

# Junping Shi<sup>1</sup>

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## CONTACT INFORMATION

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Department of Mathematics  
William & Mary  
Williamsburg, VA 23187-8795

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## RESEARCH INTERESTS

- Nonlinear Partial Differential Equations (Elliptic and Parabolic Type).
- Applied Nonlinear Analysis; Bifurcation Theory; Infinite Dimensional Dynamical Systems.
- Mathematical Biology; Natural Resource Modeling; Spatiotemporal Pattern Formation.

## EDUCATION

- Ph.D. in Mathematics, Brigham Young University, Provo, Utah, USA, 1993-1998
- Undergraduate in Mathematics, Nankai University, Tianjin, China, 1990-1993

## ACADEMIC POSITIONS

1. August 2012 – : Tenured Professor, College of William & Mary
2. July 2018 – : Chair of Department of Mathematics, College of William & Mary
3. August 2013 – August 2014: Acting BioMath Director, College of William & Mary
4. September 2006 – August 2012: Tenured Associate Professor, College of William & Mary
5. August 2000 – August 2006: Assistant Professor, College of William & Mary
6. July 1998 – July 2000: Visiting Assistant Professor, Tulane University
7. September 2001 – : Guest Professor, Harbin Normal University, China (March 2006–March 2009, Longjiang Scholar Chair Professor)
8. January 2011 – : Guest Professor, Shanxi University, China
9. Feb–May, 2013: Visiting Professor, National Center of Theoretical Science, Hsinchu, Taiwan
10. Sept–Dec, 2007: Visiting Associate Professor, National Tsing Hua University, Hsinchu, Taiwan
11. Feb–Apr, 2005: Visiting Scholar, National Tsing Hua University, Hsinchu, Taiwan; University of Sydney, Sydney, NSW, Australia; University of New England, Armidale, NSW, Australia; and Tokyo Metropolitan University, Tokyo, Japan
12. May–June 2001: Visiting Scholar, Beijing (Peking) University, China

## HONORS AND AWARDS

1. Margaret Hamilton Professor of Mathematics, 2016–2019.
2. Nominee for the State Council of Higher Education in Virginia (SCHEV) Outstanding Faculty Awards (OFA), 2015.
3. Plumeri Awards for Faculty Excellence, College of William & Mary, 2013-2015.
4. 100 Talent Program, Shanxi Province, China, 2010–2013.
5. Arts and Sciences Distinguished Associate Professor of Mathematics, College of William & Mary, 2010–2013.
6. Second class scientific research award, Heilongjiang province, China, 2008. (with Yuwen Wang, Ping Liu, Renhao Cui, Yuhua Zhao.)
7. Faculty Award for the Advancement of Scholarship by the Alpha Chapter of Phi Beta Kappa, College of William & Mary, 2008.
8. Second class research award from Department of Education of Heilongjiang province, China, 2003. (with Yuwen Wang, Wen Song, Mingyao Xu and Shaorong Pan.)
9. Ralph E. Powe Junior Faculty Enhancement Award, Oak Ridge Associated Universities, 2002.

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<sup>1</sup>Date: July 1, 2020

EDITORIAL  
POSITIONS

1. (2019-) Associate Editor, Mathematics in Applied Science and Engineering
2. (2018-) Associate Editor, Complex Variables and Elliptic Equations
3. (2016-) Associate Editor, Communications on Pure and Applied Analysis
4. (2016-2018) Associate Editor, Japan Journal of Industrial and Applied Mathematics
5. (2009-) Associate Editor, Journal of Mathematical Analysis and Applications
6. (2008-) Associate Editor, Applicable Analysis
7. (2008-) Editorial board, International Journal of Differential Equations
8. (2010-) One of editors, problem session, Electronic Journal of Differential Equations.  
(<http://math.uc.edu/ode/odeprobs/odeprobs.html>)

COURSES TAUGHT College of William & Mary (all are undergraduate courses, 3-4 credits)

1. Fall 2020 and Spring 2021: sabbatical leave, no teaching
2. Spring 2020: Math 442 (Partial Differential Equations), Math 496 (Yuxin Shang, Kaidi Wang)
3. Fall 2019: Math 302 (Differential Equations), Math 495 (Yuxin Shang, Kaidi Wang)
4. Spring 2019: Math 442 (Partial Differential Equations)
5. Fall 2018: Math 345 (Intro to Mathematical Biology), Math 496 (Chengli Huang)
6. Spring 2018: Math 212 (Multivariate Calculus), Math 442(Partial Differential Equations)  
Math 495 (Chengli Huang), Math 496 (Christopher Hambric)
7. Fall 2017: Math 212 (Multivariate Calculus), Math 214 (Foundation of Mathematics),  
Math 495 (Christopher Hambric), Math 496 (Xin Zou), Intr 496 (Xiang Liu)
8. Spring 2017: Math 212 (Multivariate Calculus), Math 442(Partial Differential Equations)  
Math 495 (Xin Zou), Intr 495 (Xiang Liu)
9. Fall 2016: Math 214 (Foundation of Mathematics), Math 302 (Differential Equations)
10. Spring 2016: Math 214(Foundation of Mathematics), Math 442(Partial Differential Equations)
11. Fall 2015: Math 212 (Multivariate Calculus), Math 302 (Differential Equations)
12. Spring 2015: Math 214(Foundation of Mathematics), Math 442(Partial Differential Equations)  
Math 410 (Data Science: theory and applications, 1 credit, co-teach with Gexin Yu)
13. Fall 2014: Math 214(Foundation of Mathematics), Math 345(Intro to Mathematical Biology)
14. Spring 2014: Math 214(Foundation of Mathematics), Math 442(Partial Differential Equations)  
Math 410 (Big Data Analysis, 1 credit, co-teach with Tanujit Dey)
15. Fall 2013: Math 214(Foundation of Mathematics),  
Math 441(Ordinary Differential Equations II)
16. Fall 2012 and Spring 2013: sabbatical leave, no teaching
17. Spring 2012: Math 112(Calculus II), Math 442(Partial Differential Equations),  
Math 496 (Matt Becker, Tim Becker, Patrick King, Tim McDade),  
Math 410(Topics in Computational Mathematics, 1 credit, co-teach with Jesse Berwald)
18. Fall 2011: Math 214(Foundation of Mathematics),  
Math 441(Ordinary Differential Equations II),  
Math 495 (Matt Becker, Tim Becker, Patrick King, Tim McDade)
19. Spring 2011: Math 214(Foundation of Mathematics), Math 442(Applied Mathematics, II),  
Math 410(Topics in Computational Mathematics, 1 credit, co-teach with Drew LaMar)
20. Fall 2010: Math 214(Foundation of Mathematics), Math 441(Applied Mathematics, I)
21. Spring 2010: Math 302(Differential Equations), Math 442(Applied Mathematics, II),  
Math 410(Topics in Computational Mathematics, 1 credit),  
Math 496 (Michael Essman, William Jordan-Cooley, Yuanyuan Liu)

22. Fall 2009: Math 302(Differential Equations), Math 441(Applied Mathematics, I),  
Math 410(Problem Solving Seminar, 1 credit, co-teach with Dey, Hasler, Yu)  
Math 495 (Michael Essman, William Jordan-Cooley, Yuanyuan Liu)
23. Spring 2009: Math 311 (Elementary Analysis), Math 490(Math. Biology and PDE)  
Math 496 (Daniel Hariprasad)
24. Fall 2008: Math 111 (Calculus I), Math 311 (Elementary Analysis)  
Math 410(Problem Solving Seminar, 1 credit, co-teach with Dey, Hasler, Vinroot, Yu)  
Math 495 (Daniel Hariprasad)
25. Spring 2008: Math 213(Multi-variable Calculus), Math 302(Differential Equations)
26. Spring and Fall 2007: sabbatical leave, no teaching
27. Fall 2006: Math 131 (Calculus for Life sciences I), Math 345 (Math. Models in biology)  
Math 410(Problem Solving Seminar, 1 credit)
28. Spring 2006: Math 302(Differential Equations), Math 490(Math. Biology and PDE)
29. Fall 2005: Math 302(Differential Equations), Math 490(Problem solving seminar)
30. Spring 2005: pre-tenure junior research leave, no teaching
31. Fall 2004: Math 112(Calculus II, 2 sections), Math 302(Differential Equations)
32. Spring 2004: Math 213(Multi-variable Calculus), Math 490(Math. Biology and PDE)
33. Fall 2003: Math 112(Calculus II), Math 302(Differential Equations)
34. Spring 2003: Math 112(Calculus II, 2 sections)
35. Fall 2002: Math 111(Calculus I), Math 441(Applied Mathematics, I)
36. Spring 2002: Math 302(Differential Equations), Math 490(Math. Biology and PDE)
37. Fall 2001: Math 302(Differential Equations), Math 410(510)(Math. Models in biology)
38. Spring 2001: Math 111(Calculus I), Math 112(Calculus II)
39. Fall 2000: Math 111(Calculus I, 2 sections)

Tulane University (all are undergraduate courses)

1. Spring 2000: Math 111(Probability and statistics), Math 224(Differential Equations)
2. Fall 1999: Math 221(Multi-variable calculus), Math 224(Differential Equations)
3. Spring 1999: Math 122(Calculus II), Math 224(Differential Equations)
4. Fall 1998: Math 121(Calculus I), Math 224(Differential Equations)

Brigham Young University (all are undergraduate courses)

1. Fall 1997: Math 312(Advanced engineering mathematics)
2. Summer 1997: Math 112(Calculus I)
3. Spring 1997: Math 110(College Algebra)
4. Fall 1996: Math 110(College Algebra)

National Tsing Hua University, Taiwan (graduate course)

1. Spring 2013: Math 637 (Reaction-diffusion models and bifurcation theory)
2. Fall 2007: Math 6101-01 (Bifurcation Theory in Banach Spaces and Application to Semilinear Elliptic Equations and Systems)

UNDERGRADUATE REU students (co)-supervised in College of William & Mary: (49)  
STUDENTS  
SUPERVISED

Name	Year	support source	position after graduation
Young He Lee	2004	NSF (2003-07)	
Lena Shebakov	2004	NSF (2003-07)	Ph.D(applied math), U. Washington
Jackie Taber	2004	NSF (2003-07)	M.S.(COR), William & Mary
Kristina Little	2006	NSF (2003-07)	Ph.D(bioengineering), U. Virginia
Derek LaMontagne	2006	NSF (2003-07)	Ph.D(chemistry), U. Florida
Fumie Hirata	2006		M.S(math), Keio U., Japan
Michael Essman	2008	NSF-CSUMS	Navel Surface Warfare Center
Daniel Hariprasad	2009	NSF-CSUMS,UBM	Ph.D(applied math) U. Arizona
William Jordan-Cooley*	2009	NSF-CSUMS,UBM	M.S.(education) Columbia U.
Yuanyuan Liu	2009	W&M Biomath	Ph.D(economics), Georgetown U.
Ruoyan Sun	2010	W&M Biomath	Ph.D(pub. health) U. Michigan
Matt Becker <sup>#</sup>	2010	NSF-CSUMS,NSF(2010-14)	Ph.D(applied math), U. Maryland
Tim Becker*	2010	NSF-CSUMS,W&M	Ph.D(applied math), Rice U.
Patrick King <sup>∇</sup>	2011	NSF-CSUMS	Ph.D(physics), U. Virginia
Tim McDade*	2011	NSF-CSUMS	Microsoft, Ph.D(political sci), Duke U.
James Janopaul-Naylor	2011	Monroe Freshman	M.D., U. Penn
Cathrine King	2011	Monroe Freshman	Ph.D(comp.), Carnegie Mellon U.
Nicholas Ducharme-Barth*	2012	NSF-CSUMS,NSF(2010-14)	Ph.D(marine sci), U. Florida
Wei Xia	2012	NSF(2010-14)	Ph.D(indu engi), Lehigh U.
Haomiao Li	2014	NSF(2010-14)	M.S.(statistics), Yale U.
Wade Hodson*	2014	NSF(2013-17)	Ph.D(physics), U. Maryland
Jing Yi Zhou*	2014	NSF(2013-17)	SBB Research Group
Mayee Chen (high school)	2014		B.S., Princeton U., Ph.D, Stanford U.
Kristina Kelly <sup>♣</sup>	2015	NSF-EXTREEMS-QED	Sageworks
Ben Dykstra	2015	NSF-EXTREEMS-QED	Capital One
Danella Singer <sup>◊</sup>	2015	NSF-EXTREEMS-QED	SAP PMO Analyst
Margaret Swift <sup>#</sup>	2015	NSF(2013-17)	IBM Consultant, Ph.D(biol), Duke U.
Yi Zhang*	2016	NSF(2013-17,2017-20)	Ph.D(env. engi.), Cal. Tech.
Tianshu Li	2016		Transfer to U. Virginia
Jasper Short <sup>◊</sup>	2016	NSF-EXTREEMS-QED	Chegg
Xiang Liu	2017	W&M Charles Center	DCL Capital
Xin Zou	2017	W&M Charles Center	M.S.(comp.sci.), Carnegie Mellon U.
Christopher Hambric <sup>♡</sup>	2017	NSF-EXTREEMS-QED	Ph.D.(math), Lehigh U.
Gabrielle Tauscheck <sup>♡</sup>	2017	NSF-EXTREEMS-QED	Ph.D.(math), U. South Carolina
Yiyang Liu <sup>♡</sup>	2017	W&M Charles Center	Ph.D.(applied math), U. Michigan
Mikela Dockery <sup>♣</sup>	2017	NSF-EXTREEMS-QED	IBM
Chengli Huang	2018	W&M Charles Center	MicroStrategy
Tiana Jackson <sup>♣</sup>	2018	NSF-EXTREEMS-QED	
Cheng Chen	2018	Monroe Sophomore	Ph.D.(economics), U. Washington
Kyle Cochran*	2018	NSF-EXTREEMS-QED	National Institutes of Health
Peter Psathas <sup>#</sup>	2018	NSF-EXTREEMS-QED	Federal Reserve Bank of Philadelphia
Rachel Wilson*	2018	NSF-EXTREEMS-QED	U. Georgia Marine Extension & Sea Grant
DeAndre Johnson <sup>¶</sup>	2018	NSF-EXTREEMS-QED	U.S. Naval Research Laboratory
Kexin Feng	2019	Monroe Sophomore	Ph.D.(economics), Cal. Tech.
Xinzhi Zhang	2019	Monroe Sophomore	
Fangming Xu*	2019	NSF(2017-20)	M.S.(statistics), Yale U.
Kaidi Wang	2019	W&M Charles Center	M.S.(finance), MIT
Yuxin Shang	2019	W&M Charles Center	M.S.(busi.anal), Columbia U.
Jiankun Wang <sup>#</sup>	2020	W&M Charles Center	

\*: co-advised with Rom Lipcius, Leah Shaw; <sup>#</sup>: co-advised with Leah Shaw;

<sup>∇</sup>: co-advised with Daniel Vasiliu; <sup>◊</sup>: co-advised with Zhifu Xie; <sup>♣</sup>: co-advised with Larry Leemis;

<sup>♡</sup>: co-advised with Chi-Kwong Li; <sup>♣</sup>: co-advised with Jing Zhang and Leah Shaw;

<sup>¶</sup>: co-advised with Sarah Day, Yongjin Lu and Laura Storch

REU students supervised in China: (2)

Name	Year	Institute	Position after graduation
Jiayin Jin	2008	Harbin Institute of Technology	Ph.D(math), Michigan State U.
Yongnan Zhao	2008	Harbin Normal University	

Honors students advised in College of William & Mary: (14)

Name	Year	position after graduation	co-advisers
Daniel Hariprasad	2009	Ph.D(applied math) U. Arizona	R.Lipcius,L.Shaw  L.Shaw R.Lipcius,L.Shaw D.Vasiliu        C.Li
Michael Essman	2010	Researcher in military research center	
William Jordan-Cooley	2010	M.S.(education), Columbia U.	
Yuanyuan Liu	2010*	Ph.D(economics), Georgetown U.	
Matt Becker	2012	Ph.D(applied math), U. Maryland	
Tim Becker	2012*	Ph.D(applied math), Rice U.	
Patrick King	2012	Ph.D(physics), U. Virginia	
Tim McDade	2012	Microsoft	
Xiang Liu	2017*	DCL Capital	
Xin Zou	2017*	M.S.(comp.sci.), Carnegie Mellon U.	
Christopher Hambric	2018	Ph.D.(math), Lehigh U.	
Chengli Huang	2018*	Microstrategy	
Yuxin Shang	2020*	M.S.(busi. anal), Columbia U.	
Kaidi Wang	2020*	M.S.(fina.), MIT	

\*: supported by William & Mary Honors Fellowship or Charles Center Fellowship

Serve in committee of Marc McGuigan (BS, Phys, 2003), Heather Wiseman (BS, Biol, 2006), David Gould (BS, Math, 2009), Niha Zubair (BS, Math, 2009), Georgia Pfeiffer (BS, Math, 2011), Ben Holman (BS, Math, 2011), Matt Peppe (BS, Math, 2011), Brian Waldman (BS, Math, 2012), Kyle Zora (BS, Phys, 2012), Ryan Gryder (BS, Math, 2014), Peibo An (BS, Phys, 2016), Eve Chase (BS, Phys, 2016), Evan Dienstman (BS, Math, 2017), John Marken (BS, Math, 2017), Melissa Guidry (BS, Phys, 2017), Brandon Buncher (BS, Phys, 2017), Duo Wang (BS, Math, 2018), Hangwei Zhuang (BS, Math, 2018), Rachel Wilson (BS, CAMS, 2019), Tianrui Zhu (BS, Math, 2019), Cheng Chen (BS, Econ, 2019), Fangming Xu (BS, Math, 2020), Xingyu Zheng (BS, CAMS, 2020)

GRADUATE  
STUDENTS  
SUPERVISED

Master degree students supervised in Harbin Normal University: (25, all jointly with Yuwen Wang)

Jinfeng Wang, Yuhua Zhao (MS, 2005); Renhao Cui, Guanqi Liu, Jia Duo (MS 2006); Rui Diao, Hui Ding, Jili Fu, Linan Sun, Yanan Wang (MS 2008); Xinying Hao, Ting Li, Yuhang Liu, Da Yu, Fujun Zhang, Xin Zhang (MS 2009); Rui Wang, Min Cheng, Li Li, Xiuhong Feng, Ping Li, Hongbo Duan (MS 2010); Bao Ma, Xiaoling Wang, Dong Pan (MS 2011).

