

Cumulative Curriculum Vitae

Wenzhang Huang

Department of Mathematical Sciences
University of Alabama in Huntsville
Huntsville, Alabama 35899
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Education

Fu Yang Teachers College, China	Fine Arts	B.A. 1977
Anhui University, China	Mathematics	M.S. 1982
Claremont Graduate School	Mathematics	Ph.D. 1990

Professional Experience

8/06 - present	Professor University of Alabama in Huntsville
3/00 - 3/06	Associate Professor University of Alabama in Huntsville
8/94 - 3/00	Assistant Professor University of Alabama in Huntsville
1/93 - present	Adjunct Research Scientist Georgia Institute of Technology
1/93 - 8/94	Visiting Assistant Professor Cornell University
9/92 - 12/92	Visiting Assistant Professor Pomona College
1/90 - 9/92	Postdoctoral Fellow Georgia Institute of Technology
5/86 - 8/86	Visiting Scholar International School for Advanced Studies, Italy

Honors

1. ALPHA Association International Scholarship Award, 1988.
2. University of Alabama Mini-Grant Award, Traveling Wave Solutions of Reaction-Diffusion Equations, 1998.
3. The University of Alabama in Huntsville Foundation Award for Research and Creative Achievement, 2002.
4. NSF Award, Limit Set, Spectral Analysis, and Traveling Wave Solutions for Functional Differential Equations, 08/02 - 07/05.

Associate Editor of Journals

1. Journal of Qualitative Theory of Differential Equations and Applications.
2. Journal of Applied Analysis and Computation.
3. Journal of Mathematical Biology and Engineering.

RESEARCH ACTIVITIES

1. Areas of Interest and Expertise

Dynamical Systems, Differential Equations (including Ordinary, Functional, and Partial Differential Equations), and their applications.

2. Publications

Have published over 80 research papers in the peer reviewed journals.

Selected publication

57. Global Stability of a Predator-Prey Model with Ivlev-Type Functional Response (with Yinshu Wu), Mathematics in Applied Sciences and Engineering (MASE), **3**, 224-235 (2020)
56. Non-monotone waves of a stage-structured SLIRM epidemic model with latent period (with Chufen Wu), Proceedings of the Royal Society of Edinburgh, **A**, Pub Date : 2020-09-15 , DOI: 10.1017/prm.2020.65.
55. Global dynamics of a predator-prey model with general Holling type functional responses (with Wei Ding), J. Dyn. Diff. Equations, **32**, 965-978 (2020)
54. Global stability of predator-prey models with sigmoid functional responses (with Yinshu Wu), Journal of Discrete and Continuous Dynamical Systems, Series B, **25**, 1159-1167. (2019)

