

Curriculum Vita

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Summary: 2 research monographs, more than 110 refereed journal articles, 3 currently active external grants, 20 honors and distinctions and more than 30 graduate and undergraduate students advised, more than 30 visitors invited for collaborations and 4 postdocs conducting our research projects at UTPA, Editor-in-chief of Pacific Journal of Applied Mathematics (PJAM), 69 international and national invited talks and 113 talks at local and state levels. Students' course evaluation is above 90% in the category of "Excellent and Good". Serving on committees both department and university levels.

Research Areas: Mathematical Physics and Applied Mathematics

Research Interests:

- Integrable Systems and Nonlinear Partial Differential Equations (PDEs)
- PDEs Analysis and Radar Image.
- Soliton Theory (Lax Pairs, Conservation Laws etc)
- Discrete Systems and Integrable Symplectic Map
- Algebraic and Geometric Structures of Integrable Systems
- Mathematical Model and Image Processing

Research Goals:

1. Study the integrability of nonlinear evolution equations, Lax pairs, symmetries, conservation laws, Painleve Analysis, transformations such as Darboux and Baecklund, and explicit solutions such as traveling wave and quasi-periodic solutions.
2. Analyze fluid dynamics (both stable and unstable), construct their mathematical models, figure out their exact/numeric solutions from the point of theoretical view, plot the interface curves on basis of the solutions, and furthermore compare them with the experimental solutions.
3. Investigate the relationship between finite-dimensional integrable Hamiltonian system and nonlinear evolution equations and try to give explicit solutions of nonlinear equations through solving finite-dimensional integrable Hamiltonian system.
4. Consider how to obtain the traveling wave or soliton solutions through editing effective codes in Maple or Mathematica. We plan to develop a computer

language package to provide the exact solutions for nonlinear evolution equations, and furthermore compare the results by computer with the solutions by theory.

5. Use PDEs analysis and mathematical models to reconstruct radar image based on the data analysis. We are currently conducting this research under our PDEs analysis and radar image reconstruction project (\$550K), GAANN graduate project (\$530K), and Fourier integral operation project (\$145K), which are funded by DoD – AFOSR 2008 – 2012, DoED 2012 – 2015, and TX – NHARP 2010 – 2012, respectively, including faculty research topics, graduate and undergraduate students education and training program. All program students get lot of benefits from the project, such as undergraduate scholarship, graduate fellowship, payment of tuition, learning, research, etc.

Computer Skills: Windows, Unix, Microsoft, WinEdt, Maple, etc

University Education

- **Ph.D.** in Mathematical Sciences, Fudan University, Shanghai, China (Feb. 1995 – June 1997). Dissertation title: “Generalized Lax Algebra, r -matrix and Algebro-geometric Solutions for Integrable Systems”. In 1999, my dissertation was selected as one of the most four excellent mathematics theses in national wide.

Professional Experience

TITLE	EMPLOYER	DATES
Tenured Professor	Department of Mathematics The University of Texas – Pan American	Present
Program Researcher	Theoretical Division, Los Alamos National Laboratory, Los Alamos, NM	Aug. 2001 – Aug. 2004
Prestigious Humboldt Research Fellow	Alexander von Humboldt Foundation, Department of Mathematics, Kassel University, Kassel, Germany	Aug. 1999 – July 2001
Program Researcher	Institute of Mathematics, Peking University, Beijing, China	July 1997 – July 1999
Full Professor	Department of Mathematics, Liaoning University, Shenyang, China	March 1997 – July 2001
Associate Professor	Department of Mathematics, Liaoning University, Shenyang, China	March 1993 – June 1997
Assistant Professor	Department of Mathematics, Liaoning University, Shenyang, China	July 1989 – March 1993
Teaching Assistant	Department of Mathematics, Nei Mongol National Normal University, Tongliao, China	Aug 1984 – Sept. 1986

Courses Taught:

Graduate Level: Master Thesis I (MATH 7300), Master Thesis II (MATH 7301), Special Topics – Solitons (MATH 6399), Special Topics – Boundary Value Problems (MATH

6399), Fourier Analysis (MATH 6362), Integrable Systems Seminar (2007 – 2009), PDE and Radar Image Seminar (2008 – present).

Undergraduate Level: Partial Differential Equations (MATH 4318), Differential Equations (MATH 3349), Applied Linear Algebra (MATH 3345), Mathematical Proof (MATH 3328), Calculus III (MATH 2401), Calculus II (MATH 1470), Calculus I (MATH 1460), Pre-Calculus (MATH 1450), Business Calculus (MATH 1342), College Algebra (MATH 1340), and Intermediate Algebra (MATH 1334).