Ph.D students supervised in China and USA (10 completed)

Name	Year	Institute	Co-adviser	Current Position
Ping Liu	2008	NNU	Yuwen Wang	Professor, Harbin Normal U.
Fengqi Yi	2008	HIT	Junjie Wei	Professor, Harbin Engineering U.
Jinfeng Wang	2011	HIT	Junjie Wei	Professor, Harbin Normal U.
Yuhua Zhao	2012	NNU	Yuwen Wang	Asso. Prof., Harbin Normal U.
Shanshan Chen	2013	HIT	Junjie Wei	Asso. Prof., Harbin Inst. Tech. Weihai
Renhao Cui	2014	HIT	Boying Wu	Professor, Harbin Normal U.
Sainan Wu	2017	HIT	Boying Wu	Lecturer, Nanjing Univ. Posts & Tele.
Wenjie Ni	2018	HIT	Mingxin Wang	Postdoc, Univ. New England
Yan Wang	2019	W&M		Postdoc, Beijing Normal University
Qingyan Shi	2019	TJU	Yongli Song	Lecturer, Jiangnan University

W&M=College of William & Mary, HIT=Harbin Institute of Technology,  
NNU=Northeast Normal University, TJU=Tongji University

Serve as Ph.D Thesis external reviewer (5)

Name	Year	Institute	Adviser
Rui Hu	2009	Memorial University of New Foundland, Canada	Yuan Yuan
Rui Peng	2010	University of New England, Australia	Yihong Du
Jerome Goddard II	2011	Mississippi State University, USA	R. Shiva,ji
Sarath Sasi	2012	Mississippi State University, USA	R. Shiva,ji
Ruiwen Wu	2019	Memorial University of New Foundland, Canada	Xiaoqiang Zhao

Serves as College of William & Mary Ph. D committee member for Xiao Wang (2015), Diane Christine Pelejo (2016), Sofya Zaytseva (2019).

## Grants, Fellowships

All fellowships, grants, contracts awarded by outside agencies. (various travel supports not listed)

Funding in US (as PI, co-PI or senior personnel)

1. *Collaborative Research: Quantitative Principles behind the Spatio-Temporal Oscillation of Intracellular Calcium*, DMS-1853598, National Science Foundation, 2019-2022, \$134,974. (PI: J. Shi) (collaborating with University of California at Riverside, \$466,774, PIs: X. Cui, Z. Yang)
2. *Collaborative Research: Persistence, Stability and Control of Populations in Heterogeneous Networks*, DMS-1715651, National Science Foundation, 2017-2020, \$199,999. (PI: J. Shi, co-PI: L. Shaw) (collaborating with University of Central Florida, \$150,000, PI: Z. Shuai)
3. *EXTREEMS-QED: Computational and Statistical theory and techniques in the study of large data sets*, DMS-1331021, National Science Foundation, 2013-2019, \$879,498. (PI: J. Shi, co-PI: S. Day, C. Li and G. Yu)
4. *Collaborative Research: Multiscale Modeling of Oyster Reef Dynamics*, DMS-1313243, National Science Foundation, 2013-2017, \$151,328. (PI: L. Shaw, co-PI: J. Shi) (collaborating with Virginia Institute of Marine Science, \$128,672, PI: R. Lipcius, J. Shen)
5. *Mathematical Studies of Spatial Bistability in Ecological Systems*, DMS-1022648, National Science Foundation, 2010-2014, \$157,492. (PI: J. Shi)
6. *CSUMS: Theory, Techniques, and Research in Computational Mathematics*, DMS-0703532, National Science Foundation, 2007-2013, \$884,029. (PI: C. Li, co-PIs: S. Day, R. Lewis, D. Lutzer, D. Philips, J. Shi (acting PI for 2010-2012), G. Smith)
7. *UBM: Undergraduate Research in Metapopulation Ecology*, EF-0436318, National Science Foundation, 2004-2009, \$647,000. (PI: D. Cristol, co-PIs: J. Swaddle, S. Schreiber, senior personnel: R. Chambers, T. Killingback, J. Shi.)
8. *Persistence and pattern formation in biological systems*, DMS-0314736, National Science Foundation, 2003-2007, \$108,545. (PI: J. Shi)
9. American Mathematical Society Ky Fan fund (with Chi-Kwong Li), 2003-2004. \$3,500 plus \$4,000 matching fund from College of William and Mary.
10. Ralph E. Powe Junior Faculty Enhancement Award, Oak Ridge Associated Universities, 2002. \$5,000.
11. *Theory and Applications of Semilinear Elliptic and Parabolic Equations*, Board of Regents of Louisiana, 1999-2001, \$15,501. (PI: J. Shi)

All summer grants and Faculty Research Assignments received from William and Mary

1. Faculty Semester Research Assignment, Fall 2020 and Spring 2021.
2. *Data analysis and visualization from the perspective of NSF EXTREEMS-QED grant*. Charles Center Fellowships / May Seminar, College of William and Mary, 2014, \$2,000. (Project coordinators: J. Shi, T. Dey, C.-K. Li, Participants: 10)
3. Faculty Semester Research Assignment, Fall 2012 and Spring 2013.

4. *Bistability in Biological and Chemical Systems*, Summer Research Grant, College of William & Mary, 2008, \$5,000. (PI: J. Shi)
5. Faculty Semester Research Assignment, Spring 2007 and Fall 2007.
6. Junior Research Leave, Spring 2005.
7. *Reaction Diffusion Equations and Applications*, Summer Research Grant, College of William & Mary, 2003, \$4,000. (PI: J. Shi)
8. *Studies of Nonlinear Partial Differential Equations from Fishery Management*, Summer Research Grant, College of William & Mary, 2002, \$4,500. (PI: J. Shi)
9. *Qualitative Studies of Nonlinear Partial Differential Equations*, Summer Research Grant, College of William & Mary, 2001, \$6,000. (PI: J. Shi)
10. *Developing a revised calculus curriculum for business and economics students at W&M*, Charles Center Fellowships / May Seminar, College of William & Mary, 2001, \$2,700. (Project Coordinator: C.-K. Li, Participants: D. Lutzer, J. Shi, B. Robeson, C. Moody)
11. Startup grant, College of Arts and Sciences, College of William and Mary, 2000-2003, \$25,000. (PI: J. Shi)

Funding in China (as co-PI)

1. *Existence and orbital stability of solutions to several classes of nonlinear elliptic equations and systems*, NSFY-11971202, Natural Science Foundation of China, 2020-2023, 520,000 Chinese Yuan (about \$74,000 in 2019). (PI: J. Wang, co-PI: J.-P. Shi)
2. *Studies on reaction-diffusion equations with chemotaxis or advection*, NSFY-11971135, Natural Science Foundation of China, 2020-2023, 490,000 Chinese Yuan (about \$70,000 in 2019). (PI: J.-F. Wang, co-PI: J.-P. Shi)
3. *Quasilinear generalized inverse, Banach manifold and bifurcation analysis of nonlinear Equations*, NSFY-11471091, Natural Science Foundation of China, 2015-2017, 700,000 Chinese Yuan (about \$114,000 in 2014). (PI: Y.-W. Wang, co-PI: J.-P. Shi, P. Liu)
4. *Bifurcation analysis for reaction-diffusion systems with non-monotone structure*, NSFY-11201101, National Natural Science Foundation of China, 2013-2015, 220,000 Chinese Yuan (about \$35,000 in 2012). (PI: J.-F. Wang, co-PI: J.-P. Shi)
5. *Analytic Bifurcation Theory in Infinite Dimensional Space and Applications in Ecological Models*, NSFY-11101110, National Natural Science Foundation of China, 2012-2014, 230,000 Chinese Yuan (about \$36,000 in 2011). (PI: P. Liu, co-PI: J.-P. Shi, S.-J. Shi)
6. *Nonlinear Generalized Inverse and Solution Set of Nonlinear Equations and Applications*, 11071051, National Natural Science Foundation of China, 2011-2013, 320,000 Chinese Yuan (about \$47,000 in 2010). (PI: Y. Wang, co-PI: J.-P. Ma, J.-P. Shi)
7. *Applications of Singularity Theory, Generalized Inverse in Bifurcation Problems and Nonlinear Analysis*, 10671049, National Natural Science Foundation of China, 2007-2009, 267,000 Chinese Yuan (about \$33,000 in 2006). (PI: Y.-W. Wang, co-PI: J.-P. Ma, J.-P. Shi)
8. *Oversea Chinese Research Fund*, Heilongjiang province, China, 2003-2006. 50,000 Chinese Yuan (about \$6,200). (PI: Y.-W. Wang, co-PI: J.-P. Shi)

REFEREED  
PUBLICATIONS  
(JOURNAL OR  
BOOK CHAPTERS)

Electronic version: Click on URL to access the full text of papers

Or downloadable from <http://jxshix.people.wm.edu/publication.html>

\*: PhD student, \*\*: MS student, \*\*\*: undergraduate student, \*\*\*\*: high school student at time of preparation of papers.

1. Wang, Yan; Shi, Jumping,  
Dynamics of a Reaction-Diffusion Benthic-Drift Model with Strong Allee Effect Growth.  
**Journal of Differential Equations** 269 (2020), 7605–7642.  
<https://doi.org/10.1016/j.jde.2020.05.044>

2. Chen, Shanshan; Shi, Junping; Shuai, Zhisheng; Wu, Yixiang,  
Asymptotic profiles of the steady states for an SIS epidemic patch model with asymmetric connectivity matrix. **Journal of Mathematical Biology** 80 (2020), no. 7, 2327–2361. <https://doi.org/10.1007/s00285-020-01497-8>
3. Chen, Shanshan; Shi, Junping,  
Asymptotic Profiles of Basic Reproduction Number for Epidemic Spreading in Heterogeneous Environment. **SIAM Journal of Applied Mathematics** 80 (2020), no. 3, 1247–1271. <https://doi.org/10.1137/19M1289078>
4. Huang, Yongyan\*; Li, Fuyi; Shi, Junping,  
Stability of Synchronized Steady State Solution of Diffusive Lotka-Volterra Predator-Prey Model. **Applied Mathematics Letter** 105 (2020), 106331. <https://doi.org/10.1016/j.aml.2020.106331>
5. Jiang, Weihua; An, Qi\*; Shi, Junping,  
Formulation of the normal forms of Turing-Hopf bifurcation in reaction-diffusion systems with time delay. **Journal of Differential Equations** 268 (2020), 6067–6102. <https://doi.org/10.1016/j.jde.2019.11.039>
6. Zaytseva, Sofya\*; Shi, Junping; Shaw, Leah,  
Model of pattern formation in marsh ecosystems with nonlocal interactions. **Journal of Mathematical Biology** 80 (2020), 655–686. <https://doi.org/10.1007/s00285-019-01437-1>
7. Shi, Junping; Wang, Chuncheng; Wang, Hao; Yan, Xiangping,  
Diffusive spatial movement with memory. **Journal of Dynamics and Differential Equations** 32 (2020), no. 2, 979–1002. <https://doi.org/10.1007/s10884-019-09757-y>
8. Shi, Junping; Wu, Yixiang; Zou, Xingfu,  
Coexistence of competing species for intermediate dispersal rates in a reaction-diffusion chemostat model. **Journal of Dynamics and Differential Equations** 32 (2020), no. 2, 1085–1112. <https://doi.org/10.1007/s10884-019-09763-0>
9. Chen, Shanshan; Shi, Junping,  
Global dynamics of the diffusive Lotka-Volterra competition model with stage structure. **Calculus of Variations and Partial Differential Equations** (2020) 59:33. <https://doi.org/10.1007/s00526-019-1693-y>
10. Tian, Chenwei\*; Shi, Qingyan\*; Cui, Xinping; Guo, Jingzhe; Yang, Zhenbiao; Shi, Junping,  
Spatiotemporal dynamics of a reaction-diffusion model of pollen tube tip growth. **Journal of Mathematical Biology** 79 (2019), 1319–1355. <https://doi.org/10.1007/s00285-019-01396-7>
11. Jin, Yu; Peng, Rui; Shi, Junping,  
Population dynamics in river networks. **Journal of Nonlinear Science** 29 (2019), 2501–2545. <https://doi.org/10.1007/s00332-019-09551-6>
12. Shi, Junping; Wang, Chuncheng; Wang, Hao,  
Diffusive spatial movement with memory and maturation delays. **Nonlinearity** 32 (2019), 3188–3208. <https://doi.org/10.1088/1361-6544/ab1f2f>
13. Chen, Sitong\*; Shi, Junping; Tang, Xianhua,  
Ground state solutions of Nehari-Pohozaev type for the planar Schrodinger-Poisson system with general nonlinearity. **Discrete and Continuous Dynamical Systems A** 39 (2019), 5867–5889. <http://dx.doi.org/10.3934/dcds.2019257>
14. Wang, Yan\*; Shi, Junping,  
Persistence and extinction of population in reaction-diffusion-advection model with weak Allee effect growth. **SIAM Journal of Applied Mathematics** 79 (2019), 1293–1313. <https://doi.org/10.1137/18M1215505>



15. Li, Yuhua; Hao, Xiaocui<sup>\*\*</sup>; Shi, Junping,  
Existence of constrained minimizers for a class of functional with Kirchhoff terms and double critical exponents. **Nonlinear Analysis: Theory, Methods & Applications** 186 (2019), 99–112. <https://doi.org/10.1016/j.na.2018.12.010>
16. Wang, Yan<sup>\*</sup>; Shi, Junping; Wang, Jinfeng,  
Persistence and extinction of population in reaction-diffusion-advection model with strong Allee effect growth. **Journal of Mathematical Biology** 78 (2019), no. 7, 2093–2140. <https://doi.org/10.1007/s00285-019-01334-7>
17. Chen, Shanshan; Shi, Junping,  
Threshold dynamics of a diffusive nonlocal phytoplankton model with age structure. **Nonlinear Analysis Series B: Real World Applications**. (2019) 50: 55–66. <https://doi.org/10.1016/j.nonrwa.2019.04.002>
18. Wang, Xiaoli; Shi, Junping; Zhang, Guohong,  
Bifurcation analysis of a model on wild and sterile mosquito interaction. **Mathematical Biosciences and Engineering (MBE)** (2019) 16(5): 3215–3234. <http://dx.doi.org/10.3934/mbe.2019160>
19. Shi, Junping; Zhang, Jimin; Zhang, Xiaoyan,  
Dynamical analysis of an algae growth model in a pelagic-benthic coupled shallow aquatic ecosystem. **Communications on Pure and Applied Analysis** 18, (2019), 2325–2347. <http://dx.doi.org/10.3934/cpaa.2019105>
20. Hambric, Christopher<sup>\*\*\*</sup>; Li, Chi-Kwong; Pelejo, Diane Christine; Shi, Junping,  
Minimum number of non-zero-entries in a  $7 \times 7$  stable matrix. **Linear Algebra and Applications** 572, (2019), 135–152. <https://doi.org/10.1016/j.laa.2019.03.002>
21. Chen, Shanshan; Liu, Zonghao; Shi, Junping,  
Nonexistence of nonconstant positive steady states of a diffusive predator-prey model with fear effect. **Nonlinear Modeling and Analysis**. 1 (2019), no.1, 47–56. <http://dx.doi.org/10.12150/jnma.2019.47>
22. Qingyan Shi<sup>\*</sup>, Junping Shi, Yongli Song,  
Hopf bifurcation and pattern formation in a diffusive delayed logistic model with spatial heterogeneity. **Discrete and Continuous Dynamical Systems B**. 24 (2019), no. 2, 467–486. <http://dx.doi.org/10.3934/dcdsb.2018182>
23. Xiaoyuan Chang, Junping Shi, Jimin Zhang,  
Dynamics of a scalar population model with delayed Allee effect. **International Journal of Bifurcation and Chaos**. 28 (2018), 1850153, 15 pp. <https://doi.org/10.1142/S0218127418501535>
24. Fuyi Li, Chunjuan Gao<sup>\*\*</sup>, Zhanping Liang, Junping Shi,  
Existence and concentration of nontrivial nonnegative ground state solutions to Kirchhoff-type system with Hartree-type nonlinearity. **Zeitschrift fuer Angewandte Mathematik und Physik (ZAMP)**. 69 (2018) 148. <https://doi.org/10.1007/s00033-018-1043-5>
25. Sainan Wu<sup>\*</sup>, Junping Shi, Jinfeng Wang,  
Dynamics and Pattern Formation of a Diffusive Predator-Prey Model with Predator-Taxis. **Mathematical Models and Methods in Applied Sciences** 28 (2018), 2275–2312. <https://doi.org/10.1142/S0218202518400158>
26. Wenjie Ni<sup>\*</sup>, Junping Shi, Mingxin Wang,  
Global stability and pattern formation in a nonlocal diffusive Lotka-Volterra competition model. **Journal of Differential Equations**. 264 (2018), 6891–6932. <https://doi.org/10.1016/j.jde.2018.02.002>
27. Stephen A. Gourley, Xiulan Lai<sup>\*</sup>, Junping Shi, Wendi Wang, Yanyu Xiao<sup>\*</sup>, Xingfu Zou,  
*Role of white-tailed deer in geographic spread of the black-legged tick Ixodes scapularis : analysis of a spatially nonlocal model*. **Mathematical Biosciences and Engineering (MBE)**. 15 (2018), 1033–1054. <http://dx.doi.org/10.3934/mbe.2018046>