53. Global dynamics of a ratio-dependent Holling-Tanner predator-prey systems (with Wei Ding), *Journal of Mathematical Analysis and Applications*, **460**, 458- 475. (2018)
52. A geometric approach in the study of traveling waves for some classes of non-monotone reaction-diffusion systems, *J. Diff. Equations*, **260**, 2190-2224. (2016)
51. Traveling Wave Solutions for Some Classes of Diffusive Predator-Prey Models (with Wei Ding), *J. Dyn. Diff. Equations*, **28**, 1293-1308. (2016)
50. Reaction, diffusion and chemotaxis in wave propagation (with S. Ai and Z. Wang), *Dis. and Cont. Dynamical Systems - Series B*, **20** 1-21. (2015)
49. A Brief Introduction on Professor Zuxiu Zheng's Achievements in Mathematical Field, *Annals Diff. Equations*, **30**, 1-4. (2014)
48. Spatially Heterogeneous Invasion of Toxic Plant Mediated by Herbivory (with Z. Feng and D.L. DeAngelis), *Journal Meth. Bio. Engineering*, **10**, 1519-1538. (2013)
47. Traveling Wave Solutions for a Diffusive SIS Epidemic Model (with W. Ding and S. Kansakar), *Discrete and Continuous Dynamical Systems, Series B*, **18**, 1291-1304. (2013)
46. Global Dynamics of a Plant-Herbivore Model with Toxin-Determined Functional Response (with Z. Feng and C. Castillo-Chavez), *SIAM J. Appl. Math.*, **72**, 1002-1020. (2012)
45. Traveling Wave Solutions for a Class of Predator-Prey Systems. *J. Dyn. Diff. Equations*, **24**, 633-644. (2012)
44. Non-Linear Determinacy of Minimum Wave Speed for a Lotka-Volterra Competition Model (with Maoan Han), *J. Diff. Equations*, **251**, 1549-1561. (2011)
43. On Hopf bifurcations of piecewise planar Hamiltonian systems (with J. Yan and M. Han), *J. Differential Equations*, **250**, 1026-1051. (2010)
42. Dynamics of an SIS reaction-diffusion epidemic model for disease transmission (with M. Han and K. Liu), *J. Math. Biosciences and Engineering*, **7**, 51 - 66. (2010)
41. Problem on Minimum Wave Speed for a Lotka-Volterra Reaction Diffusion Competition Model, *J. Dynamics and Differential Equations*, **22**, 285-297. (2010)
40. Co-existence of Traveling Waves for a Model of Microbial Growth and Competition in a Flow Reactor, *J. Discrete and Continuous Dynamical Systems*, **24**, 883-896. (2009)
39. Uniqueness of Monotone Mono-stable Waves for Reaction-Diffusion Equations with Time Delay (with M. Han and M. Puckett), *J. Math. Model. and Nat. Phenom.*, **4**, 48 - 67. (2009)
38. Traveling waves connecting equilibrium and periodic orbit for reaction-diffusion equations with time delay and nonlocal response, *J. Diff. Equations*, **244**, 1230-1254. (2008)
37. Traveling wave front in combustion and chemical reaction models (with Shangbing Ai), *Proc. Royal Society Edinburgh*, **137A**, 671 - 7000. (2007)

36. Periodic traveling wave solutions for a reaction-diffusion equation with time delay and non-local response (with Dawn Duehring), *J. Dynamics and Diff. Equations*, **19**, 457 - 477. (2006)
35. Predator-prey interactions with delays due to Juvenile maturation (with Kenneth Cooke and Richard Elderkin), *SIAM J. Appl. Math.* **66**, 1050-1079. (2006)
34. Spike solutions for a singularly perturbed differential equation modeling an electrical circuit (with Shui-Nee Chow), *Annali Di Metematica Pura ed Applicata*, **185**, 129-169. (2006)
33. Traveling Waves for Delayed Reaction-Diffusion Equations with Global Response (with Teresa Faria and Jianhong Wu), *Proc. Royal Society A*, **462**, 229-261 (2006)
32. Uniqueness of traveling wave solutions for a biological reaction-diffusion equation, *J. Math. Analysis and Application*, **316**, 42-59. (2006)
31. Weakly Coupled Traveling Waves for a Model of Growth and Competition in a Flow Reactor, *J. Math. Biology and Engineering*, **3**, 79-87. (2006)
30. Traveling Waves for a System of Biological Models (with Shangbing Ai), *Proc. Royal Society Edinburgh*, **135A**, 663-675. (2005)
29. Global behavior of a multi-group SIS epidemic model with age structure (with Z. Feng and C. Castillo-Chavez), *J. Differential Equations*, **218**, 292-324. (2005)
28. Special solutions for linear functional differential equations and asymptotic behaviour (with T. Faria), *J. Differential and Integral Equations*, **18**, 337-360. (2005)
27. Transition layers for a singularly perturbed neutral delay differential equations, *Contemporary Mathematics*, AMS, **379**, 125-133. (2005)
26. Traveling waves for a biological reaction-diffusion equations, *J. Dynamics and Diff. Equations*, **16**, 745-765. (2004)
25. Smoothness of center manifolds for maps and formal adjoints for semilinear PDEs in general Banach space (with T. Faria and J. Wu), *SAIM J. Math. Analysis*, **34**, 173-203. (2002)
24. Stability of periodic solutions arising from Hopf bifurcation for a reaction-diffusion equations with time delay (with Teresa Faria), *Fields Institute Communications* **31**, 125-141. (2002)
23. Age-structured core group model and its impact on STD dynamics (with C. Castillo-Chavez), *IMA(Ins. Math. Appl., Edits. C. Castillo-Chavez, S. Blower, P. Driessche, D. Kirschner, and A. Yakubu)*, **126**, 261-273, Springer. (2002)
22. Uniqueness of bistable traveling wave for mutualist species, *J. Dynamics and Diff. Equations*, **13**, No1, 147-183. (2001)
21. Dimension of space of solutions for a linear nonautonomous infinite delay differential equation, *Fiels Institute Communications*, **29**, 245-265. (2001)