Courses taught Fall 2011 – Summer 2012

Fall 2011	MATH 7301-01	1 student	3 SCH
Fall 2011	MATH 6362-02	10 students	3 SCH
Fall 2011	MATH 2401-03	28 students	3 SCH
Spring 2012	MATH 7301-01	1 student	3 SCH
Spring 2012	MATH 2401-01	33 students	3 SCH
Spring 2012	MATH 2401-02	39 students	3 SCH
Summer II 2012	MATH 7301-01	1 student	3 SCH
Summer II 2012	MATH 7300-05	2 students	3 SCH
Summer II 2012	MATH 3349-01	14 students	3 SCH
Summer II 2012	MATH 1450-01	32 students	3 SCH

Courses taught Fall 2010 – Summer 2011

Fall 2010	MATH 7300-08	1 student	3 SCH
Fall 2010	MATH 7300-07	1 student	3 SCH
Fall 2010	MATH 3328-01	29 students	3 SCH
Fall 2010	MATH 1340-09	27 students	3 SCH
Fall 2010	MATH 1340-08	30 students	3 SCH
Spring 2011	MATH 7301-06	2 students	3 SCH
Spring 2011	MATH 3345-02	25 students	3 SCH
Spring 2011	MATH 3328-02	30 students	3 SCH
Summer I 2011	MATH 7301-03	2 students	3 SCH
Summer II 2011	MATH 7300-03	1 student	3 SCH
Summer II 2011	MATH 7301-04	2 students	3 SCH

Courses taught Fall 2009 – Summer 2010

Fall 2009	MATH 7300-04	1 student	3 SCH
Fall 2009	MATH 1342-03	36 students	3 SCH
Fall 2009	MATH 1342-02	53 students	3 SCH
Fall 2009	MATH 1334-05	30 students	3 SCH
Spring 2010	MATH 1340-06	30 students	3 SCH
Spring 2010	MATH 3349-04	39 students	3 SCH
Spring 2010	MATH 4318-01	14 students	3 SCH
Spring 2010	MATH 6399-01	7 students	3 SCH

Spring 2010	MATH 7301-04	1 student	3 SCH
Summer I 2010	MATH 7301-02	1 student	3 SCH

Courses taught Fall 2008 – Summer 2009

Fall 2008	MATH 6399-01	10 students	3 SCH
Fall 2008	MATH 1450-05	30 students	4 SCH
Fall 2008	MATH 7300-03	1 student	3 SCH
Spring 2009	MATH 1460-03	30 students	4 SCH
Spring 2009	MATH 1460-05	31 students	4 SCH
Spring 2009	MATH 7301-16	1 student	3 SCH
Summer I 2009	MATH 7301-05	1 student	3 SCH
Summer II 2009	MATH 1340-08	16 students	3 SCH
Summer II 2009	MATH 7301-02	1 student	3 SCH

Courses taught Fall 2007 – Summer 2008

Fall 2007	MATH 1470-01	29 students	4 SCH
Fall 2007	MATH 1470-02	26 students	4 SCH
Spring 2008	MATH 2401-01	30 students	4 SCH
Spring 2008	MATH 2401-02	30 students	4 SCH

Courses taught Fall 2006 – Summer 2007

Fall 2006	MATH 1460-01	44 students	4 SCH
Fall 2006	MATH 1460-03	29 students	4 SCH
Spring 2007	MATH 2401-01	30 students	4 SCH
Spring 2007	MATH 2401-02	32 students	4 SCH
Summer II 2007	MATH 2401-01	53 students	4 SCH
Summer II 2007	MATH 1342-02	29 students	3 SCH

Courses taught Fall 2005 – Summer 2006

Fall 2005	MATH 4318-01	17 students	3 SCH
Fall 2005	MATH 1470-03	24 students	4 SCH
Spring 2006	MATH 6362-01	8 students	3 SCH
Spring 2006	MATH 1450-03	11 students	3 SCH
Summer II 2006	MATH 1450-01	39 students	4 SCH
Summer II 2006	MATH 1340-03	21 students	3 SCH

Courses taught Fall 2004 – Summer 2005

Fall 2004	MATH 1460-03	27 students	4 SCH
Fall 2004	MATH 1460-04	32 students	4 SCH
Spring 2005	MATH 2345-02	37 students	3 SCH

Spring 2005	MATH 1450-03	14 students	3 SCH
Spring 2005	MATH 1450-06	27 students	3 SCH