28. Wenjie Zuo, Junping Shi,  
*Traveling wave solutions of a diffusive ratio-dependent Holling-Tanner system with distributed delay.* **Communications on Pure and Applied Analysis.** 17 (2018), 1179–1200.  
<http://dx.doi.org/10.3934/cpaa.2018057>
29. Yulian An, Jann-Long Chern, Junping Shi,  
*Uniqueness of positive solution to a coupled cooperative variational elliptic system on an interval.* **Transactions of American Mathematical Society.** 370 (2018), 5209–5243.  
<https://doi.org/10.1090/tran/7207>
30. Jimin Zhang, Junping Shi, Xiaoyuan Chang,  
*A mathematical model of algae growth in a pelagic-benthic coupled shallow aquatic ecosystem.* **Journal of Mathematical Biology.** 76 (2018), 1159–1193.  
<https://doi.org/10.1007/s00285-017-1168-8>
31. Yuhua Li, Fuyi Li, Junping Shi,  
*Ground states of nonlinear Schrödinger equation on star metric graphs.* **Journal of Mathematical Analysis and Applications.** 459 (2018), 661–685.  
<https://doi.org/10.1016/j.jmaa.2017.10.069>
32. Ping Liu, Junping Shi,  
*Bifurcation of Positive Solutions to Scalar Reaction-Diffusion Equations with Nonlinear Boundary Condition.* **Journal of Differential Equations.** 264 (2018), 425–454.  
<https://doi.org/10.1016/j.jde.2017.09.014>
33. Mayee Chen\*\*\*\*, Junping Shi,  
*Effect of rotational grazing on plant and animal production.* **Mathematical Biosciences and Engineering (MBE)** 15 (2018), 393–406.  
<http://dx.doi.org/10.3934/mbe.2018017>
34. Jun Wang, Junping Shi,  
*Standing waves for a coupled nonlinear Hartree equations with nonlocal interaction.* **Calculus of Variations and Partial Differential Equations.** 56 (2017), 168 (page 1–36).  
<https://doi.org/10.1007/s00526-017-1268-8>
35. Qingyan Shi\*, Junping Shi, Yongli Song,  
*Hopf bifurcation in a reaction-diffusion equation with distributed delay and Dirichlet boundary condition.* **Journal of Differential Equations.** 263 (2017), 6537–6575.  
<https://doi.org/10.1016/j.jde.2017.07.024>
36. Yuhua Li, Fuyi Li, Junping Shi,  
*Existence and multiplicity of positive solutions to Schrodinger-Poisson type systems with critical nonlocal term.* **Calculus of Variations and Partial Differential Equations.** 56 (2017), 134 (page 1–17). <https://doi.org/10.1007/s00526-017-1229-2>
37. Xiaoli Wang, Junping Shi, Guohong Zhang,  
*Interaction of water and plants: rich dynamics in a simple model.* **Discrete and Continuous Dynamical Systems B.** 22 (2017), 2971–3006.  
<http://dx.doi.org/10.3934/dcdsb.2017159>
38. Zhanping Liang, Fuyi Li, Junping Shi,  
*Positive solutions of Kirchhoff type nonlocal elliptic equation: a bifurcation approach.* **Proceedings of Royal Society of Edinburgh Section A.** 147 (2017), 875–894.  
<https://doi.org/10.1017/S0308210516000378>
39. Deqiong Ding, Junping Shi, Yan Wang\*,  
*Bistability in a model of grassland and forest transition.* **Journal of Mathematical Analysis and Applications.** 451 (2017), 1165–1178.  
<http://dx.doi.org/10.1016/j.jmaa.2017.02.062>
40. Xiangping Yan, Junping Shi,  
*Stability switches in a Logistic population model with mixed instantaneous and delayed density dependence.* **Journal of Dynamics and Differential Equations.** 29 (2017), 113–130.  
<http://dx.doi.org/10.1007/s10884-015-9432-3>

41. Renhao Cui, Haomiao Li\*\*\*, Linfeng Mei, Junping Shi,  
Effect of harvesting quota and protection zone in a reaction-diffusion model arising from fishery management. **Discrete and Continuous Dynamical Systems B**. 22 (2017), 791–807.  
<http://dx.doi.org/10.3934/dcdsb.2017039>
42. Sainan Wu\*, Junping Shi, Boying Wu,  
*Global existence of solutions to a quasilinear attraction-repulsion chemotaxis model with growth*. **Communications on Pure and Applied Analysis**. 16 (2017), 1037–1058.  
<http://dx.doi.org/10.3934/cpaa.2017050>
43. Jitao Sun, Qing-guo Wang, Junping Shi, Fangfang Jiang\*,  
On the existence and uniqueness of a limit cycle for a Liénard system with a discontinuity line. **Communications on Pure and Applied Analysis**. 15, (2016), 2509–2526.  
<http://dx.doi.org/10.3934/cpaa.2016047>
44. Junping Shi, Ratnasinham Shivaji,  
*Uniqueness of positive solutions to cooperative Hamiltonian elliptic systems*. **Electronic Journal of Differential Equations Conference**. 23, (2016), 155–173.  
<http://ejde.math.txstate.edu/conf-proc/23/s2/abstr.html>
45. Sainan Wu\*, Junping Shi, Boying Wu,  
*Global existence of solutions to a diffusive predator-prey model with prey-taxis*. **Journal of Differential Equations**. 260, (2016), 5847–5874.  
<http://dx.doi.org/10.1016/j.jde.2015.12.024>
46. Jinfeng Wang, Junjie Wei, Junping Shi,  
*Global bifurcation analysis and pattern formation in homogeneous diffusive predator-prey systems*. **Journal of Differential Equations**. 260, (2016), 3495–3523.  
<http://dx.doi.org/10.1016/j.jde.2015.10.036>
47. Yulian An, Chan-Gyun Kim, Junping Shi,  
*Exact Multiplicity of Positive Solutions for a  $p$ -Laplacian Equation with Positive Convex Nonlinearity*. **Journal of Differential Equations**. 260, (2016), 2091–2118.  
<http://dx.doi.org/10.1016/j.jde.2015.09.058>
48. Jun Wang, Junping Shi,  
*Standing waves of a weakly coupled Schrodinger system with distinct potential functions*. **Journal of Differential Equations**. 260, (2016), 1830–1864.  
<http://dx.doi.org/10.1016/j.jde.2015.09.052>
49. Chan-Gyun Kim, Zhanping Liang, Junping Shi,  
*Existence of positive solutions to a Laplace equation with nonlinear boundary condition*. **Zeitschrift fuer Angewandte Mathematik und Physik (ZAMP)**. 66 (2015), 3061–3083.  
<http://dx.doi.org/10.1007/s00033-015-0578-y>
50. Jun Zhou, Junping Shi,  
Pattern Formation in a general glycolysis reaction-diffusion system. **IMA Journal of Applied Mathematics**. 80, (2015), 1703–1738.  
<http://dx.doi.org/10.1093/imamat/hxv013>
51. Jianjun Paul Tian, Junping Shi, Jingan Cui,  
*A mathematical model for high pathogenicity avian influenza viruses emerging from outbreaks with low pathogenicity avian influenza viruses*. **Dynamics of Continuous, Discrete and Impulsive Systems Series B: Applications & Algorithms**. 22, (2015), 359–379.
52. Fangfang Jiang\*, Junping Shi, Jitao Sun, On the number of limit cycles for discontinuous generalized Lienard polynomial differential systems. **International Journal of Bifurcation and Chaos**. 25, (2015), 1550131 (10 pages).  
<http://dx.doi.org/10.1142/S021812741550131X>
53. Feng-Bin Wang, Junping Shi, Xingfu Zou,  
*Global Dynamics of Insect Pathogens in Spatial Habitats*. **Communications on Pure and Applied Analysis**. 14 (2015), 2535–2560.  
<http://dx.doi.org/10.3934/cpaa.2015.14.2535>

54. Leiga Zhao, Fukun Zhao, Junping Shi,  
*Higher dimensional solitary waves generated by second-harmonic generation in quadratic media.* **Calculus of Variations and Partial Differential Equations.** 54 (2015), 2657–2691.  
<http://dx.doi.org/10.1007/s00526-015-0879-1>
55. Chuncheng Wang, Rongsong Liu, Junping Shi, and Carlos Martinez del Rio,  
*Traveling waves of a mutualistic model of mistletoes and birds.* **Discrete and Continuous Dynamical Systems A.** 35, (2015), 1743–1765.  
<http://dx.doi.org/10.3934/dcds.2015.35.1743>
56. Fuyi Li, Yuhua Li, and Junping Shi,  
*Existence of positive solutions to Schrodinger-Poisson type systems with critical exponent.* **Communications in Contemporary Mathematics.** 16, (2014) 1450036 (28 pages)  
<http://dx.doi.org/10.1142/S0219199714500369>
57. Sze-Bi Hsu, Junping Shi and Feng-Bin Wang,  
*Further studies of a reaction-diffusion system for an unstirred chemostat with internal storage.* **Discrete and Continuous Dynamical Systems B.** 19, (2014), 3169–3189.  
<http://dx.doi.org/10.3934/dcdsb.2014.19.3169>
58. Xin Zhang\*\*, Jinfeng Wang, Junping Shi and Yuwen Wang,  
*Properties of limit cycle in a class of general predator-prey systems.* **Applied Mathematics and Computation.** 242, (2014), 397–406.  
<http://dx.doi.org/10.1016/j.amc.2014.05.020>
59. Chuncheng Wang, Rongsong Liu, Junping Shi and Carlos Martinez del Rio,  
*Spatiotemporal Mutualistic Model of Mistletoes and Birds.* **Journal of Mathematical Biology.** 68, No. 6, (2014), 1479–1520.  
<http://dx.doi.org/10.1007/s00285-013-0664-8>
60. Zhanping Liang, Fuyi Li, Junping Shi,  
*Positive solutions to Kirchhoff type equations with nonlinearity having prescribed asymptotic behavior.* **Annales de l'Institut Henri Poincaré / Analyse non lineaire.** 31, No. 1, (2014), 155–167. <http://dx.doi.org/10.1016/j.anihpc.2013.01.006>
61. Shanshan Chen, Junping Shi and Junjie Wei,  
*Bifurcation analysis of the Gierer-Meinhardt system with a saturation in the activator production.* **Applicable Analysis.** 93, No. 6, (2014), 1115–1134.  
<http://dx.doi.org/10.1080/00036811.2013.817559>
62. Jun Zhou, Chan-Gyun Kim, Junping Shi,  
*Positive steady state solutions of a diffusive Leslie-Gower predator-prey model with Holling type II functional response and cross-diffusion.* **Discrete and Continuous Dynamical Systems A.** 34, No. 9, (2014), 3875–3899.  
<http://dx.doi.org/10.3934/dcds.2014.34.3875>
63. Jun Zhou and Junping Shi,  
*Qualitative Analysis of an Autocatalytic Chemical Reaction Model with Decay.* **Proceedings of Royal Society of Edinburgh Section A.** 144, No. 2, (2014), 427–446.  
<http://dx.doi.org/10.1017/S0308210512001667>
64. Ping Liu, Junping Shi, Rui Wang\*\* and Yuwen Wang,  
*Bifurcation Analysis of a Generic Reaction-Diffusion Turing model.* **International Journal of Bifurcation and Chaos.** 24, No. 4, (2014), 1450042 (12 pages).  
<http://dx.doi.org/10.1142/S0218127414500424>
65. Renhao Cui\*, Junping Shi and Boying Wu,  
*Strong Allee effect in a diffusive predator-prey system with a protection zone.* **Journal of Differential Equations.** 256, No. 1, (2014), 108–129.  
<http://dx.doi.org/10.1016/j.jde.2013.08.015>
66. Fuyi Li, Yuhua Li and Junping Shi,  
*Existence of positive solutions to Kirchhoff type problems with zero mass.*

- Journal of Mathematical Analysis and Applications.** 410, No. 1, (2014), 361–374.  
<http://dx.doi.org/10.1016/j.jmaa.2013.08.030>
67. Ping Liu, Junping Shi and Zhian Wang,  
*Pattern formation of the attraction-repulsion Keller-Segel system.*  
**Discrete and Continuous Dynamical Systems B.** 18, No. 10, (2013), 2597–2625.  
<http://dx.doi.org/10.3934/dcdsb.2013.18.2597>
68. Renhao Cui, Ping Li\*\*, Junping Shi, Yunwen Wang,  
*Existence, uniqueness and stability of positive solutions for a class of semilinear elliptic systems.* **Topological Methods in Nonlinear Analysis.** 42, No. 1, (2013), 91–104.
69. Jiayin Jin\*\*\*, Junping Shi, Junjie Wei, and Fengqi Yi,  
*Bifurcations of patterned solutions in diffusive Lengyel-Epstein system of CIMA chemical reaction.* **Rocky Mountain Journal of Mathematics.** 43, No. 5, (2013), 1637–1674.  
<http://dx.doi.org/10.1216/RMJ-2013-43-5-1637>
70. Jun Zhou and Junping Shi,  
*Uniqueness of the positive solution for a non-cooperative model of nuclear reactors.*  
**Applied Mathematics Letter.** 26, No. 10, (2013), 1005–1007.  
<http://dx.doi.org/10.1016/j.aml.2013.05.007>
71. Jinfeng Wang, Junping Shi and Junjie Wei,  
*Nonexistence of periodic orbits for predator-prey system with strong Allee effect in prey populations.* **Electronic Journal of Differential Equations.** 2013, No. 164, (2013), 1–14.  
<http://ejde.math.txstate.edu/Volumes/2013/164/abstr.html>
72. Ping Liu, Junping Shi, Yuwen Wang and Xiuhong Feng\*\*,  
*Bifurcation Analysis of Reaction-Diffusion Schnakenberg Model.*  
**Journal of Mathematical Chemistry.** 51, No. 8, (2013), 2001–2019.  
<http://dx.doi.org/10.1007/s10910-013-0196-x>
73. Chan-Gyun Kim and Junping Shi,  
*Multiple Positive Solutions for  $p$ -Laplacian Equation with Weak Allee Effect Growth Rate.*  
**Differential and Integral Equations.** 26, No. 7/8, (2013), 707–720.  
<http://projecteuclid.org/euclid.die/1369057813>
74. Linan Sun\*\*, Junping Shi, Yuwen Wang,  
*Existence and uniqueness of steady state solutions of a nonlocal diffusive logistic equation.*  
**Zeitschrift fuer Angewandte Mathematik und Physik (ZAMP).** 64, No. 4, (2013), 1267–1278. <http://dx.doi.org/10.1007/s00033-012-0286-9>  
 Erratum: 64, No. 4, (2013), 1279–1281. <http://dx.doi.org/10.1007/s00033-013-0336-y>
75. Chan-Gyun Kim and Junping Shi,  
*Existence and Multiplicity of Positive Solutions to a Quasilinear Elliptic Equation with Strong Allee Effect Growth Rate.* **Results in Mathematics.** 64, No. 1 (2013), 165–173.  
<http://dx.doi.org/10.1007/s00025-013-0306-x>
76. Jun Zhou, Junping Shi,  
*The existence, bifurcation and stability of positive stationary solutions of a diffusive Leslie-Gower predator-prey model with Holling-type II functional responses.*  
**Journal of Mathematical Analysis and Applications.** 405, No. 2, (2013), 618–630.  
<http://dx.doi.org/10.1016/j.jmaa.2013.03.064>
77. Junping Shi,  
*Absolute Stability and Conditional Stability in General Delayed Differential Equations.* In “Advances in Interdisciplinary Mathematical Research”, Edited by Bourama Toni. Springer Proceedings in Mathematics & Statistics, Volume 37, 2013, 117–131.  
[http://dx.doi.org/10.1007/978-1-4614-6345-0\\_5](http://dx.doi.org/10.1007/978-1-4614-6345-0_5)
78. Ping Liu, Junping Shi, Yuwen Wang,  
*A double saddle-node bifurcation theorem.*  
**Communication of Pure and Applied Analysis.** 12, No. 6, (2013), 2923–2933.  
<http://dx.doi.org/10.3934/cpaa.2013.12.2923>

