Contact Information

Address: Department of Mathematics
The Ohio State University
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Education

B.S. **University of Science and Technology of China (Hefei, China)**
Mathematics and Applied Mathematics (July 2008)

Ph.D. **The Ohio State University (Columbus, OH, USA)**
Mathematics (August 2015)
Advisor: Barbara Lee Keyfitz
Dissertation: The Problem of Sonic Shock Formation

Major areas of research interest

The analysis of nonlinear partial differential equations – especially conservation laws which change type from hyperbolic to elliptic in transonic flow.

Research Publications

1. (with K. Jegdic, B. L. Keyfitz, and S. Canic) *A Free Boundary Value Problem for the Isentropic Gas Dynamics Equations - Transonic Regular Reflection* Submitted.
2. (with B. L. Keyfitz) *A Two-Dimensional Riemann Problem for Scalar Conservation Laws. IMA Volume 153: Nonlinear Conservation Laws and Applications*, (2011), 447-455.

Presentations

- Invited Talk, *Conference on PDEs and Free Boundary Problems, University of Pittsburgh*. (March 11 - 14, 2015)
- Poster, *ICIAM 2014 Scientific Workshop, The Ohio State University*. (May 15 - 16, 2014)

Presentations in Seminars and Reading Clubs

- Reading seminars on elliptic partial differential equations of second order. (Winter, 2011)
- Seminars on Sobolev spaces and its applications. (Summer, 2012)
- Reading club on stochastic methods. (Spring, 2014 – Summer, 2015)

Honors and Awards

- Graduate Teaching/Research Assistantship, The Ohio State University, 2008-2015
- Second prize of China Undergraduate Mathematical Contest in Modeling (CUMCM) in Anhui Province, 2007

Relevant Graduate Coursework

Real Analysis, Ordinary Differential Equations, Partial Differential Equations, Numerical Methods for Partial Differential Equations, Topics in Functional Analysis, Applied Complex Variables and Asymptotics, Topics in Applied Mathematics (Conservation Laws), Topics in Applied Mathematics (Mathematical Fluid Dynamics), Topics in Applied

Mathematics (Stochastic Calculus with Financial Applications), Topics in Applied Mathematics (Mathematical Modeling of Biological Processes), Theory of Probability, Differential Geometry, Ergodic Theory, Abstract Algebra, Lie Groups

Employment History

- Graduate Teaching Associate, The Ohio State University, Autumn, 2008–Summer, 2015
- Lecturer, The Ohio State University, Autumn, 2015–present

Conferences Attended

- *Conference on PDEs and Free Boundary Problems*, University of Pittsburgh. (March 11 - 14, 2015)
- *ICIAM 2014 Scientific Workshop*, The Ohio State University. (May 15 - 16, 2014)
- *72nd Midwest PDE Seminar*, Purdue University. (November 16-17, 2013)
- *68th Midwest PDE Seminar*, University of Notre Dame. (November 4-6, 2011)
- *New Perspectives in Nonlinear PDE's*, University of Michigan. (May 2-6, 2011)
- *AMS 2009 Fall Eastern Section Meeting*, Pennsylvania State University. (October 24-25, 2009)
- *Nonlinear Conservation Laws and Applications Summer Program*, University of Minnesota. (July 13-31, 2009)

- *61st Midwest PDE Seminar*, The Ohio State University. (November 7-9, 2008)

Teaching Experience

- *Lecturer at The Ohio State University*

Autumn 2015 Precalculus (two sections).

Spring 2014 Calculus I.

Spring 2012 Mathematical Analysis for Business III.

- *Teaching Assistant at The Ohio State University*

Summer 2015 Qualifier Preparation Course in Analysis (for new Ph.D. students).

Spring 2015 Calculus for Business (two sections).

Autumn 2014 Calculus for Business (two sections).

Autumn 2013 Calculus for the Biological Sciences (two sections).

Autumn 2012 Calculus for Business (two sections).

Autumn 2011 Mathematical Analysis for Business II (four sections).

Spring 2011 Calculus and Analytic Geometry IV (two sections).

Winter 2011 Mathematical Analysis for Business III (two sections).

Autumn 2010 Mathematical Analysis for Business III (two sections).

Spring 2010 Ordinary and Partial Differential Equations (two sections).

Winter 2010 Mathematical Analysis for Business II (two sections).

Autumn 2009 Mathematical Analysis for Business II (two sections).

Service

Journal Reviewer: Journal of Scientific Computing

Computer Skills

Platforms: Unix, Windows, Linux

Languages: C/C++, Python, Matlab, R, LaTeX
Applications: Mathematica, Microsoft Office