In my teaching taskforce, I have taught more than 30 classes at both graduate and undergraduate levels, including MATH 7301, MATH 7300, MATH 6399, MATH 6362, MATH 4318, MATH 3349, MATH 3328, MATH 3345, MATH 2401, MATH 1470, MATH 1460, MATH 1450, MATH 1342, MATH 1340, and MATH 1334. Average of all students' evaluations in category of "Excellent & Good" is above 90% (see details in teaching efficiency). In the teaching pedagogy of my all classes, I always combine computer technology with my classes. For example, I post my course syllabus, lecture notes with homework, tests and quizzes and their solutions online (either webwork.utpa.edu or blackboard) for students' review. In class, I also use computer projector to show students how to do a computation and make graphs.

In all of these classes students greatly benefited from the homework problems and projects, quizzes and tests which were counted toward their final grade. These carry-out helped students regularly identifying their strengths and weaknesses. I like students very much, and what I hope in my class is not only to get students passed through the course under my class rule, but the most important is to want students to learn how to apply the knowledge to really practical problem. In each class, I always give a brief review of the previous class before teaching new materials. In this way, students are able to easily follow the class, and they like it very much. Before each test and final exam, I conducted a clear review session, which was very popular among my students. In addition to those, I often communicate with my students in many different ways such as asking questions and letting students answer in the class, talking in my office hours, sending emails, speaking over the phones etc. I often collect students' needs, ask for their questions/comments to improve my teaching style. I have also found that over time my relationship with students has evolved into a unique connection. By utilizing teaching methods that close the student-teacher gap in the grasp and view of concepts, I have connected with my students in order to help better impart my understanding of what I am here to teach. My course materials are well-organized, well-prepared, and effective at all times.

In the past seven years, I invited and collaborated with 31 visitors coming to UTPA math department to give presentations and doing further co-operations under my grant support. I directed 4 postdoctoral researchers and 24 Ph. D. and master students and 7 undergraduate students for the designated research programs, see the following table for details. These students either local or international got much benefit of education and trained through my DoD and TX-HNARP funded research programs toward getting their degrees. Also, in Fall 2012 and Spring 2013, I will have two more visitors joining our research team.

31 international and national program students supervised and advised

Student	Math Faculty	Project
Xianqi Li (MATH)	Zhijun Qiao	<p>UTPA-FRC, Solitons and Integrable Equations Math Thesis: Solitary waves and Integrable Equations, graduated summer 2009. Now, Postdoctoral study at University of Florida.</p> <p>He published 3 papers and won a conference award at the 6th international IMACS conference, UGA, Athens, 2009, and won the 2nd place at 2008 HESTEC poster session.</p>
Jaime Lopez (MATH)	Zhijun Qiao	<p>DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets. Graduate summer 2011.</p> <p>Jaime published 3 papers and was invited to give a presentation at International SPIE conference, April 2010 and 2011, Orlando, FL.</p> <p>UTPA-URI, Integral Image equations. Now, UTPA math department lecturer.</p>
Guillermo Garza (MATH)	Zhijun Qiao	<p>DoD program graduate student, and UTPA-URI, Micro-Local Analysis and Radar Image Processing. Graduate summer 2011.</p> <p>Guillermo published/accepted 3 papers and was invited to give a presentation at International SPIE conference, April 2010 and 2011, Orlando, FL. He received an international invitation to Beijing for attending the Beihang Graduate Students' Forum and to give an invited presentation at Special Forum on information technologies held on Oct. 30 – Oct. 31, 2011.</p> <p>Now, UTPA math department lecturer.</p>
Timothy Ray (MATH)	Zhijun Qiao	<p>DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets, Participated in International Radar Conf, 2011, Kansas City, MO.</p>
Yufeng Cao (MATH)	Zhijun Qiao	<p>TX – NHARP program graduate student, working on Partial Differential Equations and Radar Image Reconstruction. He is an international student from UTPA partner university – Zhaoqing University, where Dr. Qiao serves as a UTPA representative faculty to cooperate with.</p>

Juan Lopez (MATH)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets.
Noe Pena (MATH)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets. Participated in International Radar Conf, 2011, Kansas City, MO. He joined UTPA – STEM Undergraduate Research Program summer 2011 and did the 2011 HESTEC poster presentation.
Franklyn Pechco (MATH)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets. He is now at University of Houston for Ph D study.
Raul Mercado (MATH)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets
Roberto Castillo (MATH)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets. UTPA Summer Research Initiative Program 2010 – 2011
Andrew Alaniz (MATH)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets
Richard Charles (MATH)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets. He did the 2011 HESTEC poster presentation and won the 1 st place at 2011 HESTEC poster competition.
Qitong Li (MATH)	Zhijun Qiao	TX – NHARP program graduate student, working on Partial Differential Equations and Radar Image Reconstruction. He is an international student from Shanghai University, where Dr. Qiao serves as a UTPA representative faculty to cooperate with.

