Fengxin Chen

updated in Dec. 2008

Address:

Department of Mathematics	*Tel: (210)-458-5696 (work)*
University of Texas at San Antonio	*Tel: (210)-695-9299 (home)*
One UTSA Circle	*Email: feng@math.utsa.edu*
San Antonio, TX 78249	Web: www.math.utsa.edu/˜feng

Education:

August, 1999	Ph.D.	Brigham Young University
1992-1993	Visiting Scholar	The Institute of Applied Mathematics
		And Computational Physics, Beijing, China
July, 1987	M.S.	Yunnan University, Kunming, China,
July, 1984	B.S.	Hangzhou University, Hangzhou, China,

Research Area:

Partial Differential Equations (Phase Transition, Dynamical System, Nonlocal Evolution Equations, Neural network, Navier Stokes Equations); Approximation Theory

Teaching Experiences:

2004-present	Associate Professor	University of Texas at San Antonio
1999-2004	Assistant Professor	University of Texas at San Antonio
1995-1999	Teaching Assistant	Brigham Young University
1987-1995	Lecturer	Yunnan University, China

Publications:

Refereed publications:

1. F. Chen, Stability and Uniqueness of Traveling Waves for System of Nonlocal Evolution Equations with Bistable Nonlinearity, to appear in December in J. Discrete and Continuous Dynamical Systems (A).

2. F. Chen, Spectral Analysis of Traveling Waves for Monotone System of Nonlocal Evolution Equations with Bistable Nonlinearity, J. Discrete and Continuous Dynamical Systems (A) Vol. 14(S2) (2007), 6-10.

3. P. W. Bates, F. Chen, Spectral analysis of traveling waves for nonlocal evolution equations, Siam Journal on Mathematical Analysis. 38 (2006), no. 1, 116–126

4. F. Chen, An Extended Urn Model with Application to Approximation, Trans. Amer. Math. Soc. 356 (2004), no. 9, 3505–3515.

5. F. Chen, Travelling waves for a neural network, Electronic J. Diff. Eqs. Vol. 2003(2003), No. 13, pp. 1-4.

6. F. Chen, Uniform stability of multidimensional travelling waves for the nonlocal Allen-Cahn equation, Electronic J. Diff. Eqs. Conf. 10(2003), pp. 109-113

7. P. W. Bates, F. Chen, Traveling Wave Solutions for a Nonlocal Phase Field System, J. Interfaces and Free Boundary, 4 (2002) 227-238.

8. P. W. Bates, F. Chen, Spectral analysis and multidimensional stability of traveling waves for nonlocal Allen-Cahn equation, J. Math. Analysis and Applications, 273 (2002) 45-57.

9. F. Chen, Almost Periodic Traveling Wave Solutions to a Nonlocal Phase Field Model. Nonlinear Anal., 50 (2002) 807-838.

10. C. Qu, K. H. Kwek, F. Chen, The global asymptotic stability for F-M equation, Appl. Math. Letters, 13 (2000) 35-41.

11. P. W. Bates, F. Chen, P. Wang, Existence of Global Solution for a Differential System With Initial Data in L^p. Internat. J. Math. Math. Sci. 22 (1999) no. 4 823-834.

12. P. W. Bates, F. Chen, Periodic Traveling Wave Solutions of a Nonlocal Phase Field Model. Electronic J. of Diff. Eqns. 1999 (1999) no. 26 1-19.

13. Z. Dai, B. Guo, F. Chen, Global attractor of a class of strongly damped nonlinear wave equations. Acta Math. Sci. 18 (1998), no. 4, 404–412.

14. F. Chen, B. Guo, P. Wang, Long time behavior of strongly damped nonlinear wave equations. J. Differential Equations 147 (1998), no. 2, 231–241.

15. F. Chen, P. Wang, C. Qu, On the differential system governing flows in magnetic field with data in L^p. Internat. J. Math. Math. Sci. 21 (1998), no. 2, 299–305.