79. Ping Liu, Junping Shi, Yuwen Wang,  
*Bifurcation from a Degenerate Simple Eigenvalue.*  
**Journal of Functional Analysis.** 264, No. 10, (2013), 2269–2299.  
<http://dx.doi.org/10.1016/j.jfa.2013.02.010>
80. Shanshan Chen\*, Junping Shi,  
*Global Attractivity of Equilibrium in Gierer-Meinhardt System with Activator Production Saturation and Gene Expression Time Delays.*  
**Nonlinear Analysis Series B: Real World Applications.** 14, No. 4, (2013), 1871–1886.  
<http://dx.doi.org/10.1016/j.nonrwa.2012.12.004>
81. Shanshan Chen\*, Junping Shi, Junjie Wei,  
*Time delay induced instabilities and Hopf bifurcations in general reaction-diffusion systems.*  
**Journal of Nonlinear Science.** 23, No. 1, (2013), 1–38.  
<http://dx.doi.org/10.1007/s00332-012-9138-1>
82. Xin Li\*, Weihua Jiang, Junping Shi,  
*Hopf bifurcation and Turing instability in the reaction-diffusion Holling-Tanner predator-prey model.* **IMA Journal of Applied Mathematics.** 78, No. 2, (2013), 287–306.  
<http://dx.doi.org/10.1093/imamat/hxr050>
83. Shanshan Chen\*, Junping Shi, Junjie Wei,  
*The effect of delay on a diffusive predator-prey system with Holling type-II predator functional response.* **Communications on Pure and Applied Analysis,** 12, No. 1, (2013), 481–501.  
<http://dx.doi.org/10.3934/cpaa.2013.12.481>
84. Michael Essman\*\*\*, Junping Shi,  
*Bifurcation diagrams of coupled Schrödinger equations*  
**Applied Mathematics and Computation,** 219, No. 8, (2012), 3646–3654.  
<http://dx.doi.org/10.1016/j.amc.2012.09.061>
85. Ying Su, Junjie Wei, Junping Shi,  
*Hopf bifurcation in a diffusive logistic equation with mixed delayed and instantaneous density dependence.* **Journal of Dynamics and Differential Equations,** 24, No. 4, (2012), 897–925. <http://dx.doi.org/10.1007/s10884-012-9268-z>
86. Shanshan Chen\*, Junping Shi,  
*Stability and Hopf Bifurcation in a diffusive logistic population model with nonlocal delay effect.*  
**Journal of Differential Equations,** 253, No. 12, (2012), 3440–3470.  
<http://dx.doi.org/10.1016/j.jde.2012.08.031>
87. Chan-Gyun Kim, Junping Shi,  
*Global continuum and multiple positive solutions to a  $p$ -Laplacian boundary-value problem.*  
**Electronic Journal of Differential Equations,** 2012 (2012), No. 106, pp. 1–12.  
<http://ejde.math.txstate.edu/Volumes/2012/106/kim.pdf>
88. Yuhua Li, Fuyi Li, Junping Shi,  
*Existence of a positive solution to Kirchhoff type problems without compactness conditions.*  
**Journal of Differential Equations,** 253, (2012), 2285–2294.  
<http://dx.doi.org/10.1016/j.jde.2012.05.017>
89. Yuhua Zhao\*, Yuwen Wang, Junping Shi,  
Steady states and dynamics of an autocatalytic chemical reaction model with decay.  
**Journal of Differential Equations,** 253, (2012), 533–552.  
<http://dx.doi.org/10.1016/j.jde.2012.03.018>
90. Shanshan Chen\*, Junping Shi, Junjie Wei,  
*Global stability and Hopf bifurcation in a delayed diffusive Leslie-Gower predator-prey system.*  
**International Journal of Bifurcation and Chaos,** 22, (2012), 1250061 (11 pages).  
<http://dx.doi.org/10.1142/S0218127412500617>
91. Shanshan Chen\*, Junping Shi, *Global stability in a diffusive Holling-Tanner predator-prey model.* **Applied Mathematics Letters,** 25, (2012), 614–618.  
<http://dx.doi.org/10.1016/j.aml.2011.09.070>

92. William Jordan-Cooley<sup>\*\*\*</sup>, Romuald N. Lipcius, Leah Shaw, Jian Shen, Junping Shi,  
*Bistability in a differential equation model of oyster reef height and sediment accumulation.*  
**Journal of Theoretical Biology**, 289, (2011), 1–11.  
<http://dx.doi.org/10.1016/j.jtbi.2011.08.013>
93. Shanshan Chen<sup>\*</sup>, Junping Shi, Junjie Wei,  
*A Note on Hopf bifurcations in a delayed diffusive Lotka-Volterra predator-prey system.*  
**Computers and Mathematics with Applications**, 62, (2011), 2240–2245.  
<http://dx.doi.org/10.1016/j.camwa.2011.07.011>
94. Ruoyan Sun<sup>\*\*\*</sup>, Junping Shi,  
*Global stability of multigroup epidemic model with group mixing and nonlinear incidence rates.*  
**Applied Mathematics and Computation**, 218, (2011) 280–286.  
<http://dx.doi.org/10.1016/j.amc.2011.05.056>
95. Jinfeng Wang<sup>\*</sup>, Junping Shi and Junjie Wei,  
*Dynamics and Pattern Formation in a Diffusive Predator-Prey System with Strong Allee Effect in Prey.* **Journal of Differential Equations**, 251, (2011), 4-5, 1276-1304.  
(No. 2 in Top 25 Hottest Articles of *Journal of Differential Equations*, for Apr.-Jun., 2011)  
<http://dx.doi.org/10.1016/j.jde.2011.03.004>
96. Chunxiang Li<sup>\*</sup>, Junping Shi, Jitao Sun,  
*Stability of impulsive stochastic differential delay systems and its application to impulsive stochastic neural networks.*  
**Nonlinear Analysis: Theory, Methods & Applications**, 74, (2011), 10, 3099–3111.  
<http://dx.doi.org/10.1016/j.na.2011.01.026>
97. Renhao Cui<sup>\*</sup>, Junping Shi and Yuwen Wang,  
*Existence and Uniqueness of positive solutions for a class of semilinear elliptic systems.*  
**Acta Mathematica Sinica**, 27, (2011), 6, 1079–1090.  
<http://dx.doi.org/10.1007/s10114-011-9299-0>
98. Junping Shi, Zhifu Xie, and Kristina Little<sup>\*\*\*</sup>,  
*Cross-diffusion induced instability and stability in reaction-diffusion systems.*  
**Journal of Nonlinear Analysis and Computation**, 1, (2011), 1, 95–119.
99. Jann-Long Chern, Chang-Shou Lin, Junping Shi, and Yong-Li Tang<sup>\*</sup>,  
*Existence, Uniqueness and Stability of Positive Solutions to Sublinear Elliptic Systems.*  
**Proceedings of Royal Society of Edinburgh A**, 141A, (2011), 1, 45–64.  
<http://dx.doi.org/10.1017/S0308210509001115>
100. Jinfeng Wang<sup>\*</sup>, Junping Shi and Junjie Wei,  
*Predator-prey system with strong Allee effect in prey.*  
**Journal of Mathematical Biology**, 62, (2011), 3, 291–331.  
<http://dx.doi.org/10.1007/s00285-010-0332-1>
101. Zhi-You Chen<sup>\*</sup>, Jann-Long Chern, Junping Shi, and Yong-Li Tang<sup>\*</sup>,  
*On the Uniqueness and Structure of Solutions to a Coupled Elliptic System.*  
**Journal of Differential Equations**, 249, (2010), 12, 3419–3442.  
<http://dx.doi.org/10.1016/j.jde.2010.09.001>
102. Ping Liu, Junping Shi and Yuwen Wang,  
*Periodic solutions of logistic type population model with harvesting.*  
**Journal of Mathematical Analysis and Applications**, 369, (2010), 2, 730–735.  
<http://dx.doi.org/10.1016/j.jmaa.2010.04.027>
103. Yanan Wang<sup>\*\*</sup>, Yuwen Wang, and Junping Shi,  
*Exact multiplicity of solutions to a diffusive logistic equation with harvesting.*  
**Applied Mathematics and Computation**, 216, (2010), 5, 1531–1537.  
<http://dx.doi.org/10.1016/j.amc.2010.03.002>
104. Lijuan Shen<sup>\*</sup>, Junping Shi and Jitao Sun,  
*Complete Controllability of Impulsive Stochastic Integro-differential Systems.*

- Automatica**, 46, (2010), 6, 1068–1073.  
<http://dx.doi.org/10.1016/j.automatica.2010.03.002>
105. Ying Su\*, Junjie Wei and Junping Shi,  
*Bifurcation analysis in a delayed diffusive Nicholson's blowflies equation.*  
**Nonlinear Analysis: Real World Applications**, 11, (2010), 3, 1692–1703.  
<http://dx.doi.org/10.1016/j.nonrwa.2009.03.024>
106. Junping Shi, Zhifu Xie,  
*Classification of four-body central configurations with three equal masses.*  
**Journal of Mathematical Analysis and Applications**, 363, (2010), 2, 512–524.  
<http://dx.doi.org/10.1016/j.jmaa.2009.09.040>
107. Guanqi Liu\*\*, Junping Shi and Yuwen Wang,  
*Existence and nonexistence of positive solutions of semilinear elliptic equation with inhomogeneous strong Allee effect.* **Applied Mathematics and Mechanics**, 30, (2009), 11, 1461–1468.  
 (Chinese edition: 30, (2009), 11, 1374–1380).  
<http://dx.doi.org/10.1007/s10483-009-1112-z>
108. Junping Shi,  
*Bifurcation in infinite dimensional spaces and applications in spatiotemporal biological and chemical models.* **Frontier of Mathematics in China** 4, (2009), 3, 407–424.  
<http://dx.doi.org/10.1007/s11464-009-0026-4>
109. Ying Su\*, Junjie Wei and Junping Shi,  
*Hopf Bifurcations in a Reaction-Diffusion Population Model with Delay Effect.*  
**Journal of Differential Equations** 247, (2009), 5, 1156–1184. (No. 3 in Top 25 Hottest Articles of *Journal of Differential Equations*, for Apr.-Jun., 2009; No. 2 for Jul.-Sep. 2009; No. 6 for Oct.-Dec., 2009)  
<http://dx.doi.org/10.1016/j.jde.2009.04.017>
110. Rui Peng, Junping Shi, *Non-existence of Non-constant Positive Steady States of Two Holling Type-II Predator-prey Systems: Strong Interaction Case.* **Journal of Differential Equations** 247, (2009), 3, 866–886. (No. 2 in Top 25 Hottest Articles of *Journal of Differential Equations*, for Apr.-Jun., 2009)  
<http://dx.doi.org/10.1016/j.jde.2009.03.008>
111. Hsu, Sze-Bi; Shi, Junping,  
*Relaxation oscillator profile of limit cycle in predator-prey system.*  
**Discrete and Continuous Dynamical Systems B**, 11, (2009), no. 4, 893–911.  
<http://dx.doi.org/10.3934/dcdsb.2009.11.893>
112. Jifa Jiang and Junping Shi,  
*Bistability dynamics in some structured ecological models.*  
 In **Spatial Ecology** (Chapman & Hall/CRC Mathematical and Computational Biology), edited by Robert Stephen Cantrell, Chris Cosner, and Shigui Ruan, Chapman & Hall/CRC, 33–62, 2009.  
<http://www.math.wm.edu/~shij/shi/bistability-survey-3.pdf>
113. Chjan Lim and Junping Shi, *The role of higher vorticity moments in a variational formulation of the Barotropic Vorticity Model on a rotating sphere.*  
**Discrete and Continuous Dynamical Systems B**, 11, (2009), no. 3, 717–740.  
<http://dx.doi.org/10.3934/dcdsb.2009.11.717>
114. Junping Shi and Xuefeng Wang,  
*On global bifurcation for quasilinear elliptic systems on bounded domains.*  
**Journal of Differential Equations**, 246, (2009), no. 7, 2788–2812.  
 (No. 12 in Top 25 Hottest Articles of *Journal of Differential Equations*, for the period of Jan.–March, 2009; No. 10 for the period of Oct.–Dec, 2008)  
<http://dx.doi.org/10.1016/j.jde.2008.09.009>
115. Fengqi Yi\*, Junjie Wei and Junping Shi,  
*Bifurcation and spatiotemporal patterns in a homogeneous diffusive predator-prey system.* **Journal of Differential Equations**, 246, (2009), no. 5, 1944–1977.



(No. 2 in Top 25 Hottest Articles of *Journal of Differential Equations*, for Jan.–March, 2009; No. 12 for Oct.–Dec, 2008; No. 16 for Apr.–Jun., 2009; No. 6 for Jul.–Sep., 2009)  
<http://dx.doi.org/10.1016/j.jde.2008.10.024>

116. Fengqi Yi\*, Junjie Wei and Junping Shi,  
*Global asymptotical behavior of the Lengyel-Epstein reaction-diffusion system.*  
**Applied Mathematics Letters**, 22, (2009), no. 1, 52–55.  
<http://dx.doi.org/10.1016/j.aml.2008.02.003>
117. Ping Liu, Junping Shi and Yuwen Wang,  
*Exact multiplicity of solutions to perturbed logistic type equations on a symmetric domain.*  
**Science in China Series A: Mathematics**, 51 (2008), no. 10, 1753–1762. (Chinese edition: 38 (2008) no. 8, 930–939.)  
<http://dx.doi.org/10.1007/s11425-008-0101-4>
118. Jia Duo\*\*, Junping Shi and Yuwen Wang,  
*Structure of the solution set of semilinear elliptic equations with asymptotic linear nonlinearity.*  
**Nonlinear Analysis: Theory, Methods & Applications**, 69, (2008), no. 8, 2369–2378.  
<http://dx.doi.org/10.1016/j.na.2007.08.014>
119. Kazuhiro Kurata and Junping Shi,  
*Optimal Spatial Harvesting Strategy and Symmetry-Breaking.*  
**Applied Mathematics and Optimization**, 58 (2008), no. 1, 89–110.  
<http://dx.doi.org/10.1007/s00245-007-9032-7>
120. Rui Peng, Junping Shi and Mingxin Wang,  
*On Stationary Patterns of a Reaction-diffusion Model with Autocatalysis and Saturation Law.*  
**Nonlinearity**, 21 (2008), no. 7, 1471–1488.  
(One of 18 ‘high-profile articles’ of 2008 for **Nonlinearity**)  
<http://dx.doi.org/10.1088/0951-7715/21/7/006>
121. Jifa Jiang and Junping Shi,  
*Dynamics of a reaction-diffusion system of autocatalytic chemical reaction.*  
**Discrete and Continuous Dynamical Systems A**, 21 (2008), no. 1, 245–258. <http://dx.doi.org/10.3934/dcds.2008.21.245>
122. Fengqi Yi\*, Junjie Wei and Junping Shi,  
*Diffusion-Driven Instability and Bifurcation in the Lengyel-Epstein System.*  
**Nonlinear Analysis: Real World Applications**, 9 (2008), no. 3, 1038–1051.  
<http://dx.doi.org/10.1016/j.nonrwa.2007.02.005>
123. Junping Shi and Shin-Hwa Wang,  
*Exact multiplicity of boundary blow-up solutions for bistable equation.*  
**Computers and Mathematics with Applications**, 54 (2007), no. 9-10, 1285–1292.  
<http://dx.doi.org/10.1016/j.camwa.2007.04.017>
124. Ping Liu\*, Junping Shi and Yuwen Wang,  
*Imperfect transcritical and pitchfork Bifurcations.*  
**Journal of Functional Analysis**, 251 (2007), no. 2, 573–600.  
<http://dx.doi.org/10.1016/j.jfa.2007.06.015>
125. Rui Peng, Junping Shi and Mingxin Wang,  
*Stationary Pattern of a Ratio-dependent Food Chain Model with Diffusion.*  
**SIAM Journal of Applied Mathematics**, 67 (2007), no. 5, 1479–1503.  
<http://dx.doi.org/10.1137/05064624X>
126. Yihong Du and Junping Shi,  
*Allee Effect and Bistability in a Spatial Heterogeneous Predator-Prey Model.*  
**Transactions of American Mathematical Society**, 359 (2007), no. 9, 4557–4593.  
<http://dx.doi.org/10.1090/S0002-9947-07-04262-6>
127. Renhao Cui\*\*, Yuwen Wang and Junping Shi,  
*Uniqueness of positive solution for a class of semilinear elliptic systems.*