Daqi Xin (MATH)	Zhijun Qiao	TX – NHARP program graduate student, working on Partial Differential Equations and Radar Image Reconstruction. He is an international student from China.
Alex Martinez (MATH)	Zhijun Qiao	DoD program undergraduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets. He joined UTPA – STEM Undergraduate Research Program summer 2011 and did the 2011 HESTEC poster presentation won the 1 st place at 2011 HESTEC poster competition..
Alex Marroquin (EE)	Zhijun Qiao	DoD program undergraduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets. He joined UTPA – STEM Undergraduate Research Program summer 2011 and did 2011 HESTEC poster presentation.
Angel Tijerina (EE)	Zhijun Qiao	DoD program undergraduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets.
Walter Rodriguez (EE)	Zhijun Qiao	DoD program undergraduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets.
Kyle Taylor (EE)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets
Ismael Quintanilla (EE)	Zhijun Qiao	DoD program graduate student, working on Micro-Local Analysis and Image Reconstruction of Moving Targets
Manuel Lara (PHYS)	Zhijun Qiao	PDE Analysis and Radar Image Reconstruction Now, postdoctoral researcher at Indiana University
Xiaohui Wang (EE)	Zhijun Qiao	PDE Analysis and Radar Image Reconstruction PhD student at Michigan Technology
Fang Cheng (EE)	Zhijun Qiao	PDE Analysis and Radar Image Reconstruction PhD student at Michigan Technology
Lin Luo (MATH)	Zhijun Qiao	Co-supervisor of Ph D Thesis, Fudan University

Jie Ji (MATH)	Zhijun Qiao	Defense Committee Chair, Co-supervisor of Math Thesis, Jiangsu Normal University
Saulo Orizaga (MATH)	Zhijun Qiao	UTPA-LSAMP project student.
Haiqi Wang (MATH)	Zhijun Qiao	Math Master Thesis: Soliton Solutions of Integrable Equations, graduated summer 2010.
Eugenio De Hoyos (MCHE)	Zhijun Qiao	UTPA-URI project, Nonlinear evolution equations and solitons, Ph D study now at Massachusetts Institute of Technology (MIT).
Zackary Gill (MATH)	Zhijun Qiao	UTPA-URI project, Solution of Soliton Equations UTPA-LSAMP project
Cristina Salinas (MATH)	Zhijun Qiao	UTPA-FRC, Solitons and Integrable Equations
Miguel Gonzalez (MATH)	Zhijun Qiao	UTPA-URI, Traveling wave solutions for water wave equations

Teaching Assignments with student evaluation

Course Section, Term	# Excellent	# Good	# Average	# Fair	# Poor	Totals
MATH 2345.02 (Spring 2005)	275	161	48	5	0	489
MATH 1357.03 (Spring 2005)	152	24	9	3	1	189
MATH 1357.06 (Spring 2005)	266	86	23	1	0	376
MATH 1401.03 (Fall 2004)	194	137	39	9	2	381
MATH 1401.04 (Fall 2004)	137	147	5	5	2	296
Total Across All Classes and Terms	1024	556	124	23	5	1732
	<u>91.4%</u>		7%	1.3%	0.3%	
Course Section, Term	# Excellent	# Good	# Average	# Fair	# Poor	Totals
MATH 1450.06 (Spring 2006)	86	90	4	1	0	181
MATH 6362.01 (Spring 2006)	85	22	1	0	0	108
MATH 4318.01 (Fall 2005)	156	65	15	2	3	241
MATH 1470.03 (Fall 2005)	234	69	27	3	0	333
Total Across All Classes and Terms	561	246	47	6	3	863
	<u>93.5%</u>		5.4%	0.7%	0.4%	
Course Section, Term	# Excellent	# Good	# Average	# Fair	# Poor	Totals
MATH 2401.01 (Spring 2007)	262	161	12	0	0	435
MATH 2401.02 (Spring 2007)	263	106	10	0	0	379
MATH 1460.01 (Fall 2006)	285	148	43	12	0	488
MATH 1460.03 (Fall 2006)	269	111	17	3	0	400
Total Across All Classes and Terms	1079	526	82	15	0	1702
	<u>94.3%</u>		4.8%	0.9%	0%	
Course Section, Term	# Excellent	# Good	# Average	# Fair	# Poor	Totals
MATH 2401.01 (Spring 2008)	182	62	28	2	0	274
MATH 2401.02 (Spring 2008)	226	131	51	17	2	417
MATH 1470.01 (Fall 2007)	249	127	26	5	0	417
MATH 1470.02 (Fall 2007)	198	120	21	4	15	348
Total Across All Classes and Terms	775	440	126	28	17	1456
	<u>90.4%</u>		6.6%	1.9%	1.1%	