20. On the role of variable latent periods in mathematical models for TB (with C. Castillo-Chavez, Zhilan Feng), *J. Dynamics and Diff. Equations*, **13**, No2, 425-452. (2001)
19. Stability of square wave periodic solution for singularly perturbed delay differential equations, *J. Diff. Equations*, **168**, 239-269. (2000)
18. Monotonicity of heteroclinic orbits and spectral properties of variational equations for delay differential equations, *J. Diff. Equations*, **162**, 91-139. (2000)
17. Competitive Exclusion and coexistence of multiple strains in an SIS STD model (with C. Castillo-Chavez and Jia Li), *SIAM J. Appl. Math.*, **59**, 1790-1811. (1999)
16. Global dynamics for a reaction-diffusion equation with time delay, *J. Diff. Equations*, **143**, 293-326. (1998)
15. Backward bifurcations and catastrophe in simple models of fatal diseases (with J. Dushoff and C. Castillo-Chavez), *J. Math. Biol.*, **36**, 227-248. (1998)
14. On the problems of linearization for a class of state-dependent functional differential equations (with Kenneth L. Cooke), *Proceedings of the Amer. Math. Society*, **124**, 1417-1425. (1996)
13. Periodic solutions of singularly perturbed delay equations (with J.K. Hale), *Z angew (ZAMP). Math. Phys.*, **47**, 57-88. (1996)
12. Competitive exclusion in gonorrhea models and other sexually transmitted disease (with C. Castillo-Chavez and Jia Li), *SIAM J. Appl. Math.*, **56**, 494-508. (1996)
11. Stability and Hopf bifurcation for a population delay model with diffusion (with Stavros Busenberg), *J. Diff. Equations*, **124**, 80-106. (1996)
10. Period doubling in singularly perturbed delay equations (with Jack K. Hale), *J. Diff. Equations*, **114**, 1-23. (1994)
9. Singular perturbation problems for a system of differential-difference equations and its applications, Part I (with Shui-Nee Chow), *J. Diff. Equations*, **112**, 257-307. (1994)
8. Global geometry of the stable regions for two delay differential equations (with Jack K. Hale), *J. Math. Anal. Appl.*, **178**, 344-362. (1993)
7. Transition layers for a singularly perturbed 2-dimensional system of differential and difference equations (with Shui-Nee. Chow), *Contemporary Mathematics*, **129**, 55-71, AMS. (1992)
6. From sine waves to square waves in delay equations (with Shui-Nee Chow and Jack K. Hale), *Proceedings of the Royal Society of Edinburgh*, **120A**, 223-229. (1992)
5. Stability and bifurcation for a multiple group model for dynamics of HIV/AIDS transmission (with Kenneth L. Cooke and C. Castillo-Chavez). *SIAM J. Appl. Math.* **52**, 835-854. (1992)
4. A theorem of George Seifert and an equation with state-dependent delay (with K. L. Cooke), *Proceedings in delay and differential equations* (A.M. Fink, R. Miller and W. Kliemann, eds), 65-77, World Scientific. (1992)