- Nonlinear Analysis: Theory, Methods & Applications**, 67 (2007), no. 6, 1710–1714.  
<http://dx.doi.org/10.1016/j.na.2006.08.010>
128. Yuhua Zhao\*\*, Yuwen Wang and Junping Shi, *Exact multiplicity of solutions and S-shaped bifurcation curve for a class of semilinear elliptic equations*. **Journal of Mathematical Analysis and Applications**, 331 (2007), no. 1, 263–278.  
<http://dx.doi.org/10.1016/j.jmaa.2006.08.081>
129. Junping Shi and Xuefeng Wang,  
*Hair-Triggered Instability of Radial Steady States, Spread and Extinction in Semilinear Heat Equations*, **Journal of Differential Equations**, 231 (2006), no. 1, 235–251.  
<http://dx.doi.org/10.1016/j.jde.2006.06.008>
130. E. Norman Dancer and Junping Shi,  
*Uniqueness of positive solution to sublinear semipositone problem*.  
**Bulletins of London Mathematical Society**, 38 (2006), no. 6, 1033–1044.  
<http://dx.doi.org/10.1112/S0024609306018984>
131. Yihong Du and Junping Shi,  
*Spatially Heterogeneous Predator-Prey Model with Protect Zone for Prey*.  
**Journal of Differential Equations**, 229 (2006), no. 1, 63–91. (No. 11 in Top 25 Hottest Articles of *Journal of Differential Equations*, for the period of Jul.–Sep, 2006)  
<http://dx.doi.org/10.1016/j.jde.2006.01.013>
132. Yihong Du and Junping Shi,  
*Spatially Heterogeneous Predator-Prey Model (A survey paper)*. **Nonlinear Dynamics and Evolution Equations**, Edited by Hermann Brunner, Xiaoqiang Zhao, and Xingfu Zou, Fields Institute Communications, 48, 95–135, American Mathematical Society, 2006.  
<http://www.resnet.wm.edu/~jxshix/du-shi-proof.pdf>
133. Junping Shi and Ratnasingham Shivaji,  
*Diffusive population models with Allee effects*.  
**Journal of Mathematical Biology**, 52 (2006), no. 6, 807–829.  
<http://dx.doi.org/10.1007/s00285-006-0373-7>
134. Young Hee Lee\*\*\*, Lena Sherbakov\*\*\*, Jacquelyn G. Taber\*\*\* and Junping Shi,  
*Bifurcation Diagrams of Population Models with Nonlinear Diffusion*.  
**Journal of Computational & Applied Mathematics**, 194 (2006), no. 2, 357–367.  
<http://dx.doi.org/10.1016/j.cam.2005.08.004>
135. Junping Shi,  
*A new proof of anti-maximum principle via a bifurcation approach*.  
**Resultate der Mathematik**, 48 (2005), no. 1-2, 162–167.
136. Philip Korman and Junping Shi,  
*On Lane-Emden type systems*. **Discrete and Continuous Dynamical Systems A**, Proceedings of 5th AIMS International Conference on Dynamic Systems and Differential Equations, 510–517, (2005).
137. Junping Shi and Ratnasingham Shivaji,  
*Semilinear elliptic equations with generalized cubic nonlinearities*.  
**Discrete and Continuous Dynamical Systems A**, Proceedings of 5th AIMS International Conference on Dynamic Systems and Differential Equations, 798–805, (2005).
138. Junping Shi and Miaoxin Yao,  
*Positive Solutions of Elliptic Equations with Singular Nonlinearity*.  
**Electronic Journal of Differential Equations**. 2005, No. 4, 1–11, (2005).  
<http://ejde.math.txstate.edu/Volumes/2005/04/abstr.html>
139. Junping Shi,  
*A radially symmetric anti-maximum principle and applications to fishery management models*.  
**Electronic Journal of Differential Equations**. 2004, No. 27, 1–13, (2004).  
<http://ejde.math.txstate.edu/Volumes/2004/27/abstr.html>

140. Shohba Oruganti, Junping Shi and Ratnasingham Shivaaji,  
*Logistic equation with the  $p$ -Laplacian and constant yield harvesting.*  
**Abstract and Applied Analysis**, 2004, No. 9, 723–727, (2004).  
<http://dx.doi.org/10.1155/S1085337504311097>
141. Junping Shi and Ratnasingham Shivaaji,  
*Global bifurcation of concave semipositon problems.*  
**Advances in Evolution Equations: Proceedings in honor of J.A.Goldstein's 60th birthday**, Edited by G.R. Goldstein, R. Nagel, and S. Romanelli, Marcel Dekker, Inc., New York, Basel, 385–398, 2003.
142. Junping Shi,  
*Exact multiplicity of positive solutions to superlinear problem.*  
**Electronic Journal of Differential Equations**. 2002, Conf 10, 257-265, (2002).  
<http://ejde.math.txstate.edu/conf-proc/10/s1/abstr.html>
143. Peter W. Bates and Junping Shi,  
*Existence and instability of spike layer solutions to singular perturbation problems.*  
**Journal of Functional Analysis**, 196, No. 2, 429–482, (2002).  
[http://dx.doi.org/10.1016/S0022-1236\(02\)00013-7](http://dx.doi.org/10.1016/S0022-1236(02)00013-7)
144. Junping Shi,  
*Global bifurcation of semilinear Neumann boundary problem.*  
**Transactions of American Mathematical Society**, 354, No. 8, 3117–3154, (2002).  
<http://dx.doi.org/10.1090/S0002-9947-02-03007-6>
145. Shohba Oruganti\*, Junping Shi and Ratnasingham Shivaaji,  
*Diffusive Logistic equation with constant effort harvesting, I: steady states.*  
**Transactions of American Mathematical Society**, 354, No. 9, 3601–3619, (2002).  
<http://dx.doi.org/10.1090/S0002-9947-02-03005-2>
146. Junping Shi,  
*Saddle solutions of the balanced bistable diffusion equation.*  
**Communication of Pure and Applied Mathematics**, 55, No. 7, 815–830, (2002).  
<http://dx.doi.org/10.1002/cpa.3027>
147. Junping Shi,  
*Exact multiplicity of solutions to superlinear and sublinear problems.*  
**Nonlinear Analysis: Theory, Methods & Applications**, 50, No. 5, 665–687, (2002).  
[http://dx.doi.org/10.1016/S0362-546X\(01\)00775-1](http://dx.doi.org/10.1016/S0362-546X(01)00775-1)
148. Philip Korman and Junping Shi,  
*New exact multiplicity results with an application to a population model.*  
**Proceedings of Royal Society of Edinburgh A**, 131, No. 5, 1167–1182, (2001).  
<http://dx.doi.org/10.1017/S0308210500001323>
149. Junping Shi and Ratnasingham Shivaaji,  
*Exact Multiplicity of solutions for classes of problems with concave-convex nonlinearity.*  
**Discrete and Continuous Dynamical Systems A**, 7, No. 3, 559–571, (2001).  
<http://dx.doi.org/10.3934/dcds.2001.7.559>
150. Philip Korman and Junping Shi,  
*Instability and exact multiplicity of solutions of semilinear equations.*  
**Electronic Journal of Differential Equations**, Con-05, 311–322, (2000).  
<http://ejde.math.txstate.edu/conf-proc/05/k3/abstr.html>
151. Junping Shi,  
*Blow-up points of solution curves for a semilinear problem.*  
**Topological Methods in Nonlinear Analysis**, 15, No. 2, 251-266, (2000).
152. Junping Shi,  
*Persistence and bifurcation of degenerate solutions.*  
**Journal of Functional Analysis**, 169, No. 2, 494–531, (1999).  
<http://dx.doi.org/10.1006/jfan.1999.3483>

153. Junping Shi\* and Junping Wang\*,  
*Morse indices and exact multiplicity of solutions to semilinear elliptic problems.*  
**Proceedings of American Mathematics Society**, 127, No. 12, 3685–3695, (1999).  
<http://dx.doi.org/10.1090/S0002-9939-99-05542-2>
154. Tiancheng Ouyang and Junping Shi\*,  
*Exact multiplicity of positive solutions for a class of semilinear problems:II.*  
**Journal of Differential Equations**, 158, No. 1, 94–151, (1999).  
<http://dx.doi.org/10.1006/jdeq.1999.3966>
155. Peter W. Bates, Edward Norman Dancer and Junping Shi\*,  
*Multi-spike stationary solution of Cahn- Hilliard equation and instability.*  
**Advances in Differential Equations**, 4, No. 1, 1–69, (1999).
156. Junping Shi\* and Miaoxin Yao,  
*On a singular nonlinear semilinear elliptic problem.*  
**Proceedings of Royal Society of Edinburgh A**, 128, No. 6, 1389–1401, (1998).
157. Tiancheng Ouyang and Junping Shi\*,  
*Exact multiplicity of positive solutions for a class of semilinear problems.*  
**Journal of Differential Equations**, 146, No. 1, 121–156, (1998).  
<http://dx.doi.org/10.1006/jdeq.1998.3414>
158. Tiancheng Ouyang and Junping Shi\*,  
*A bifurcation approach to the exact multiplicity of semilinear elliptic equations.*  
**Discrete and Continuous Dynamical Systems**, Proceedings of International Conference on Dynamic Systems and Differential Equations, 2, 162–173, (1998).

BOOK OR BOOK  
CHAPTERS  
(NON-REFEREED)

1. Junping Shi,  
*Solution set of semilinear elliptic equations: Global Bifurcation and Exact Multiplicity.* Series on Partial Differential Equations and Applications, World Scientific Publication Company, Singapore, to be published in 202X. approximately 300 pages.  
ISBN 978-981-277-594-8, 981-277-594-3.  
<http://www.worldscibooks.com/mathematics/6640.html>
2. Junping Shi,  
*Asymptotic Spatial Patterns and Entire Solutions of Semilinear Elliptic Equations.*  
**Proceedings of the Ryukoku Workshop 2003: New perspectives of nonlinear partial differential equations**, Edited by Y. Morita, H. Ninomiya, E. Yanagida and S. Yotsutani, Joint research center for sciences and technology of Ryukoku University, 27–35, 2004.
3. Junping Shi,  
*Multi-Parameter Bifurcation and Applications.*  
**ICM 2002 Satellite Conference on Nonlinear Functional Analysis: Topological Methods, Variational Methods and Their Applications**, Edited by H. Brezis, K.C. Chang, S.J. Li and P. Rabinowitz, World Scientific, Singapore, 211–222, 2003.
4. Tiancheng Ouyang and Junping Shi\*,  
*Exact multiplicity of solutions and global bifurcation of  $\Delta u + \lambda f(u) = 0$ .* **Proceedings of the US-Chinese Conference: Differential Equations and Applications**, Edited by P.W. Bates, S-N. Chow, K. Lu and X. Pan, World Scientific, Singapore, 356–363, 1998.

Invited  
Conference Talks

1. Special Session on Future Directions in Theory & Applications of Nonlinear Reaction-Diffusion Equations, 2020 Joint Mathematics Meetings, Denver, CO, January 15-18, 2020. (30 min invited talk)
2. Special Session on Differential and Difference Equations in Biological Dynamics, 2020 Joint Mathematics Meetings, Denver, CO, January 15-18, 2020. (30 min invited talk)
3. Session on Modeling Population Dynamics: Applications and Recent Developments, CMS Winter Meeting, Toronto, Canada, December 6-9, 2019. (30 min invited talk)

4. Special Session on Mathematical Modeling in Developmental Biology, AMS Fall Western Sectional Meeting, University of California at Riverside, Riverside, CA, November 9-10, 2019. (30 min invited talk)
5. Minisymposium on Spectral theory and PDEs on metric graphs, Equadiff 2019, Leiden University, Netherland, July 8-12, 2019. (30 min invited talk)
6. International Conference on Dynamical Systems and Applications, Lanzhou University, Lanzhou, China, June 20-23, 2019. (40 min invited talk)
7. International Workshop on Nonlinear Analysis and Reaction-Diffusion Equations, Harbin Normal University, Harbin, China, June 15-17, 2019. (40 min invited talk)
8. Thirteenth International Conference on Recent Advances in Applied Dynamical Systems, Hangzhou Normal University, Hangzhou, China, June 8-10, 2019. (30 min invited talk)
9. The 6th International Workshop on Biomathematics Modeling and Its Dynamical Analysis, Huaiyin Normal University, Huai-An, China, May 30-June 2, 2019. (45 min invited talk)
10. Minisymposium on Nonlocal Dynamical Systems and Applications, SIAM Dynamical Systems Conference, Snowbird, Utah, May 19-23, 2019. (20 min invited talk)
11. Workshop on emerging areas in reaction-diffusion systems, Center for Partial Differential Equations of East China Normal University (ECNU), Shanghai, China, April 22-26, 2019. (50 min plenary talk) <http://cpde.ecnu.edu.cn/WERDS/>
12. Special Session on Differential Equations in Mathematical Biology, AMS Spring Southeastern Sectional Meeting, Auburn University, Auburn, March 15-17, 2019. (30 min invited talk)
13. Special Session on Nonlinear Reaction-Diffusion Equations and Their Applications, AMS Spring Southeastern Sectional Meeting, Auburn University, Auburn, March 15-17, 2019. (30 min invited talk)
14. Special Session on Recent Advances in Biological Modeling and Related Dynamical Analysis, 2019 Joint Mathematics Meetings, Baltimore, MD, January 16-19, 2019. (30 min invited talk)
15. Fall Eastern Sectional Meeting, University of Delaware, Newark, DE, Sept 29-30, 2018. (30 min invited talk)
16. Special Session on Analysis of Mathematical Modeling Arising from Population Biology, The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan, July 5-9, 2018. (30 min invited talk)
17. Twelfth International Conference on Recent Advances in Applied Dynamical Systems, Chongqing, China, June 8-10, 2018. (30 min invited talk)
18. The international workshop on nonlinear partial differential equations and the applications in geometry and biology, Shaanxi Normal University, Xi'an, China, June 1-4, 2018. (45 min invited talk)
19. 2018 NCTS Workshop on Mathematical Biology, National Tsing Hua University, Hsinchu, Taiwan, May 28-June 1, 2018. (45 min invited talk)
20. International Conference on Variational Methods (ICVAM-4), Chern Institute of Mathematics, Nankai University, Tianjin, China, May 14-19, 2018. (45 min invited talk)
21. Frontier of Mathematical Biology: Modeling, Computation and Analysis, University of Central Florida, Orlando, FL, May 2-4, 2018. (30 min invited talk)
22. Special Session on Nonlinear Reaction-Diffusion Equations and Their Applications, AMS Spring Eastern Sectional Meeting, Northeastern University, Boston, MA, April 21-22, 2018. (30 min invited talk)
23. Special Session on Recent Advances in Mathematical Biology, AMS Spring Southeastern Sectional Meeting, Vanderbilt University, Nashville, TN, April 14-15, 2018. (30 min invited talk)
24. Mini-symposium on PDE models in population biology, SIAM-SEAS 2018, UNC Chapel Hill, North Carolina, March 9-11, 2018. (30 min invited talk)

25. Special Session on Mathematical modeling, analysis and applications in population biology, 2018 Joint Mathematics Meetings, San Diego, CA, January 10-13, 2018. (30 min invited talk)
26. Special Session on Dynamical systems with applications to mathematical biology, 2018 Joint Mathematics Meetings, San Diego, CA, January 10-13, 2018. (30 min invited talk)
27. ICMA VI: Sixth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, University of Arizona, Tucson, AZ, October 20-22, 2017. (30 min invited talk)
28. Special Session on Nonlinear Partial Differential Equations Arising from Life Science, Fall Eastern Sectional Meeting, State University of New York at Buffalo, Buffalo, NY, September 16-17, 2017. (30 min invited talk)
29. Mini-symposium on Patterns and dynamics in nonlinear partial differential equation, Equadiff 2017, Bratislava, Slovakia, July 24-28, 2017. (30 min invited talk)
30. Mini-symposium on Cross-diffusive systems, Equadiff 2017, Bratislava, Slovakia, July 24-28, 2017. (30 min invited talk)
31. International Conference on Topological Nonlinear Analysis, Guangzhou University, Guangzhou, China, June 12-15, 2017. (40 min invited talk)
32. The Eleventh International Conference on Recent Advances in Applied Dynamical Systems, Xi'an Jiaotong University, Xi'an, China, June 9-12, 2017. (40 min invited talk)
33. International conference on infinite dimensional dynamical systems, Sichuan University, Chengdu, China, May 29-June 2, 2017. (50 min invited talk)
34. International Conference in Nonlinear Analysis, Yunnan Normal University, Kunming, China, May 25-27, 2017. (40 min invited talk)
35. Workshop on generalized inverse and space structure and applications, Harbin Normal University, Harbin, China, May 12-14, 2017. (40 min invited talk)
36. Special Session on Differential Equations and Their Applications to Biology, AMS Spring Central Sectional Meeting at Indiana University, Bloomington, IN, April 1-2, 2017. (30 min invited talk)
37. Special Session on Recent Advances in Mathematical Biology, 2017 Joint Mathematics Meetings, Atlanta, GA, January 4-7, 2017. (30 min invited talk)
38. Workshop on Mathematical Analysis, Tokyo Institute of Technology, Tokyo, Japan, December 13, 2016. (50 minute plenary talk)
39. Special Session on Nonlinear Boundary Value Problems, AMS Fall Southeastern Sectional Meeting at North Carolina State University, Raleigh, NC, November 12-13, 2016. (30 min invited talk)
40. Summer short course in Harbin Institute of Technology, July 21-26, 2016. (16 hour short course)
41. Special session on Dissipative Systems and Applications, The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, Florida, USA, July 1-4, 2016. (30 min invited talk)
42. Special session on Recent advances in dynamical systems with applications to ecology and epidemiology, The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, Florida, USA, July 1-4, 2016. (30 min invited talk)
43. Tenth International Conference on Recent Advances in Applied Dynamical Systems, Jiangsu Normal University, Xuzhou, China, June 10-12, 2016. (40 minute invited talk)
44. International Conference on Reaction-Diffusion Equations and their Applications to the Life, Social and Physical Sciences, Institute of Mathematical Sciences (IMS) at the Renmin University of China, Beijing, China, May 26-29, 2016. (50 minute plenary talk) <http://ims.ruc.edu.cn/201605/index.php?cid=80>
45. Workshop in Application of Mathematics in Economics and Finance, Harbin Normal University, Harbin, China, January 13-14, 2016. (50 minute invited talk)