Course Section, Term	# Excellent	# Good	# Average	# Fair	# Poor	Totals
MATH 7301.16 (Spring 2009)	18	0	0	0	0	18
MATH 1460.03 (Spring 2009)	247	69	25	5	0	369
MATH 1460.05 (Spring 2009)	232	77	30	11	0	350
MATH 7300.03 (Fall 2008)	20	0	0	0	0	20
MATH 6399.01 (Fall 2008)	150	15	2	0	0	167
MATH 1450.01 (Fall 2008)	269	44	10	8	1	332
Total Across All Classes and Terms	936	205	67	24	1	1233
	<u>93%</u>		5%	1.9%	0.1%	
Course Section, Term	# Excellent	# Good	# Average	# Fair	# Poor	Totals
MATH 7301.02 (SSI 2010)	18	0	0	0	0	18
MATH 7301.04 (Spring 2010)	18	0	0	0	0	18
MATH 6399.01 (Spring 2010)	113	13	0	0	0	126
MATH 4318.01 (Spring 2010)	165	30	3	0	0	198
MATH 3349.04 (Spring 2010)	236	146	48	14	8	452
MATH 1340.06 (Spring 2010)	189	89	59	13	22	372
MATH 7300.04 (Fall 2009)	18	0	0	0	0	18
MATH 1334.05 (Fall 2009)	145	145	129	21	7	447
MATH 1342.02 (Fall 2009)	268	60	21	1	1	351
MATH 1342.03 (Fall 2009)	275	136	46	11	4	472
Total Across All Classes and Terms	1445	619	306	60	42	2472
	<u>90%</u>		6.5%	2%	1.5%	
MATH 7301.06 (Spring 2011)	35	0	0	0	0	35
MATH 3345.02 (Spring 2011)	226	82	12	1	0	321
MATH 3328.02 (Spring 2011)	312	53	8	2	1	376
MATH 7300.07 (Fall 2010)	18	0	0	0	0	18
MATH 3328.01 (Fall 2010)	223	145	10	18	0	396
MATH 1340.08 (Fall 2010)	152	90	36	25	3	306
MATH 1340.09 (Fall 2010)	186	120	63	6	1	376
Total Across All	1152	490	129	52	5	1828

Classes and Terms	<u>90%</u>		7%	2.8%	0.2%	
	MATH 7301.01 (Spring 2012)	18	0	0	0	0
MATH 2401.01 (Spring 2012)	273	128	27	4	0	432
MATH 2401.02 (Spring 2012)	279	53	26	2	0	360
MATH 7301.01 (Fall 2011)	18	0	0	0	0	18
MATH 6362.01 (Fall 2011)	118	28	20	13	1	180
MATH 2401.03 (Fall 2011)	191	79	42	26	2	340
Total Across All Classes and Terms	1007	298	115	45	3	1448
	<u>90%</u>		7%	2.8%	0.2%	

Effective Teaching Efforts

- Gave a summary of the previous class before teaching new materials. In this way, students are able to easily follow the class, and they like it very much.
- Conducted a clear review session before each test and final exam, which were very popular among my students.
- Often communicated with my students in different ways such as asking questions in the class questions and letting students answer in the class, talking in my office hours, sending emails, speaking over the phones etc. I often collected students' needs, and asked for their questions/comments to improve my teaching style to solve the students' problems. I have also found that over time my relationship with students has evolved into a unique connection.
- My course materials are well-organized, well-prepared, and effective at all times. I plan to set up a new course of "integrable dynamical systems" for graduate students in Spring/Fall 2013, if possible.
- In the past, I mentored 4 postdoctoral researchers, 24 graduate students and 7 undergraduate students through my grants. Most of graduate students pursued Ph D studies, and most of undergraduates continued their master studies.