3. On asymptotical stability for linear delay equations, *J. Diff. Int. Equations*, **4**, 1303-1316. (1991)
2. On the role of long incubation periods in the dynamics of acquired immunodeficiency syndrome (AIDS), Part 1. Single population models (with Kenneth L. Cooke, C. Castillo-Chavez and Simon A. Levin), *J. Math. Biology*, **27**, 373-398. (1989)
1. Generalization of Liapunov's theorem in general linear delay system, *J. Math. Anal. Appl.*, **142**, 83-94. (1989)

3. Invited talks and Lectures in Conferences and Workshops

1. "Hopf Bifurcation Analysis for Hybrid Systems", International Conference on Differential Equations and Applications to Biology and to Industry, Claremont, California, June 1-5, 1994.
2. "Dynamics of Disease Transmission for an SIS STD Model with Two Strains", The 4th International Conference on Mathematical Population Dynamics, Houston, Texas, May 23-27, 1995.
3. "Bifurcation method for the Singularly Perturbed Delay Differential Equations", Beijing University, Beijing, China, July 25, 1995.
4. "Monotone flow for a class of system of first order partial differential equations and applications", Institute of Applied Mathematics, China Academia Sinica, Beijing, China, July 27, 1995.
5. "Monotonicity, irreducibility, and asymptotic behavior for a class of population dynamics with age structure", Eighth Annual Meeting of the University of Alabama System, University of Alabama - Tascaloosa, Alabama, October 21, 1995.
6. "Global Dynamics of a Class of Reaction-Diffusion Equations with Time Delay", Special Session on Nonlinear Partial Differential Equations, AMS Meeting, University of Tennessee, Chattanooga, Tennessee, October 11-12, 1996.
7. "Spectral Property of Variational Equations of Heteroclinic orbits for Delay Differential Equations and its Applications", Workshop on Dynamics of Differential Equations with Delay, Lorentz Center, Leiden University, Netherlands, October 13 - 15, 1997.
8. "Uniqueness of Bistable Traveling Wave for Mutualist Species", AMS Meeting in Special Session on Nonlinear Dynamics and Applications, Georgia Institute of Technology, Georgia, October 17 - 19, 1997.
9. "Heteroclinic Orbits of Delay Differential Equations and Application to Singular Perturbation Problems", Workshop on Global and Geometric Theory of Delay Differential Equations, Mathematics Institute, Oberwolfach, Germany, January 11 - 17, 1998.
10. "Comparison Principle, Monotone Flows Generated by Differential Equations, and Eigenvalue Problems for Positive Matrices", International Center of Sciences, Coernavaca, Mexico, June 10, 1998.