46. Special Session on Random and Complex Dynamics of Reaction-Diffusion Systems, 2016 Joint Mathematics Meetings, Seattle, WA, January 6-9, 2016. (30 min invited talk)
47. Special Session on Recent advances in dynamical systems and mathematical biology, 2016 Joint Mathematics Meetings, Seattle, WA, January 6-9, 2016. (30 min invited talk)
48. Workshop on Shapes and other properties of solutions of PDEs, Research Institute for Mathematical Sciences (RIMS), Kyoto University, Kyoto, Japan, November 11-13, 2015. (50 min invited talk)
49. The 5th International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, University of Western Ontario, London, Ontario, Canada, October 2-4, 2015. (30 min invited talk)
50. Workshop on nonlinear and global analysis, Harbin Normal University, Harbin, China, August 19-20, 2015. (30 min invited talk)
51. The Second International Workshop on Biomathematics Modelling and Its Dynamical Analysis, Heilongjiang University, Harbin, China, August 16-17, 2015. (30 min invited talk)
52. Mini-symposium on Recent Developments in the Modeling, Simulation and Analysis of Mathematical Models Arising from Biology, 8th International Congress on Industrial and Applied Mathematics (ICIAM), Beijing, China, August 11-14, 2015. (30 min invited talk)
53. Workshop on Mathematical Modeling in Life Sciences, Harbin Normal University, Harbin, China, August 1-2, 2015. (50 min invited talk)
54. Differential Equations and Applications to Biological Models, Tongji University, Shanghai, China, May 25-27, 2015. (Two 50 min invited talks)
55. Special Session on Advances in the Theory and Applications of Dynamical Systems, AMS Spring Southeastern Sectional Meeting, University of Alabama in Huntsville, Huntsville, AL, March 27-29, 2015. (30 min invited talk)
56. Special Session on Spatial Evolutionary Models and Biological Invasions, AMS Spring Eastern Sectional Meeting, Georgetown University, Washington, DC, March 7-8, 2015. (30 min invited talk)
57. Special Session on Theory and Application of Reaction Diffusion Models, 2015 Joint Mathematics Meetings, San Antonio, TX, January 10-13, 2015. (30 min invited talk)
58. Special Session on Applications of Dynamical Systems to Biological Model, 2015 Joint Mathematics Meetings, San Antonio, TX, January 10-13, 2015. (30 min invited talk)
59. Workshop on Mathematical Biology and Nonlinear Analysis, and celebration for Steve Cantrell, University of Miami, Miami, FL, December 19-21, 2014. (30 min invited talk)
60. AMS Fall Southeastern Section Meeting, University of North Carolina at Greensboro, Greensboro, NC, November 8-9, 2014. (30 min invited talk)
61. 10th Mississippi State Conference on Differential Equations and Computational Simulations, Mississippi State University, Starkville, MS, October 23-25, 2014. (50 min plenary talk) <https://www.ccs.msstate.edu/deconf/de2014/index.php>
62. 13th National Conference in Functional Differential Equations, Qinghai Minority University, Xining, China, July 29-31, 2014. (40 min invited talk)
63. Workshop in Functional Differential Equations, Harbin Institute of Technology at Weihai, Weihai, China, July 23-27, 2014. (50 min invited talk)
64. 18th China National Conference on Nonlinear Functional Analysis, Harbin, China, July 14-16, 2014. (50 min plenary talk) <http://www.smartchair.cn/hp/Math8806>
65. Special session on Qualitative Analysis of Reaction Diffusion Systems, 10th AIMS International Conference on Dynamical Systems, Differential Equations, and Applications, Madrid, Spain, July 7-11, 2014. (30 min invited talk)
66. Special session on Nonlinear Elliptic and Parabolic Problems, 10th AIMS International Conference on Dynamical Systems, Differential Equations, and Applications, Madrid, Spain, July 7-11, 2014. (30 min invited talk)

67. Eighth International Conference on Recent Advances in Applied Dynamical Systems, Guilin University of Electronic Technology, Guilin, China, June 2-4, 2014. (40 min invited talk)
68. NCTS International Conference of Nonlinear Dynamics with Application to Biology, NCTS, National Tsing Hua University, Hsinchu, Taiwan, May 28-30, 2014. (40 min invited talk)
69. 2014 International Symposium on Mathematical Biology, Guangzhou, China, May 24-28, 2014. (50 min invited talk)
70. Minisymposium on Recent Advances in Mathematical Biology, 38th Annual SIAM Southeastern Atlantic Section Conference, Florida Institute of Technology, Melbourne, Florida, March 28-30, 2014. (30 min invited talk)
71. Special session on Reaction Diffusion Equations and Applications, 2014 Joint Mathematics Meetings, Baltimore, MD, January 15-18, 2014. (30 min invited talk)
72. International Workshop on New Mathematical Developments Arising from Ecology, Epidemiology and Environmental Science, Beijing International Center for Mathematical Research, Peking University, Beijing, China, October 17-20, 2013. (45 min invited talk)
73. Special session on Recent Advances in Mathematical Epidemiology and Ecology, The Fourth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems (ICMA IV), Texas Tech University, Lubbock, TX, October 4-6, 2013. (30 min invited talk)
74. The Seventh International Conference on Recent Advances in Applied Dynamical Systems, Linyi, China, June 8-10, 2013. (40 min invited talk)
75. Special session on pattern Formation in Biology, Fourth Conference on Computational and Mathematical Population Dynamics (CMPD4), Taiyuan, China, May 29–June 2, 2013. (30 min invited talk)
76. Special session on Understanding Planet Earth via Reaction Diffusion Equations, 2013 Joint Mathematics Meetings, San Diego, CA, January 9–12, 2013. (30 min invited talk)
77. Special session on Recent progress in nonlinear analysis and PDE's arising from dispersal models, Everything Disperses to Miami: The Role of Movement and Dispersal in Ecology, Epidemiology and Environmental Science, University of Miami, Miami, FL, December 14–16, 2012. (30 min invited talk)
78. International Conference in Nonlinear Analysis, Xuzhou Normal University, Xuzhou, China, October 9–13, 2012. (30 min invited talk)
79. Special Session on Nonlinear Elliptic and Parabolic Problems in Mathematical Sciences, 9th AIMS International Conference on Dynamical Systems, Differential Equations, and Applications, Orlando, FL, July 1–5, 2012. (30 min invited talk)
80. Special Session on Reaction Diffusion Equations and Applications, 9th AIMS International Conference on Dynamical Systems, Differential Equations, and Applications, Orlando, FL, July 1–5, 2012. (30 min invited talk)
81. The Sixth International Conference on Recent Advances in Applied Dynamical Systems, Guangzhou University, Guangzhou, China, June 25-27, 2012. (40 min invited talk)
82. Workshop on PDE Problems in Mathematical Biology and Physics, Hong Kong Polytechnic University, HongKong, China, June 22-23, 2012. (1 hour invited talk)
83. Minisymposium on Modeling Complex Biological Systems: Theoretical and Computational Studies, 36th Annual SIAM Southeastern Atlantic Section Conference, University of Alabama, Huntsville, AL, March 24-25, 2012. (30 min invited talk)
84. Special Session on Recent Advances in Mathematical Biology, Ecology, and Epidemiology, 2012 Joint Mathematics Meetings, Boston, MA, January 4–7, 2012. (30 min invited talk)
85. Special Session on Nonlinear Boundary Value Problems, 2011 AMS Fall Southeastern Sectional Meeting, Wake Forest University, Winston-Salem, North Carolina, USA, September 24–25, 2011. (30 min invited talk)



86. 8th East China Partial Differential Equations Conference, Xi'an, China, July 11–14, 2011. (45 min invited talk)
87. Special Session on Nonlinear PDEs and Variational Methods, 2011 AMS Spring Western Section Meeting, Las Vegas, Nevada, USA, April 30–May 1, 2011. (30 min invited talk)
88. Minisymposium on Simulation and analysis in biological systems, 35th SIAM Southeastern Atlantic Section Conference, Charlotte, North Carolina, USA, March 26–27, 2011. (20 min invited talk)
89. Special session on Structured Models in Ecology, Evolution, and Epidemiology: Periodicity, Extinction, and Chaos, 2011 Joint Mathematics Meeting, New Orleans, Louisiana, USA, Jan 6–9, 2011. (30 min invited talk)
90. Special session on Analysis of Reaction-Diffusion Models, 2011 Joint Mathematics Meeting, New Orleans, Louisiana, USA, Jan 6–9, 2011. (30 min invited talk)
91. A PDE Day in NCTS, NCTS, National Tsing Hua University, Hsinchu, Taiwan, Dec 20, 2010. (2 one-hour invited talks)
92. NCTS Workshop on PDE Models of Biological Process, NCTS, National Tsing Hua University, Hsinchu, Taiwan, Dec 13–17, 2010. (30 min invited talk)
93. 2010 Mathematical Conference and Annual Meeting of the Taiwan Mathematical Society, Changhua Normal University, Changhua, Taiwan, Dec 11–12, 2010. (45 min invited talk)
94. Special session on Differential Equations and Applications to Physics and Biology, AMS Southeastern Section Meeting, Richmond, Virginia, USA, Nov 6–7, 2010. (20 min invited talk)
95. International conference on Functional Analysis and Applications, Harbin Institute of Technology, Harbin, China, July 25–28, 2010. (1-hour invited talk)
96. 7th East China Partial Differential Equations Conference, Central China Normal University, Wuhan, China, July 6–9, 2010. (45 min invited talk)
97. Fourth International Conference on Recent Advances in Applied Dynamical Systems, Jinhua, China, June 16–20, 2010. (30 min invited talk)
98. International Conference on Variational and Topological Methods in Nonlinear Analysis, Beijing, China, May 20–22, 2010. (45 min invited talk)
99. International Workshop on Reaction-Diffusion Models and Mathematical Biology, Harbin, China, June 24–27, 2009. (45 min invited talk)
100. International Conference on Nonlinear and Stochastic Dynamics, Sichuan university, Chengdu, China, June 1–5, 2009. (45 min invited talk)
101. Interdisciplinary Conference on Applied Analysis and Mathematics, NCTS, Tsing Hua University, Hsinchu, Taiwan, May 13, 2009. (30 min invited talk)
102. AMS southeastern sectional meeting, Special Session on Dynamics and Applications of Differential Equations, Huntsville, AL, October 26, 2008. (30 min invited talk)
103. *Lectures on bifurcation in reaction-diffusion models from biology.* Mathematical Applications in Ecology and Evolution Workshop, Center for Computational Sciences, Mississippi State University, August 4–6, 2008. (three 1-hour invited lectures, one of two main speakers)  
<http://www.ccs.msstate.edu/conferences/Bio-Conference-Collage.jpg>
104. International Conference on Nonlinear Partial Differential Equations and Geometric Analysis, Harbin, China, June 30–July 4, 2008. (45 min invited talk)
105. 7th AIMS International Conference on Dynamical Systems and Differential Equations, Special session on Differential Equations of Mixed Type Arising in Engineering, Biology and Ecology, Arlington, Texas, May 18–21, 2008 (30 min invited talk)
106. 7th AIMS International Conference on Dynamical Systems and Differential Equations, Special session on Nonlinear Evolution Equations and Related Topics, Arlington, Texas, May 18–21, 2008 (30 min invited talk)

107. 7th AIMS International Conference on Dynamical Systems and Differential Equations, Special session on Pattern Formation in Biology and Ecology: from Interfaces to Meta-solutions, Arlington, Texas, May 18-21, 2008 (30 min invited talk)
108. AMS southeastern sectional meeting, Special Session on Mathematical Modeling in Biology, Baton Rouge, LA, March 29, 2008. (30 min invited talk)
109. Workshop on Variational Methods, Capital Normal University, Beijing, China, December 28-29, 2007. (45 min invited talk)
110. PDE Day in Taida Institute of Mathematical Sciences, National Taiwan University, Taipei, Taiwan, November 28, 2007 (1-hour invited talk)
111. International Workshop on Banach Space, Operator Theory and Applications in Nonlinear Analysis, Harbin Normal University, Harbin, Heilongjiang, China, July 25-27, 2007 (50 min invited talk)
112. The Second International Conference on Recent Advance in Applied Dynamical Systems, Zhejiang Normal University, Jinhua, Zhejiang, China, June 4-8, 2007 (40 min invited talk)
113. The Fourth International Conference on Mathematical Biology, Wuyi Mountain, Fujian, China, May 29-June 1, 2007 (30 min invited talk)
114. AMS eastern sectional meeting, Special Session on Nonlinear Elliptic and Parabolic Equations, Storrs, CT, October 29, 2006. (30 min invited talk)
115. AMS western sectional meeting, Special Session on Nonlinear Differential Equations: Methods & Applications, Salt Lake City, UT, October 7, 2006. (30 min invited talk)
116. Workshop on Analysis and PDE, Harbin Normal University, July 22, 2006. (Two 1-hour invited talk)
117. Recent Developments In Differential Equations and Applications, Guangzhou University, Guangzhou, China, July 17-21, 2006. (45 min invited talk)
118. 6th AIMS International Conference on Dynamical Systems and Differential Equations, Special session on Modeling and Analysis of Predators-Preys Systems: Stability, Bifurcation, Chaos and Complexity, Poitiers, France, June 25-28, 2006 (30 min invited talk)
119. 6th AIMS Internatinal Conference on Dynamical Systems and Differential Equations, Special session on Nonlinear Parabolic and Elliptic PDEs and Applications, Poitiers, France, June 25-28, 2006 (30 min invited talk)
120. International Conference on Nonlinear and Stochastic Dynamics, Sichuan University, Chengdu, China, June 5-9, 2006 (45 min invited talk)
121. International Conference on Dynamical Systems: Bifurcation, Application and Computation, Shanghai Normal University, Shanghai, China, June 2-5, 2006 (45 min invited talk)
122. International Conference on Nonlinear Partial Differential Equations, Qufu Normal University, Rizhao, Shandong, China, July 11-16, 2005. (45 min invited talk)
123. HuaZhong International Conference on Nonlinear Partial Differential Equations, Zhangjiajie, Hunan, China, July 9-12, 2005. (45 min invited talk)
124. First International Conference on Recent Advances in Bifurcation Theory and Applications of Dynamical System, Zhejiang Normal University, Jinhua, Zhejiang, China, June 8-12, 2005. (45 min invited talk)
125. International Conference of Nonlinear Evolution Equations and Infinite Dimensional Dynamical Systems, Nanjing Normal University, Nanjing, Jiangsu, China, June 2-6, 2005. (45 min invited talk)
126. Workshop on Mathematical and Numerical Analysis on Nonlinear Phenomena, Tokyo Metropolitan University, Tokyo, Japan, February 7, 2005. (Two 1-hour invited talks, only invited foreign speaker)

127. Workshop on Spatial Ecology: The Interplay between Theory and Data, Institute of Theoretical and Mathematical Ecology (ITME), University of Miami, Coral Gables, FL, January 7-10th, 2005. (one hour plenary talk)  
<http://www.math.miami.edu/anno/spatial/participants.htm>
128. AMS-SIAM Special Session on Reaction Diffusion Equations and Applications, Joint Mathematics Meetings, Atlanta, GA, January 5-8th, 2005. (30 min invited talk)
129. International Conference On Nonlinear Dynamics And Evolution Equations, Memorial University of Newfoundland , St. John's, Newfoundland and Labrador, Canada, July 6-10th, 2004. (30 min invited talk)
130. Special session on Recent Developments on Nonlinear Elliptic Equations and Variational Problems, AIMS' Fifth International Conference on Dynamical Systems and Differential Equations California State Polytechnic University, Pomona, CA, June 16-19th, 2004. (30 min invited talk)
131. Special session on PDE with Application in Biology, AIMS' Fifth International Conference on Dynamical Systems and Differential Equations California State Polytechnic University, Pomona, CA, June 16-19th, 2004. (30 min invited talk)
132. Workshop on Nonlinear Analysis - Hamiltonian Systems and Celestial Mechanics, Nankai Institute of Mathematics, Nankai University, Tianjin, China, June 9-13th, 2004. (1-hour invited talk)
133. International Workshop of bifurcation theory and applications, Shanghai Jiaotong University, Shanghai, China, May 23-26th, 2004. (30 min invited talk)
134. Workshop on Defects and their Dynamics, Banff International Research Station, Banff, Canada, August 9-16th, 2003. (1-hour invited talk)
135. Program on Nonlinear Functional Analysis and PDE, Morningside Center, Institute of Mathematics, Chinese Academy of Sciences, Beijing, China, July 4th, 2003. (Two 1-hour invited talks)
136. Workshop: New Perspective of Nonlinear Partial Differential Equations, Ryukoku University, Otsu, Shiga, Japan, June 23-25th, 2003. (one hour plenary talk), One of two invited foreign speakers.
137. Special Session on Nonlinear Elliptic Partial Differential Equations, AMS Sectional Meeting, Salt Lake City, UT, October 26th, 2002. (30 min invited talk)
138. International conference of Nonlinear Functional Analysis, (satellite conference of ICM 2002) Shanxi University, Taiyuan, Shanxi, China, August 14-18th, 2002. (45 min invited talk)
139. Dynamical Systems and Differential Equations Conference, University of North Carolina at Wilmington, NC, May 24-27th, 2002. (30 min invited talk)
140. Special session of Nonlinear Elliptic Equations, AMS Annual joint meeting, San Diego, CA, January 5-10th, 2002. (30 min invited talk)
141. Workshops in Nonlinear PDE, PIMS, University of British Columbia, Vancouver, British Columbia, Canada, July 11-27th, 2001. (30 min invited talk)
142. International Conference in Differential Equations and Dynamical Systems, Lahsa, Tibet, China, July 2-7th, 2001. (45 min invited talk)
143. Special Session of Singular and Degenerate Nonlinear Elliptic Boundary Value Problems, AMS Sectional Meeting, Hoboken, NJ, April 28th, 2001. (30 min invited talk)
144. Special Session of Analysis and Applications of Nonlinear PDEs, AMS Sectional Meeting, Las Vegas, NV, April 22nd, 2001. (30 min invited talk)
145. Special session of PDE Models in Population Biology and Epidemiology, AMS Joint meeting, New Orleans, LA, January 11th, 2001. (30 min invited talk)
146. Minisymposium on Transitions and Reaction Diffusion Equations, SIAM Pacific Rim Dynamical Systems Conference, Maui, HI, August 11th, 2000. (30 min invited talk)