16. B. Guo, F. Chen, Finite-dimensional behavior of global attractors for weakly damped and forced KdV equations coupling with nonlinear Schrödinger equations. Nonlinear Anal. 29 (1997), no. 5, 569–584.

17. C. Qu, F. Chen, Finite dimensionality of attractors of magnetic flow equation. Nonlinear evolutionary partial differential equations (Beijing, 1993), 553–557, AMS/IP Stud. Adv. Math., 3, Amer. Math. Soc., Providence, RI, 1997.

18. B. Guo, F. Chen, Finite-dimensional behavior of global attractors for weakly damped nonlinear Schrödinger-Boussinesq equations. Physica. D, 93 (1996), no. 1-2, 101–118.

19. P. W. Bates, F. Chen, J. Wang, Global existence and uniqueness of solutions to a nonlocal phase-field system. Differential equations and applications (Hangzhou, 1996), 14–21, Internat. Press, Cambridge, MA.

20. Z. Dai, C. Qu, F. Chen, (E_0, E) asymptotically smooth maps and dissipative wave equations. J. Math. Study 28 (1995), no. 2, 1–9.

21. B. Guo, F. Chen, Finite-dimensional behavior of global attractors for weakly damped nonlinear Schrödinger-Boussinesq equations. J. Math. Study 27 (1994), no. 2, 92–93.

preprints and works in Progress:

1. F. Chen, Existence of Traveling Wave Solutions to the System of Nonlocal Evolution Equations with Bistable Nonlinearity,'

2. F. Chen, Genotypic Evolution and its Eigenvector Analysis, in preparation.

3. F. Chen, On law of signs for a class of approximation operators from urn model

4. Comparison Principle and its Application to Nonlocal Evolution Equations

Invited Talks:

1. Stability and Uniqueness of Traveling Waves for System of Nonlocal Evolution Equations with Bistable Nonlinearity, 7th AIMS International Conference on Dynamical Systems, Differential Equations and Applications, Arlington, Texas, May 18-21, 2008

2. Existence of Traveling Wave Solutions to the System of Nonlocal Evolution Equations with Bistable Nonlinearity, World Congress of Nonlinear Analysists 2008, Orlando, July2-9, 2008

3. On Traveling Wave Solutions to Nonlocal Evolution Equations, Invited Talk, Michigan State University, Oct. 17, 2008

4. Traveling Waves for Nonlocal Evolution Equations, Invited Talk, Wayne State University, Oct. 22, 2008

5. Traveling waves for a system of nonlocal evolutions equations, the Fifth International Conference On Differential Equations and Dynamical Systems, Dec. 16-18, 2006, Edinburg, Texas

6. Spectral analysis of traveling waves for nonlocal evolution equations, International Conference on Statistics, Combinatorics, Mathematics, and Applications (December 2-4, 2005, Auburn University, Alabama)

7. Nonlocal Evolution equations, The First International Conference on Recent Advances in Bifurcation Theory and Theory and Applications of Dynamical Systems (June 8-12,2005, Jinhua, PRC)

8. Spectral analysis of traveling waves for nonlocal evolution equations, workshop on Defects and their Dynamics, Banff, Canada, 8/9/-8/16, 2003.

9. Traveling waves for nonlocal evolution equations, International Congress of Mathematicians (2002) satellite conference, Kunming, 2002.

10. Spectral Analysis for nonlocal evolution equations, Texas A&M University, April, 2002.

11. Almost Periodic Traveling Waves of Nonlocal Evolution Equations, Pacific Rim Conference on Dynamical Systems, Maui, Hawaii, August,2000

12. Traveling Wave Solutions to a Nonlocal Phase Field System, AMS Annual Conference, Washington D.C. January, 2000

13. Periodic Traveling Wave Solutions, Courant Institute, New York University, August, 1998.

Advanced Seminar And Contributed Conference Presentations:

1. Multiscale and Stochastic Modelimg, Analysis, and Computions, Oct. 10-11,2008, Michigan State University.

2. Spectral Analysis for traveling waves of nonlocal evolution equations, Pomona, CA, June 16-19,2004

3. Multidimensional Stability of Traveling Wave Solutions to Nonlocal Allen-Cahn Equations, Starkville, Mississippi, May, 2001

4. Spectral analysis and multidimensional stability of traveling waves for nonlocal Allen-Cahn equation, Houston, Texas, March, 2001

5. Nonlinear dynamics of low-dimensional continua MSRI, Berkeley, June 1999

6. Clifford Lectures (participant), Tulane University, October,1996.

7. The Existence of weak solutions of magnetic flow equations within the earth with initial data in L^p, International conference on NEPDE and Dynamical Systems, Beijing, June, 1994.