11. "Application I: SIS Type of Epidemiological Models and Cooperative Systems - Threshold Conditions and Global Stability", International Center of Sciences, Coernavaca, Mexico, June 11, 1998.
12. "Application II: Competitive Models from Epidemiology and Ecology", International Center of Sciences, Coernavaca, Mexico, June 12, 1998.
13. "Transition Layers for a Neutral Type of Singularly Perturbed Delay Differential Equation", The Third America Conference on Differential Equations and Nonlinear Analysis, Georgia Institute of Technology, Georgia, September 9-13, 1998.
14. "Application of Monotone System Theory to Epidemiological Models", IMA Tutorial, University of Minnesota, May 13-14, 1999.
15. "Traveling wave solution and competitive exclusion of multiple strains in an STD model", Institute for Mathematics and its Application, University of Minnesota, May 17-21, 1999.
16. "Positive Limit Set and Traveling Wave Solution", International Conference on Functional Differential and Difference Equations, Lisbon, Portugal, July 26-30, 1999.
17. "Existence and Stability of Square Wave Periodic Solution for Singularly Perturbed Delay Differential equations", The Sixth Colloquium on the Qualitative Theory of Differential Equations, Bolyai Institute, Regional Committee of the Hungarian Academy of Sciences, Szeged, Hungary, August 10-14, 1999.
18. "Global Stability for a Logistic Reaction-Diffusion Equation with Time Delay", International Conference for Dynamical Systems and differential equations, Kennesaw State University, GA, May 18-21, 2000.
19. "Asymptotical Behavior of an SIS Multiple Group Model with Age-Structure", SAIM's 2000 Annual Meeting, Rio Grande, Puerto Rico, July 10-14, 2000.
20. "Traveling Wave and Application to Mathematical Epidemiology", Conference on Differential Equations and Application to Biology, Georgia Institute of Technology, September 9-11, 2000.
21. "Singular Perturbation Problems in Delay Differential Equations", Mathematical Colloquium, Auburn University, March 14, 2001.
22. "Traveling Wave Solutions for Time Delayed Reaction-diffusion Equations and Applications", The Fifth America Conference on Differential Equations, University of Alberta, Canada, July 7-12, 2002
23. "Traveling Wave Solutions for Reaction-diffusion Equations and Applications", Mathematical Colloquium, North Carolina A&M University, April 2003.
23. "Existence of Traveling Waves for a time delayed Reaction-diffusion Equation and application to a Age-structured Population Model, University of Lisbon, Portugal, May 13, 2003.
24. "Traveling Waves in a Class of Reaction-diffusion Equations with Time delay and Non Local Response", Los Alamos National Laboratory, August, 2003

25. “Number of Spikes and their Stability for Singularly Perturbed Differential Equations arising from an Electrical Circuit”, International Conference on New Directions in Dynamics and Evolution Equations, Hunan University, China, December 16-20, 2003.
26. “Traveling Waves for a Biological Reaction-Diffusion Model”, Mathematical Colloquium, Shanghai Jiao Tong University, December 29, 2003.
27. “Traveling Waves for a Biological Reaction-Diffusion Equation”, International Workshop on Bifurcation Theory and Application, Shanghai Jiaotong University, China, May 23-26, 2004.
28. Singular Perturbation Method and Traveling Waves of Large Wave Speed for an Age-Structured Population Model, China University of Science and Technology, June 14, 2004.
29. “Traveling Wave Solutions for the Model of Competition in a Bio-Reactor”, International Conference on Dynamical Systems, The National Center for Theoretical Sciences, Taiwan, June 23-28, 2004.
30. Problem on Existence of Traveling Wave Solutions for some Biological Models with diffusion, MTBI (Mathematical and Theoretical Biology Institute), Los Alamos National Laboratory, July 28, 2004.
31. Traveling Waves for a Biological Reaction-Diffusion System, AMS meeting, Vanderbilt University, October 16-17, 2004.
32. A Model of Two Competing Species in a Microbial Flow Reactor and Traveling waves, Colloquium talk, Arizona State University, October 22, 2004.
33. “Singular Perturbation Method and the Existence of Traveling Wave Solutions of Reaction-Diffusion Equations with Large Wave Speed”, Kansas State University, May 5, 2005.
34. “Traveling Waves and weekly Coupled Traveling Waves for a Model of Growth and Competition in a Flow Reactor”, First International Conference on Recent Advances in Bifurcation Theory and Applications of Dynamical Systems, Zhejiang Normal University, China, June 8-12, 2005.
35. “Transition Layer and Stability of Square-Wave Periodic Solutions for Singularly Perturbed Delay Differential Equations”, Colloquium Talk, China Eastern Normal University, June 14, 2005.
36. “Singular Perturbation Method for the Existence of Traveling Wave Solutions of Time Delayed Reaction-Diffusion Equations with Non-local Response”, FuDan University, China, June 17, 2005.
37. “An Age-structured Epidemic Model - Outbreak and Extinction”, MTBI (Mathematical and Theoretical Biology Institute), Los Alamos National Laboratory, July 27, 2005.

