

Dr. Fengxin Chen
Associate Professor
The University of Texas at San Antonio

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College of Sciences
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Education

Doctor of Philosophy, Mathematics, Brigham Young University

Master of Science, Mathematics, Yunnan University

Bachelor of Science, Mathematics, Hangzhou University

Academic Positions

2004 - Present Associate Professor, UTSA

Research Interests

Differential Equations, Dynamical Systems, Applied Mathematics

SCHOLARSHIP/RESEARCH/CREATIVE WORKS

Intellectual Contributions

Journal Article, Academic Journal - Peer-Reviewed/Refereed

2011

2. Bates, P. W., Chen, F. (2011). Structure of principal eigenvectors and genetic diversity. *Nonlinear Analysis*, 74, 7285-7295.

2009

1. Chen, F. (2009). Stability and Uniqueness of Traveling Waves for System of Nonlocal Evolution Equations with Bistable Nonlinearity. *J. Discrete and Continuous Dynamical Systems (A)*, 24(3), 659-673.

Contracts, Fellowships, Grants, Sponsored Research and Residencies

Contract - Currently Under Review

2010

1. Chen, F. (Co-Principal), "Stochastic Wavefield Solution of the Poroelastic Wave Equation: Applications to Hydrogeology Systems and Lake Environments." (2009 - 2010).

Residency -

2012

1. Chen, F. (Principal), Sponsored by Institute of Mathematics and Application, Federal, \$1,600.00. (December 2, 2012 - December 7, 2012).

Travel Grant - Funded

2011

2. Chen, F., "Travel grant for the Fifth International Conference on Recent Advances in Applied Dynamical Systems, Shanghai, China," \$1,000.00. (May 14, 2011).

2010

1. Chen, F., "Travel grant for the Fourth International Conference on Recent Advances in Applied Dynamical Systems, Jinhua, China," Sponsored by NSF, \$2,350.00. (June 16, 2010 - June 20, 2010).

Presentations

Invited Talk - Peer-Reviewed/Refereed

2012

1. Chen, F. (Author & Presenter), "Traveling waves for nonlocal evolution equations," IMA "Lattice and Nonlocal Dynamical Systems and Applications", IMA, Minneapolis, Minnesota. (December 5, 2012).

Invited Talk - Not Peer-Reviewed/Refereed

2012

4. Chen, F. (Author & Presenter), "Traveling waves for system of nonlocal evolution equations," The 9th AIMS international conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL. (July 3, 2012).
3. Chen, F. (Author & Presenter), "Structure of Principal Eigenvectors and Genetic Diversity," The 9th AIMS international conference on Dynamical Systems,

Differential Equations and Applications, Orlando, FL. (July 1, 2012).

2011

2. Chen, F., "Structure of principal eigenvectors and genotypic diversity," Ffith International Conference on Recent Advances in Applied Dynamical Systems, Shanghai Normal University, Shanghai, China. (May 2011). (Completed)

2010

1. Chen, F., "Anderson localization and genotype diversity," Fourth International Conference on Recent Advances in Applied Dynamical Systems, Jinhua, China. (June 2010).

Oral Presentation - Not Peer-Reviewed/Refereed

2009

4. Chen, F., "Structure of Principal Eigenvectors and Genotypic Diversity," Texas A&M kingsville. (October 25, 2009).

2008

3. Chen, F., "Multiscale and Stochastic Modeling, Analysis, and Computions," Michigan State University. (October 2008).
2. Chen, F., "Traveling Waves for Nonlocal Evolution Equations," Wayne State University. (October 22, 2008).
1. Chen, F., "On Traveling Wave Solutions to Nonlocal Evolution Equations," Michigan State University. (October 17, 2008).

Scholarship/Research/Creative Works Currently in Progress

2. Chen, F., Existence of Traveling Waves for system of Nonlocal Evolution Equations with Bistable Nonlinearity
1. Chen, F., Multidimensional Stability of Planar Traveling Waves for Nonlocal Allen-Cahn Equation

TEACHING

Teaching Interests

Mathematics

Directed Student Learning

Publications By Your Students (Without your authorship), "Genotypic mutation and evolution." Completed, (June 1, 2012 - August 15, 2012).