147. Minisymposium on Spike Layer in Reaction-Diffusion Systems, SIAM Pacific Rim Dynamical Systems Conference, Maui, HI, August 11th, 2000. (30 min invited talk)
148. Special session of Nonlinear Differential Equations and Their Applications, AMS sectional meeting, University of Louisiana, Lafayette, LA, April, 2000. (30 min invited talk)
149. Special session of Nonlinear Eigenvalue Problems and Applications, AMS Joint meeting, Washington, DC, January, 2000. (30 min invited talk)
150. Special session of Nonlinear PDE, AMS sectional meeting, Las Vegas, NV, April, 1999. (30 min invited talk)
151. Conference honoring Professor Alan Lazer, University of Miami, Coral Gables, FL, January, 1999. (30 min invited talk)
152. Special session of Nonlinear Elliptic and Parabolic Equations, International Conference of Differential Equations and Dynamical Systems, Southwest Missouri State University, Springfield, MO, July 1996. (30 min invited talk)
153. Utah Nonlinear Analysis Conference, Brigham Young University, Provo, UT, January 1996. (45 min invited talk)

**Invited  
Colloquium Talks**

1. Zhengzhou University, Zhengzhou, China, June 20, 2019.
2. Lanzhou Jiaotong University, June 22, 2019.
3. Harbin Normal University, Harbin, China, June 12-14, 2019 (8-hour lecture series)
4. Guangzhou University, Guangzhou, China, June 6, 2019.
5. Dalian University of Technology, Dalian, China, May 30, 2019.
6. University of Cincinnati, Cincinnati, OH, February 28, 2019.
7. University of Seville, Seville, Spain, lecture series (8 hours), October 15-19, 2018.
8. Xidian University, Xi'an, China, June 4, 2018.
9. University of California at Riverside, Riverside, CA, October 18, 2017.
10. California State University, Northridge, CA, October 17, 2017.
11. South China University of Technology, Guangzhou, China, June 15, 2017; June 5, 2019.
12. Southern China Normal University, Guangzhou, June 15, 2017.
13. Shannxi Normal University, Xi'an, China June 11, 2017.
14. Renmin University of China, May 21, May 22, 2017. (2 talks)
15. University of Alberta, Edmonton, Canada, October 3, 2016.
16. Heilongjiang University, Harbin, China, July 24, 2016; May 15, 2017; May 21, 2018; June 11, 2019.
17. Central China Normal University, Wuhan, China, May 22, 2016.
18. Jiangsu University, Zhenjiang, China, June 3, 2016.
19. Southeast University, Nanjing, China, June 4, 2016.
20. Nanjing University of Aeronautics & Astronautics, China, June 4, 2016.
21. University of Tennessee at Chattanooga, Chattanooga, TN, February 19, 2016.
22. Harbin Institute of Technology, Weihai, July 27, 2015.
23. John Hopkins University, Baltimore, MD, April 6, 2015.
24. University of South Florida, Tampa, FL, February 6, 2015.
25. Ohio State University, Columbus, OH, October 15, 2014; March 8, 2017.
26. Beijing University of Chemical Engineering, Beijing, August 14, 2014.
27. Northwest Normal University, Lanzhou, China, August 5, 2014.
28. Lanzhou University, Lanzhou, China, August 3, 2014. (2 talks)

29. Lanzhou Institute of Technology, Lanzhou, China, August 3, 2014.
30. Qinghai Normal University, Xining, China, July 30, 2014.
31. National Defense Technology University, Changsha, China, June 7, 2014. (2 talks)
32. Central South University, Changsha, China, June 6, 2014; May 24, May 26, 2018.
33. Southwest University, Chongqing, China, July 14, 2013; June 10, 2018.
34. Hong Kong Polytechnic University, Hong Kong, China, May 22, 2014; July 3, 2013.
35. Institute of Mathematics, Academic Sinica, Taiwan, March 28, 2013.
36. National Center for Theoretical Sciences, National Tsing-Hua University, Hsinchu, Taiwan, March 8, March 29 and May 3, 2013. (3 talks)
37. Virginia Commonwealth University, Richmond, VA, Jan. 18, 2013.
38. North China Electric Power University, Beijing, China, Nov. 5, 2012.
39. Sichuan University, Chengdu, China, Nov. 2, 2012.
40. University of Electronic Science and Technology of China, Chengdu, China, Nov. 1, 2012; June 1, 2017. (4 talks)
41. Harbin Engineering University, Harbin, China, October 18, 2012; July 18, 2014; July 29, 2015; May 17, 2016; May 16, 2017. (6 talks)
42. University of Science and Technology of China, Hefei, China, August 7, 2014; October 15, 2012. (2 talks)
43. Shandong University, Jinan, China, October 8, 2012.
44. University of Western Ontario, London, Ontario, Canada, August 21, 2012.
45. Summer short course on bifurcation theory and its applications, University of New Brunswick, Fredericton, Canada, August 13-17, 2012. (6 talks, 15 hours)
46. North University of China, Taiyuan, China, July 22, 2012.
47. Guangdong University of Technology, Guangzhou, China, June 26, 2012.
48. Old Dominion University, Norfolk, VA, March 3, 2012; January 19, 2016. (2 talks)
49. Virginia State University, Petersburg, VA, October 31, 2014; February 17, 2012. (2 talks)
50. 2011 Nonlinear Reaction-Diffusion Equations Summer School, Shanxi University, Taiyuan, Shanxi, China, July 17-27, 2011. (5 talks, 10 hours)
51. Providence University, TaiChung, Taiwan, December 10, 2010. (2 talks)
52. Jilin University, Changchun, China, July 28 and 29, 2010. (3 talks)
53. Taiyuan University of Science and Technology, Taiyuan, China, July 11, 2010.
54. Shanxi University, Taiyuan, China, June 18, June 19, 2019; May 18, May 19, 2017; May 13, 2015; August 18 and 19, 2014; June 3, 2013; October 29 and 30, 2012; June 28 and July 21, 2012; May 11, 2011; July 10 and 11, 2010. (15 talks)
55. Tongji University, Shanghai, China, April 24, June 3, 2019; June 7, 2017; July 28, 2016; July 7 and July 8, 2013; May 14, 2011; June 30 and July 5, 2010. (10 talks)
56. Shanghai Normal University, Shanghai, China, July 1, 2010.
57. Shanghai Jiaotong University, Shanghai, China, June 30, 2010.
58. Yunnan University, Kunming, Yunnan, China, June 25, 2010.
59. Yunnan Normal University, Kunming, Yunnan, China, June 24, 2010.
60. Kunming University of Science and Technology, Kunming, Yunnan, China, June 24, 2010.
61. Guilin University of Electrical Technology, Guilin, Guangxi, China, June 21, 2010.
62. Zhejiang Normal University, Jinhua, Zhejiang, China, June 14, 2010; May 28, 2007. (4 talks)

63. Harbin Institute of Technology, Harbin, Heilongjiang, China, June 11, 2019; May 17, 2017; January 16, July 22, July 25, 2016; May 16, 2015; July 17, 2014; October 17, 2012; May 21, 2011; June 4 and June 13, 2010; January 2 and June 21, 2008; April 20 and April 27, 2007; June 11, 2006; June 19, 2005; July 2, 2003. (16 talks)
64. Harbin Normal University, Harbin, Heilongjiang, China, May 19, 2016; October 23, 2012; May 23, 2011; May 31, 2010; May 16, 2007; June 16, 2005; May 18 and 20, 2004; June 30 and July 1, 2003. (10 talks)
65. Tsinghua University, Beijing China, Nov. 6, 2012; May 27, 2010; May 26, 2005; May 31, 2001. (4 talks)
66. University of Wyoming, Laramie, WY, March 11, 2010.
67. Memorial University of Newfoundland, Canada, December 14, 2009.
68. National Central University, Chungli, Taiwan, December 9, 2010; May 14, 2009; December 6, 2007. (3 talks)
69. University of Alabama at Birmingham, Birmingham, AL, October 24, 2008.
70. Chinese Academy of Sciences, Beijing, China, July 17, 2008; December 27, 2007; May 27, 2005; May 8, 2004; July 21, 2002. (5 talks)
71. Capital Normal University, Beijing, China, June 12, 2008; April 15, 2007; May 30, 2005. (3 talks)
72. George Washington University, February 28th, 2008.
73. Beijing Normal University, Beijing, China, December 28, 2007.
74. National Chiao Tung University, Hsinchu, Taiwan, November 27, 2007; April 19th, 2005. (2 talks)
75. National Taiwan University, Taipei, Taiwan, September 20th, 2007.
76. National Tsing Hua University, Hsinchu, Taiwan, September 17th, 2007; April 18th and 25th, 2005. (3 talks)
77. *Degree Theory and Bifurcation theory for Fredholm operators, and Reaction-diffusion systems*, 12-hour Lecture series, Harbin Normal University, Harbin, Heilongjiang, China, May 7-19, 2007.
78. *Bifurcation theory in Banach space and application to semilinear equations* 14-hour Lecture series, Harbin Institute of Technology, Harbin, Heilongjiang, China, April 17-29, 2007.
79. Georgia Institute of Technology, Atlanta, GA, March 6, 2006.
80. Beihang University, Beijing, China, July 1, 2005.
81. Yangzhou University, Yangzhou, Jiangsu, China, June 7 and June 8, 2005. (2 talks)
82. Taiwan Normal University, Taipei, Taiwan, April 20th, 2005.
83. University of New England, Armidale, NSW, Australia, March 17th, 2005.
84. *Lectures on solution set of semilinear elliptic equations*, 12 hour lecture series for graduate students, Tokyo Metropolitan University, Tokyo, Japan, Feb. 7-18, 2005.
85. Rensselaer Polytechnic Institute, Troy, NY, January 24, 2005.
86. East China Normal University, Shanghai, China, May 26 and 28, 2004. (2 talks)
87. Mississippi State University, Miss State, MS, March 9, 2004; April 1999. (2 talks)
88. Lecture series (12 hours), Harbin Normal University, Harbin, Heilongjiang, China, July 30th-August 5th, 2002.
89. University of Virginia, Charlottesville, VA, September 20 and 21, 2001. (two talks)
90. University of Texas at San Antonio, San Antonio, TX, September 7th, 2001.
91. Peking University, Beijing, China, June 9th, 2001.
92. Nankai University, Tianjin, China, December 19, 2016; July 23, 2014; May 28, 2001. (3 talks)

93. Georgia State University, Atlanta, GA, March, 2000.
94. Portland State University, Portland, OR, March, 2000.
95. University of Memphis, Memphis, TN, March, 2000.
96. University of Texas at Arlington, Arlington, TX, February, 2000.
97. Georgia Southern University, Statesboro, GA, February, 2000; December 1999. (2 talks)
98. College of William and Mary, Williamsburg, VA, February, 2000.
99. Georgetown University, Washington, DC, February, 2000.
100. Brigham Young University, Provo, UT, May 1999.

CONTRIBUTED  
TALKS

1. ICMA VII: Seventh International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems, Arizona State University, Tempe, AZ, October 12-14, 2019.
2. Colloquium, College of William & Mary, April 19, 2019.
3. Colloquium, College of William & Mary, September 20, 2013.
4. 2013 Annual Meeting of The Society for Mathematical Biology, Arizona State University, June 10-13, 2013.
5. Colloquium, College of William & Mary, February 8, 2013.
6. Workshop on Mathematical Biology, Dalhousie University, Halifax, Canada, August 18-19, 2012.
7. Colloquium, College of William & Mary, November 12, 2010.
8. Math 410 (CSUMS seminar), College of William and Mary, Feb. 3, 2010.
9. Math 410 (CSUMS seminar), College of William & Mary, Feb. 18, 2009.
10. Biomath Luncheon, College of William & Mary, March 31, 2008.
11. Math 410 (CSUMS seminar), College of William & Mary, January 22, 2008.
12. 25th Annual Southeastern-Atlantic Regional Conference on Differential Equations, Dayton University, Dayton, OH, October 8th, 2005.
13. Colloquium, College of William & Mary, Williamsburg, VA, September, 2005.
14. Sixth Mississippi State-UAB Conference on Diff. Equations & Computational Simulations, Mississippi State University, Mississippi State, MS, May 13-14th, 2005.
15. Mathematical-Computational Biology (MCB) seminar, College of William & Mary, Williamsburg, VA, October 27th, 2004.
16. 23rd Annual Southeastern-Atlantic Regional Conference on Differential Equations, Kennesaw State University, Kennesaw, GA, October 17-18th, 2003.
17. 22nd Southeastern-Atlantic Regional Conf. on Differential Equations, University of Tennessee, Knoxville, TN, October 11th, 2002.
18. Nonlinear Differential Equations, Mechanics and Bifurcation, Duke University, Durham, NC, May 20-22th, 2002.
19. 21st Southeastern-Atlantic Regional Conference on Differential Equations, Wake Forest University, Winston-Salem, NC, November 3rd, 2001.
20. Fifth Mississippi State Conference on Differential equations and computational simulations, Mississippi State University, Mississippi State, MS, May 18-19th, 2001.
21. Colloquium, College of William & Mary, Williamsburg, VA, February 16th, 2001.
22. Colloquium, College of William & Mary, Williamsburg, VA, September, 2000.
23. 20th Southeastern-Atlantic Regional Conf. on Differential Equations, Virginia Tech, Blacksburg, VA, October 21st, 2000.
24. SIAM Dynamical system conference, Snowbird, UT, May, 1999.
25. Applied Mathematics Seminar, Tulane University, New Orleans, LA, October 1998.

26. Colloquium, Tulane University, New Orleans, LA, September 1998.
27. Conference on Waves in Mathematical Biology, University of Pittsburgh, Pittsburgh, PA, September 1998.