8. Finite dimensional behavior of MHD Equations, International conference on nonlinear PDEs, Beijing, June 1993.

9. Magnetic flow equations, International conference on nonlinear PDEs, Hangzhou, China, June, 1992.

10. A remark on the equivalence of asymptotic stability and uniformly asymptotic stability, National conference on nonlinear PDEs, Chundu, China, September, 1990.

Professional Service:

1. Session chair for the Fifth International Conference On Differential Equations and Dynamical Systems, Dec. 16-18, 2006, Edinburg, Texas
2. Session chair for The First International Conference on Recent Advances in Bifurcation Theory and Theory and Applications of Dynamical Systems (June 8-12,2005, Jinhua, PRC)
3. Session chair for workshop of Defects and their Dynamics, Banff, Canada (2003)
4. Co-organizer and session chair for Texas PDE Seminars (2002)
5. Reviewer for Mathematical Reviews of American Mathematical Society
6. Referee for the following journals:
   (a) Transactions of the American Mathematical Society
   (b) Nonlinear Analysis: Theory, Methods & Applications
   (c) Electronic Journal of Differential Equations
   (d) Applicable Analysis
   (e) Applied Mathematics Letters
   (f) Computers & Mathematics with Applications
7. Book reviewer for Houghton Mifflin (*An Introduction to Partial Differential Equations*)

Awards:

1999	Outstanding Teaching Award	Brigham Young University
1999	Spring Conference Award	Brigham Young University
1998	Spring Conference Award	Brigham Young University
1997	Graduate Research Fellowship Award	Brigham Young University
1991	Teaching Excellence Award	Yunnan University
1990	Advance in Science and Technology(participant)	Educational Committee of Yunnan Province
1984	Undergraduate Student Research Award	Hangzhou University

Funded Grants:

2003	Defects and their Dynamics (2003) BIRS	NSF
2002	International Congress of Mathematicians (2002)	
2000	Grant Development Program	University of Texas at San Antonio
1999	Faculty Research Awards	University of Texas at San Antonio

Theses Supervision:

Faculty supervisor for The Louis Stokes Alliances for Minority Participation (NSF program)

Supervisor for graduate independent study

Honors Thesis Committee for Ms Sharon Babiak, Mathematics

Faculty Mentor for a NSF CSEMS Scholar, Ms. Juliana A. Yankey

Service:

2006	MAT Graduate program Chair
2006	Teaching Assistant Supervisor
2006	Graduate Council
2006	International Study Committee
2006	Screen committee
2006	Calculus committee
2004-2006	College Policy Committee
1999-present	Graduate Studies Committee
2003–present	Senate Merit and Workload Committee
2003	TA Supervisor
2003	Committee for Professional Masters program in Industrial Mathematics
2002	PhD Proposal committee
2002	Texas PDE Seminar Organizing Committee
Fall 2000-2004	TA Committee
Fall 2001-present	Applicable Mathematical Meetings
Fall 2000-Summer 2001	TA Supervisor (with Dr. Travis)
Fall 1999-Dec. 1999	Division Conflict Resolution Meeting

Professional Membership:

AMS, SIAM

Computer Skills:

Knowledge of Computer Architecture, Network, Database, Artificial Intelligence, Concept of Programming Language, C^{++} and Software Engineering, Numerical Computations in Mathematical Physics; Grasp of C++, C, Pascal, HTML, Java, Windows, DOS, Unix,TeX, Matlab, Maple.