38. “Periodic Traveling Wave Solutions for Reaction-Diffusion Equations with Time Delay and Nonlocal Response”, The International Conference on Nonlinear and Stochastic Dynamics, Chengdu, China, June 5-9, 2006.
39. “Traveling Waves Connecting An Equilibrium and A Periodic Solution” International Conference on Recent Developments in Differential Equations and Applications, Guanzhou, Cina, July 17 - 21, 2006.
40. “Traveling Waves for a Models of Growth and Competition in a Microbial Flow Reactor”, Graduate Colloquium Talk, Purdue University, March 19, 2007.
41. “Traveling Waves for a Models of Growth and Competition in a Microbial Flow Reactor”, Colloquium Talk, Memorial University, Canada, March 30, 2007.
42. “Uniqueness of Monotone Traveling Waves for a Class of Reaction - Diffusion Equations”, International Conference on Recent Advances in Bifurcation Theory and Applications of Dynamical Systems, Zhejiang Normal University, China, June 1-7, 2007.
43. Bifurcation and Continuation of Periodic Solutions for Functional Differential Equations - A series of lectures, Summer Graduate Workshop, Shanghai Normal University, China, June 9 - June 22, 2007.
44. Functional Analysis Approach to the Hopf Bifurcation for Differential Equations, lectures to graduate students, Shanghai Tongji University, June, 2007.
45. “The sign of Bistable Traveling Waves for a Competition Model, International Conference on Differential Equations”, University of Sao Paulo, Frazil, January 27 - February 1, 2008.
46. “The sign of Bistable Traveling Waves and Principle of Competitive Inclusion for a Competition Model”, Colloquium talk, University of Western Ontario, Canada, March 18- 20, 2008.
47. “Hopf bifurcation for functional differential equations; Traveling wave solutions for reaction-diffusion equations”, Department Colloquium and Graduate Summer Workshop held in Harbin Institute of Technology, and Heilongjiang University, China, June 17 - June 21, 2008.
48. “The minimum wave speed of traveling waves for the Lotka-Volterra two species competition models”, International Conference on Infinite Dimensional Dynamical Systems, York University, Toronto, Canada, September 24-28, 2008.
49. “Co-existence of traveling waves for a model of microbial growth and competition in a flow reactor”, Special session on Dynamics and Applications of Differential Equations in AMS Southeast Sectional Conference, University of Alabama in Huntsville, October 24 - 26, 2008.
50. “The problem on minimum wave speed of traveling waves for competition models”, Conference on Differential Equations and Applications in Ecology and Epidemiology, Purdue University, IN, December 8 - 10, 2008.