PUBLISHED  
SOFTWARE

Java applet drawing bifurcation diagram for elliptic equations (1998)  
<http://www.math.wm.edu/~shij/java/bifurcation.html>

COMMITTEE  
SERVICE

College committee service

- Art and Sciences library policy committee (Fall 2006)
- College admission policy advisory committee (2008-2011, 2013-2016, chair 2016)
- Academic Calendar Advisory Committee (2011-2012, 2013-2014)
- Art and Science Committee on Honors and Interdisciplinary Studies (2016-2019)
- ISC4 Building Committee (2018-)

Department of Mathematics committees

- Merit Evaluation committee: 2009-2010.
- Personnel committee: 2010-2011 (coordinator), 2011-2012, 2013-2014, 2017-2018.
- Colloquium Committee: 2008-2012(chair), 2013-2018(chair)
- Mathematics Contests adviser(VPI, Putnam): 2004-2007.
- Mathematics Contests Committee: 2008-2012(chair), 2013-2014(chair)
- Applied Math hiring committee: 2005-2006
- Biomath hiring committee: 2006-2007, 2013-2014(chair)
- Statistics hiring committee: 2017-2018
- Actuarial hiring committee: 2019
- Computer committee: 2001-current
- Department webmaster: 2001-current
- Student information: 2005-2007
- Library representative: 2005-2007
- Online newsletter editor: 2002-2007
- Institute representative of AMS, SIAM and MAA: 2002-2007
- Space committee: 2000-2005
- Handbook committee: 2000-2001
- Undergraduate adviser: 2003-2004, 2005-2007, 2008-2012, 2013-2014, 2015-2016, 2017-2019
- Math 112 (Calculus II) course coordinator: Spring 2003, Fall 2003, Fall 2004



CONFERENCE  
ORGANIZING

1. Co-organizer of The Thirteenth International Conference on Recent Advances in Applied Dynamical Systems, Hangzhou Normal University, Hangzhou, China, June 8-10, 2019.
2. Co-organizer of The Twelfth International Conference on Recent Advances in Applied Dynamical Systems, Chongqing Normal University, Chongqing, China, June 8-10, 2018.
3. Co-organizer of Special Session on Recent Advances in Nonlinear Schrödinger Equations , AMS Sectional Meeting at University of Delaware, Newark, DE, September 29-30, 2018.
4. Member of Global Organizing Committee, Co-organizer of special session on Emergence and Dynamics of Patterns in Nonlinear Partial Differential Equations and Related Fields, 12th AIMS International Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan, July 5-9, 2018.
5. Co-organizer of special session on Nonlinear partial differential equations arising from life science, AMS Sectional Meeting at SUNY Buffalo in Buffalo, NY, September 16-17, 2017.
6. Co-organizer of The Eleventh International Conference on Recent Advances in Applied Dynamical Systems, Xi'an Jiaotong University, Xi'an, China, June 9-12, 2017.
7. Co-organizer of International Workshop on Nonlinear Analysis and Reaction-Diffusion Equations, Jiangsu University, Zhenjiang, China, June 3-5, 2017.
8. Co-organizer of Undergraduate EXTREEMS-QED workshop, College of William and Mary, April 8, 2017.
9. Member of Global Organizing Committee, Co-organizer of special session on Emergence and Dynamics of Patterns in Nonlinear Partial Differential Equations from Mathematical Science, 11th AIMS International Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL, USA, July 1-5, 2016.
10. Co-organizer of The Tenth International Conference on Recent Advances in Applied Dynamical Systems, Jiangsu Normal University, Xuzhou, China, June 11-13, 2016.
11. Co-organizer of Workshop in Application of Mathematics in Economics and Finance, Harbin Normal University, Harbin, China, January 13-14, 2016.
12. Chair of Organizing Committee of International Symposium on Application of Nonlinear Partial Differential Equations in Life Science, Chern Institute of Mathematics, Nankai University, Tianjin, China, August 4-7, 2015.
13. Organizing committee member of Workshop on Hamiltonian Systems and Variational Methods, Southeast University, Nanjing, China, May 30-31, 2015.
14. Organizing committee member of Recent advances in reaction-diffusion equations and applications, Jiangsu Normal University, Xuzhou, China, May 21-24, 2015.
15. Organizing committee member of International Workshop on Mathematics in Life and Physical Sciences, Institute for Mathematical Sciences, Renmin University of China, May 19-21, 2015.
16. Co-organizer of special session on *Qualitative Behavior of Solutions of Partial Differential Equations*, AMS Spring Northeastern Section Meeting, Georgetown University, Washington, DC, USA, March 7-8, 2015.
17. Co-organizer of special session on *Qualitative analysis of reaction diffusion systems*, 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain, July 7-11, 2014.
18. Co-organizer of The Eighth International Conference on Recent Advances in Applied Dynamical Systems, Guilin University of Electronic Technology, Guilin, China, June 2-4, 2014.
19. Co-organizer of Workshop on Nonlinear Elliptic Systems, Taiyuan, China, July 24-26, 2013.
20. Co-organizer of The Seventh International Conference on Recent Advances in Applied Dynamical Systems, Linyi, China, June 8-10, 2013.
21. Co-organizer of Special session on pattern Formation in Biology, Fourth Conference on Computational and Mathematical Population Dynamics (CMPD4), Taiyuan, China, May 29-June 2, 2013.

22. Co-organizer of Special Session on *Understanding Planet Earth via Reaction Diffusion Equations*, 2013 Joint Mathematics Meeting, San Diego, CA, USA, Jan 9–12, 2013.
23. Co-organizer of 9th Eastern China PDE Conference, Shanxi University, Taiyuan, China, July 16–19, 2012.
24. Co-organizer of special session on *Nonlinear Elliptic and Parabolic Problems in Mathematical Sciences*, 9th AIMS International Conference on Dynamical Systems, Differential Equations, and Applications, Orlando, FL, USA, July 1–5, 2012.
25. Co-organizer of Undergraduate Mathematics Conference in Washington, April 21–22, 2012.
26. Co-organizer of special session on *Self-organization phenomena in reaction diffusion equations*, 2012 Spring AMS Eastern Section Meeting, Washington, DC, USA, March 17–18, 2012.
27. Co-organizer of special session *Reaction Diffusion Equations and Applications*, 2012 Joint Mathematics Meeting, Boston, MA, USA, Jan 4–7, 2012.
28. Co-organizer of 2011 Nonlinear Reaction-Diffusion Equations Summer School, Shanxi University, Taiyuan, Shanxi, China, July 17–27, 2011.
29. Co-organizer of Fifth International Conference on Recent Advances in Applied Dynamical Systems, Shanghai, China, May 16–18, 2011.
30. Co-organizer of GMU-WM 2011 CSUMS Spring Workshop, Williamsburg, Virginia, USA, April 16, 2011.
31. Co-organizer of special session *Analysis of Reaction-Diffusion Models*, 2011 Joint Mathematics Meeting, New Orleans, Louisiana, USA, Jan 6–9, 2011.
32. Co-organizer of special session *Differential Equations and Applications to Physics and Biology*, 2010 Fall AMS Southeastern Section Meeting, Richmond, Virginia, Nov 6–7, 2010.
33. Co-organizer of Fourth International Conference on Recent Advances in Applied Dynamical Systems, Zhejiang Normal University, Jinhua, China, June 17–20, 2010.
34. Main organizer of International Workshop on Reaction-Diffusion Models and Mathematical Biology, Harbin, China, June 24–June 27, 2009.
35. Co-organizer of International Conference on Nonlinear Partial Differential Equations and Geometric Analysis, Harbin, China, June 30–July 4, 2008.
36. Organizer of special session *Nonlinear Elliptic and Parabolic PDEs with Applications*, The Seventh AIMS International Conference on Dynamical Systems and Differential Equations, University of Texas at Arlington, Arlington, TX, May 2008.
37. Co-Organizer of International Workshop on Banach Space, Operator Theory and Applications in Nonlinear Analysis, Y.Y. Tsengs Functional Analysis Research Center, Harbin Normal University, Harbin, China, July 25–27, 2007.
38. Co-organizer of Second International Conference on Recent Advances in Applied Dynamical Systems, Zhejiang Normal University, Jinhua, China, June 4–8, 2007.
39. Co-Organizer of Workshop on Analysis and PDE, Y.Y. Tsengs Functional Analysis Research Center, Harbin Normal University, Harbin, China, July 21–22, 2006.
40. Co-Organizer of AMS-SIAM Special Session on *Reaction Diffusion Equations and Applications*, Joint Mathematics Meetings, Atlanta, January 5–8, 2005.
41. Organizer of special session on *Recent Developments on Nonlinear Elliptic Equations and Variational Problems*, The Fifth AIMS International Conference on Dynamical Systems and Differential Equations, California State Polytechnic University, Pomona, CA, June 2004.
42. Co-organizer of mini-symposium on Steady States in *Reaction-Diffusion Systems*, SIAM Pacific Rim Dynamical Systems Conference, Maui, HI, August 2000.

HOST FOR  
ACADEMIC VISITORS  
(LONGER THAN 1  
WEEK)

- Zhitao Zhang (Chinese Academy of Sciences, China, Spring 2004)
- Yuwen Wang (Harbin Normal University, China, Dec. 2005–Jan. 2006)
- Jiabao Su (Capital Normal University, China, March-April 2006)
- Jitao Sun (Tongji University, China, Nov. 2009–May 2010)
- Shanshan Chen (PhD student, Harbin Institute of Technology, China, Aug. 2010–Aug. 2011, Aug. 2018–Aug. 2019)
- Xiaorong Gan (Kunming University of Science and Technology, China, Dec. 2010–May 2011)
- Jibin Li (Zhejiang Normal University, China, Oct. 2010)
- Maoan Han (Shanghai Normal University, China, Oct. 2010)
- Chuncheng Wang (University of Wyoming, May 2011–June 2011)
- Ping Liu (Harbin Normal University, China, Aug. 2011–Aug. 2012, Dec. 2016–Dec. 2017, Jan. 2019–Feb. 2019)
- Qiang Mu (Harbin Normal University, China, Aug. 2011–Aug. 2013, Apr. 2017–Dec. 2017, Jan. 2019–Feb. 2019)
- Chan-Gyun Kim (National Pusan University, Korea, Sept. 2011–July 2013)
- Jeong-Mi Jeong (National Pusan University, Korea, Sept. 2011–July 2013)
- Jun Zhou (Southwest University, China, Jan. 2012–Jan. 2013)
- Fengqi Yi (Harbin Engineering University, China, March 2012)
- Jann-Long Chern (National Central University, Taiwan, May 2008 and July 2012)
- Yihong Du (University of New England, Australia, November 2012)
- Xiangping Yan (Lanzhou Jiaotong University, China, Aug. 2013–Aug. 2014)
- Leiga Zhao (Beijing Chemical Engineering University, China, Aug. 2013–Feb. 2014)
- Fukun Zhao (Yunnan Normal University, China, Aug. 2013–Feb. 2014)
- Hong Li (University of Electronic Science and Technology of China, Sept. 2013–Sept. 2014)
- Jun Wang (Jiangsu University, China, Dec. 2013–Dec. 2014, Jul. 2018–Jul. 2019)
- Yulian An (Shanghai Institute of Technology, China, Dec. 2013–Jan. 2015, Aug. 2019)
- Zhanping Liang (Shanxi University, China, Jan. 2014–Jan. 2015)
- Yujuan Chen (Nantong University, China, Jan. 2014, Oct. 2014, Sept.–Oct. 2015)
- Guohong Zhang (Southwest University, China, Aug. 2014–Aug. 2015)
- Xiaoli Wang (Southwest University, China, Aug. 2014–Aug. 2015, Aug. 2018–Aug. 2019)
- Shunyong Li (Shanxi University, China, Sept. 2014–Sept. 2015)
- Sainan Wu (PhD student, Harbin Institute of Technology, China, Sept. 2014–Sept. 2016)
- Fangfang Jiang (PhD student, Tongji University, China, Jan. 2015–Apr. 2015)
- Xiaoqin Zhang (Shanxi University, China, Feb. 2015–Feb. 2016)
- Yuhua Li (Shanxi University, China, Feb. 2015–Feb. 2016)
- Deqiong Ding (Harbin Institute of Technology at Weihai, China, Feb. 2015–Feb. 2016)
- Wenjie Zuo (China University of Petroleum (East China), Aug. 2015–Aug. 2016)
- Jinfeng Wang (Harbin Normal University, China, Oct. 2015–Oct. 2016, Oct. 2017–Dec. 2017)
- Xiaoyuan Chang (Harbin University of Science and Technology, China, Feb. 2016–Feb. 2017; Aug. 2019–Aug. 2020)
- Jimin Zhang (Heilongjiang University, China, Feb. 2016–Feb. 2017; Aug. 2019–Aug. 2020)
- Wenjie Ni (PhD student, Harbin Institute of Technology, China, Aug. 2016–Feb. 2018)
- Qingyan Shi (PhD student, Tongji University, China, Sept. 2016–Sept. 2018)

- Xiaoyan Zhang (Shandong University, Dec. 2016-Aug. 2017)
- Yingli Pan (PhD student, Harbin Institute of Technology, China, Feb. 2017-Aug. 2017)
- Toru Kan (Tokyo Institute of Technology, Japan, March 2017)
- Ying Su (Harbin Institute of Technology, China, March 2017-April 2017)
- Lu Xiao (Jiangsu University, China, Jul. 2018-Jul. 2019)
- Qi Zhang (Shanxi University, China, Dec. 2018-Jun. 2019)
- Xiaoli Zhu (Shanxi University, China, Dec. 2018-Jun. 2019)
- Yiwen Tao (PhD student, Zhengzhou University, China, Apr. 2019-Aug. 2019)
- Yongyan Huang (Shanxi University, China, Jun. 2019-Dec. 2019)
- Rong Cheng (Nanjing University of Information Science and Technology, China, May 2019-Nov. 2019)
- Penglong Shao (PhD student, Harbin Institute of Technology, China, Aug. 2019-Feb. 2021)
- Yuta Ishii (PhD student, Tokyo Metropolitan University, Japan, Nov. 2019-Dec. 2019)

REFEREEING FOR  
JOURNALS

Totally > 500 manuscripts for > 86 journals in mathematics, physics and biology (2000-2019), about 30 – 40 each year since 2008

1. Abstract and Applied Analysis
2. Acta Applicandae Mathematicae
3. Acta Mathematica Applicatae Sinica
4. Advances in Mathematics (China)
5. Advances in Nonlinear Analysis
6. Advanced Nonlinear Studies
7. Applicable Analysis
8. Applied Mathematics Letters
9. Archive for Rational Mechanics and Analysis
10. Automatica
11. Boundary Value Problems
12. Bulletin of the Malaysian Mathematical Sciences Society
13. Bulletins of Mathematical Biology
14. Chaos
15. Chaos, Solitons & Fractals
16. Communications in Contemporary Mathematics
17. Communications of Partial Differential Equations
18. Communications on Pure and Applied Analysis
19. Complex Variables and Elliptic Equations
20. Computers and Mathematics with Applications
21. Discrete and Continuous Dynamical Systems A
22. Discrete and Continuous Dynamical Systems B
23. Discrete and Continuous Dynamical Systems S
24. Dynamical Systems
25. Dynamics of PDE
26. Ecological Complexity
27. Ecological Modelling

28. Ecosystems
29. Electronic Journal of Differential Equations
30. Electronic Journal of Qualitative Theory of Differential Equations
31. Estuaries and Coasts
32. European Journal of Applied Mathematics
33. Frontier of Mathematics in China
34. Global Journal of Pure and Applied Mathematics
35. IMA Journal Applied Mathematics
36. IMA Journal Mathematical Medicine and Biology
37. International Journal of Bifurcation and Chaos
38. International Journal of Biomathematics
39. International Journal of Differential Equations
40. International Journal of Dynamical Systems and Differential Equations
41. International Journal of Mathematics and Mathematical Sciences
42. Journal of Applied Analysis and Computation
43. Journal of Biological Dynamics
44. Journal of Dynamics and Differential Equations
45. Journal of Differential Equations
46. Journal of European Mathematical Society
47. Journal of Fixed Point Theory and Applications
48. Journal of Franklin Institute
49. Journal of Functional Analysis
50. Journal of London Mathematical Society
51. Journal of Mathematical Analysis and Applications
52. Journal of Mathematical Biology
53. Journal of Nonlinear Science
54. Kinetic and Related Models
55. Mathematical Biosciences
56. Mathematical Biosciences and Engineering
57. Mathematical and Computer Modeling
58. Mathematical Methods in the Applied Sciences
59. Mathematical Modelling and Analysis
60. Memoir of American Mathematical Society
61. Modelling and Simulation in Engineering
62. Natural Resource Modeling
63. Networks and Heterogeneous Media
64. New Journal of Physics
65. Nonlinear Analysis, Hybrid Systems
66. Nonlinear Analysis, Real World Applications
67. Nonlinear Analysis, Theory, Methods & Applications
68. Nonlinear Dynamics
69. Nonlinearity

70. Numerical Algorithms
71. Physica A
72. PLOSone
73. Proceedings of American Mathematical Society
74. Proceedings of London Mathematical Society
75. Proceeding of Royal Society, A
76. Proceedings of Royal Society of Edinburgh
77. Qualitative Theory of Dynamical Systems
78. Rocky Mountain Journal of Mathematics
79. Science in China (Mathematics)
80. SIAM Journal of Applied Mathematics
81. SIAM Journal of Applied Dynamical Systems
82. SIAM Journal of Mathematical Analysis
83. Taiwanese Journal of Mathematics
84. Theoretical Population Biology
85. Topological and Mathematical Nonlinear Analysis
86. Transactions of American Mathematical Society
87. ZAMP

OTHER REVIEW  
ACTIVITIES

1. Panelist of NSF panels (Nov 2009, April 2011, April 2015, Nov 2016, Feb 2018, Oct 2019)
2. Reviewer for Fulbright Scholar Program (2015)
3. Reviewer for Changjiang Professorship, China (2014)
4. Reviewer for Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant (2015, 2017, 2018, 2019)
5. Reviewer for Alberta Innovates Strategic Research Projects (2016)
6. Reviewer for Jeffress Trust Awards Program in Interdisciplinary Research (2020)
7. External reviewer of tenure/full professor promotion (2015, 2017, 2018, 2019)
8. Reviewer for *Mathematical Reviews* (MathSciNet). (40+ reviews since 2000)
9. Reviewer for PSC-CUNY research Award (2008, 2009)
10. Reviewer for Book: a collection of essays in spatial ecology (2008)
11. Reviewer for Conference: ICNAAM 2008 (2008)
12. Reviewer for textbooks: (a) *Differential Equations Manuscript*, Cengage Learning, Inc. (2007); (b) *Applied Differential Equations* text by Michael Greenberg, Addison Wiley (2008); (c) *Calculus For the Life Sciences: A Modeling Approach*, by James L. Cornette and Ralph A. Ackerman, John Wiley & Sons (2008); (d) *Biocalculus*, Brooks/Cole& Cengage Learning, (2009).