Advised: Melody Packard

Other Instructional Activities

- 2011 Course Development, Textbook review and course development for MAT 3613 and MAT 3623. Currently two textbooks are used for the department and both are lack of the software support. I have been considering to introduce the Matlab software to the courses. First, with modern technology, the courses focus is more and more on the conceptual aspect instead of techniques of find solutions. Second, modern technology provides powerful numerical computation tools to get insight of odes. I did many textbook search, reviewed two textbooks with MATHLAB and developed a preliminary curriculum for these two courses.
- 2011 Technology Development for Curriculum/Course, I developed the power point presentation for Calculus I. With the adoption of the new textbook, the old point point slides have to be modified. I spent effort to adapt the power point slides to fit in the current textbook.
- 2010 Publications by Students, Duc Duy Nguyen, Genotype model of length n and k nodes.

SERVICE

Department Service

- 2012 - Present Graduate Studies Committee, UTSA
- 2012 - Present Committee Member, Math Search Committee, UTSA
- 2012 - Present Committee Chair, Teaching Assessment subcommittee, UTSA
- 2012 - Present Committee Member, Graduate Review Committees
- 2006 - Present Committee Member, Screen Committee for MAT/MATED Graduate Admission, Mathematics
- 2006 - 2012 Committee Member, Calculus committee, Mathematics
- 2004 - 2009 Committee Member, Graduate Studies Committee, Mathematics
- 2007 - 2008 MAT Graduate Advisor of Record, MATHematics

College Service

- 2010 - 2011 Committee Member, Committee on Feasibility of Multidisciplinary Sciences Organization, College of Sciences
- 2006 - 2008 Committee Member, Graduate Council

University Service

- 2012 - Present Committee Member, Faculty Grievance Committee
- 2012 - Present Committee Member, Faculty Senates Executive Committee, UTSA
- 2012 - Present Committee Member, Faculty Senates, UTSA
- 2012 - Present Attendee, Meeting, GRIP-Four-Year Graduation Rate Improvement Plan
- 2012 - Present Attendee, Meeting, HoP 2.36 panel
- 2007 - 2009 Member, Faculty Senate, UTSA

Professional Service

- 2012 - Present Reviewer, Journal Article, AIMS Proceedings,
- 2012 - Present Reviewer, Journal Article, Electronic Differential Equations
- 2012 - Present Reviewer, Journal Article, International Journal of Bifurcation and Chaos
- 2012 Reviewer, Book, Calculus by Taalman and Kohn
- 2012 Reviewer, Journal Article, Physics Letters A
- 2011 Reviewer, Journal Article, Applied Mathematics Letters
- 2011 Reviewer, Journal Article, Computers & Mathematics with Applications
- 2011 Reviewer, Book, Differential Equations with MATLAB

- 2011 Reviewer, Book, Elementary Differential Equations and Boundary Value Problems
- 2011 Reviewer, National Commission for Scientific & Technological Research for Chile
- 2011 Reviewer, Journal Article, the Revista Colombiana de Matematicas
- 2011 Session Chair, Fifth International Conference on Recent Advances in Applied Dynamical Systems
- 2010 Reviewer, Journal Article, Applicable Analysis
- 2010 Reviewer, Journal Article, Computers & Mathematics with Applications
- 2010 Reviewer, Journal Article, Electronic Journal of Differential Equations
- 2010 Reviewer, Journal Article, Nonlinear Analysis: Theory, Methods & Applications
- 2010 Session Chair, Fourth International Conference on Recent Advances in Applied Dynamical Systems
- 2009 Reviewer, Journal Article, Applied Mathematics Letters
- 2009 Reviewer, Journal Article, Discrete and Continuous Dynamical Systems
- 2009 Reviewer, Journal Article, Journal of Differential Equations
- 2009 Reviewer, Journal Article, Transactions of the American Mathematical Society

Public Service

- 2009 Supervisor of Mr. Rafael Roguerz for summer research in McNair Scholars Program, UTSA

Faculty Development Activities Attended

- 2011 - Present Workshop, UTSA Seminars
- 2009 - Present Workshop, Trinity Seminars
- 2011 Study on Stochastic Process

2011	Workshop, UT Austin Seminars
2010	Texas PDE seminar
2008	Visiting Professor, Michigan State University