51. "The sign of bi-stable traveling waves for a competition model", Colloquium, Department of Math. Sciences, UAH, January 16, 2009.
52. "Problems on SIS/SIRS epidemic reaction-diffusion models", International Workshop on Dynamical Systems and Related, Shanghai Normal University, Shanghai, China, May 8-10, 2009.
53. "The sign of bi-stable traveling waves for a competition model", Mathematical colloquium, Shanghai University of Technology, Shanghai, China, June 6, 2009.
54. "Minimum wave speed of traveling waves for a Lotka-Volterra competition model", International Conference on Asymptotic Analysis and Infinite-dimensional Dynamical Systems, Hong Kong, China, June 19 22, 2009.
55. "Dynamics of SIS reaction-diffusion epidemic models - Results and open problems", Second International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, University of Alabama in Huntsville, October 9 - 11, 2009.
56. "Traveling wave solutions for reaction-diffusion equations and application", Graduate Student Seminar, Arizona State University, October 29, 2009.
57. "Problems on minimum wave speed of traveling waves for a diffusion competition model, Colloquium on Mathematical Biology, Arizona Sate University", December 13, 2009.
58. An Example of Nonlinear Determinacy of Minimum Wave Speed for a Lotka-Volterra Competition System, Workshop on Traveling Waves and Spreading Speeds in Evolution Systems, University of Science and Technology of China (USTC), June 12 - 14, 2010.
59. "Problem on Minimum Wave Speed of Traveling Waves for a Lotka-Volterra Competition Model", The Fourth International Conference on Recent Advances in Applied Dynamical Systems, Zhejiang Normal University, Zhejiang, China, June 16 - 20, 2010.
60. "Age-structured population models and delay differential equations, method of global stability analysis", Mini-workshop on Heterogeneity and Ecology, Arizona State University, Tempe, May 8 - 15, 2011.
61. "Traveling Wave Solutions for a Class of Predator-Prey Systems", The Fifth International Conference on Recent Advances in Applied Dynamical Systems, Shanghai Normal University, Shanghai, China, May 15 - 19, 2011.
62. "Traveling Wave Solutions for a Plant-Herbivore interaction with Toxin-Determined Functional Response", Symposium on Nonlinear Dynamical Systems and Application, Shanghai JaoTong University, June 6 - 9, 2011.
63. "Traveling Wave Solutions for a Lotka-Volterra type of Predator-Prey Systems", Colloquium, University of Wyoming, Laramie, Wyoming, October 7, 2011.
64. "Dynamics of an SIS Reaction-Diffusion Epidemic Model for Disease Transmission", Workshop on Spatial-Temporal Dynamics in Disease Ecology and Epidemiology, MBI, Ohio State University, October 10 - 14, 2011.

65. “Existence and nonexistence of traveling wave solutions and minimum wave speed for a predator-prey system, Mini-Symposium on Asymptotic Dynamics of Dissipative Evolution Equations”, SIAM South-East Section Meeting, University of Alabama in Huntsville, March 24 - 25, 2012.
66. “ Global Dynamics of a Plant-Herbivore Model with Toxin-Determined Functional Response”, AMS Central Meeting, University of Kansas, March 30 - April 1, 2012.
67. Gave six (6) lectures on The Liapunov Schmidt Method and Applications, Graduate Seminars, Eastern China Normal University, May 21 - 29, 2012.
68. Gave six (6) lectures on The Liapunov Schmidt Method and Applications to Hopf Bifurcation and Traveling Wave Solutions, Graduate Seminars, Shanghai Normal University, June 1 - 4, June 10 - 14, 2012.
69. “ Global Dynamics of a Plant-Herbivore Model with Toxin-Determined Functional Response”, Nanjing Normal University Colloquium, June 5, 2012.
70. “ Global Dynamics of a Plant-Herbivore Model with Toxin-Determined Functional Response”, Shanghai JiaoTong University, June 8, 2012.
71. “ Traveling Wave Solutions for a Class of Predator-Prey Systems with Both Positive Diffusion”, Workshop on PDE Problems in Mathematical Biology and Physics, Hong Kong Polytechnic University, June 22 - 23, 2012.
72. “ Traveling Wave Solutions for a Class of Predator-Prey Systems”, The Sixth International Conference on Recent Advances in Applied Dynamical Systems, GuangZhou University, GuangZhou, China, June 25 - 27, 2013.
73. “ Spatially Heterogeneous Invasion of Toxic Plant Mediated by Herbivory”, The First International Conference on Dynamics of Differential Equations, Georgia Institute of Technology, March 16 - 20, 2013.
74. “Traveling Wave solutions for some classes of non-monotone reaction-diffusion models”, Mathematical Colloquium, University of Central Florida, Oct. 9, 2014.
75. “A Geometrical Method in Studying the Traveling Wave Solutions for Some Classes of Reaction-Diffusion Systems”, AMS Sectional Meeting, March 27 - 29, 2015.
76. “Global Dynamics of a Plant-Herbivore Model with Toxin-Determined Functional Response”, Mathematical Colloquium, Georgia State University - Collumbas, April 15, 2015.
77. “Traveling Wave Solutions for Some Classes of Nonmontone Reaction-Diffusion Systems - A Geometrical Approach”, Workshop on Recent Advances in Reaction-Diffusion Equations and Applications, Jiangsu Normal University, China, May 21 - 24, 2015.
- 78 “Traveling Wave Solutions for Diffusive Predator-Prey Systems”, Shanghai Tongji University, June 9 - 10, 2015.
- 79 “Traveling Wave solutions for Some Classes of Predator-Prey Systems”, Research Workshop, Shanghai Normal University, June 15, 2016.

- 80 “Methods of Bifurcation Analysis”, Fosan University, Faculty Research Development Seminar, March 2 - 10, 2017.
- 81 “Global dynamics of a ratio-dependent Holling-Tanner predator-prey systems”, Georgia Tech MAP Workshop on Dynamical Systems, Georgia Tech, Atlanta, Georgia, August 10-11, 2017.
- 82 “A geometric approach in the study of traveling wave solutions for a class of non-monotone reaction-diffusion systems”, Conference on Infinite Dimensional Dynamical Systems, Sichuan University, Chengdu, China, May 29 - June 2, 2017.

SERVICE TO THE PROFESSIONAL COMMUNITIES

1. Served as a panelist for NSF-NATO Postdoctoral Fellowship Program in National Science Foundation, Arlington, VA from March 20-21, 1997. This service also includes providing review reports on 11 proposals submitted to the Postdoctoral Fellowship Program before going to the panel discussion in NSF office in Arlington.
2. NSF research proposal review, November, 1997.
3. Served as a chairman of a special session in The Sixth Colloquium on the Qualitative Theory of Differential Equations, Bolyai Institute, Regional Committee of the Hungarian Academy of Sciences, Szeged, Hungary, August 10-14, 1999.
4. NSERC(Canadian NSF) research proposal review, January, 2000.
5. NSF research proposal review, February, 2000.
6. A member of the Scientific Committee for the 2000 summer school on Delay Differential Equations organized by the International Dynamical Systems Center of Marrakech, Morocco, in collaboration with the International Center of Pure and Applied Mathematics (ICPAM).
7. The co-organizer of the special session on Nonlinear Differential Equations and Applications in American Mathematical Society Southeast Meeting held in Birmingham, Alabama from November 9-11, 2000.
9. Dutch National Science Foundation research proposal review, April, 2003.
10. The Scientific Committee for International Conference of Recent Developments on Differential Equations and Applications.
11. Co-organizer of the Special Session On Nonlinear Differential Equations and Applications in The 6th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Poitiers, France, June 25-28, 2006.
12. NSF research proposal review, March, 2007.
13. Co-organizer of the Special Session on Nonlinear Dynamical Systems and Differential Equations in AMS Southeastern Sectional Meeting, Middle Tennessee State University, Murfreesboro, November 3-4, 2007.

14. Co-organizer of the Special Session on Dynamical Systems and Applications of Differential Equations, AMS Southeastern Sectional Meeting, University of Alabama in Huntsville, Huntsville, October 24-26, 2008.
15. Co-organizer of the Mini-symposium on Asymptotic Dynamics of Dissipative Evolution Equations, SIAM South-East Section Meeting, The University of Alabama in Huntsville, March 24-25, 2012.
16. Member of the Scientific Committee of The Seventh International Conference on Recent Advances in Applied Dynamical Systems, to be held at Linyi, Shangdong, P. R. China, from June 8 - 10, 2013.
17. Co-organizer of the Special Session on Advances in the Theory and Applications of Dynamical Systems, AMS Southeastern Sectional Meeting, University of Alabama in Huntsville, Huntsville, March 27-29, 2015.

ARTICLES REVIEW

Have reviewed more than 90 research papers for prestigious mathematical journals.

GRADUATE STUDENTS ADVISED

Have advised 5 Ph.D students and 7 M.S students.