Honors and distinctions (20)

1. Honorary professor of Xuzhou Normal University, Xuzhou, since 2006.
2. Honorary professor of Liaoning University, Shenyang, since 2005.
3. Visiting professor of Inner Mongolia University, summer time since 2010.
4. Director of Applied Math Institute, Inner Mongolia University, summer time, since 2007
5. Visiting professor of Fudan University, Shanghai, summer 2007.
6. Visiting professor of Delaware State University, summer 2005.
7. <u>Humboldt Research Fellow</u> of the Alexander von Humboldt Foundation, University Kassel, Germany, 1999 – 2001 and Summer 2005 and 2008
8. Associate Member of the International Center of Theoretical Physics and the Third World Academic Science (ICTP/TWAS), Trieste, Italy, 2001 – 2008.
9. DOE – LANL Program Researcher, Los Alamos National Laboratory, Los Alamos, New Mexico, USA, 2001– 2004.
10. Our research project: LANS-alpha Turbo-Simulator – A New Approach to Simulating Turbulence won 2003 R & D 100 Awards, which is designed in the whole USA for all natural sciences to honor significant commercial promise in products, materials, or processes developed by the international research and development community. I am one of the International Turbulence Working Group members (International Turbulence Working Group, Los Alamos National Laboratory, USA; Chairman: D. Holm, Members: K. Chartrand, C. Jeffery, R. Malone, L. Margolin, J. Mohd-Yusof, B. Nadida, Zhijun Qiao , M. Staley, M. Taylor, B. Wingate).
11. Ph D Thesis was awarded as one of the most four Excellent Dissertations of Mathematics in the whole China, 1999.
12. Research Project: ‘Nonlinear Completely Integrable Systems’ was awarded the 2 nd class prize of Science and Technology Progress Award of Liaoning Province, China, 1998
13. Senior Visiting Professor invited by University of Kassel, Germany, 1997
14. Recipient of the prestigious Chinese National Government Special Prize since 1996.
15. Member of the First National Hundred and Thousand Talent Team, 1996.
16. Excellent Young Scientific and Technological Worker, Liaoning Province, 1995.
17. Paper ‘On Commutator Representations of Soliton Equations’ was awarded the 1st class prize of excellent papers in the 2nd Youth Academic Conference by Science and Technology Association of China, Liaoning Province, 1995.
18. Outstanding Teaching Award for Young Faculty in Liaoning Province, 1993.
19. Paper ‘Four New Completely Integrable Hamiltonian Systems’ was awarded the 1st class prize of excellent papers by the Mathematical Society of Liaoning Province, 1993.
20. Paper ‘C Neumann Constraint and C Neumann integrable Systems’ was awarded the

1st class prize of excellent papers in the 1st Youth Academic Conference by Science and Technology Association of China, Liaoning Province, 1992.

In my research, I have been working in the area of Mathematical Physics, Partial Differential Equation, Analysis, Soliton Theory, Integrable Systems, and Inverse Problems and Image Reconstruction since 1986. I have already published 2 research monographs and more than 110 refereed journal articles (see more details in publications list) in prestigious international journals such as *Communications in Mathematical Physics*, *Europhysics Letters*, *Reviews in Mathematical Physics*, *Communications in Partial Differential Equations*, *IEEE transactions on geoscience and remote sensing*, etc. In particular, one of my recent works on shallow water equations and peaked solitons was published in *Communications in Mathematical Physics*, which is the top journal in the area of mathematical physics. In addition, for the first time I proposed the M/W-shape soliton solution (See *Journal of Mathematical Physics*, 47(2006), 112701) in the soliton theory, which I found for an integrable equation that people called the Qiao or Fokas-Qiao equation (See *Journal of Physics A: Math. Theor.* 41 (2008) 372002, and http://jmp.aip.org/resource/1/jmapaq/v53/i7/p073710_s1?isAuthorized=no by the well-known author Prof. Enrique G. Reyes). My another new work: New integrable hierarchy, parametric solutions, cuspons, one-peak solitons, and M/W-shape peak solutions, *Journal of Mathematical Physics* 48, 082701-20 was also named as the Qiao equation by a well-known expert Prof. Sergei Sakovich in his paper arXiv:1010.1907 (Title: Smooth soliton solutions of a new integrable equation by Qiao), and my this work has already been extended to: Generalized Qiao hierarchy in 2+1 dimensions: Reciprocal transformations, spectral problem and non-isospectrality *Physics Letters A, Volume 375, Issue 3, 17 January 2011, Pages 537-540* by P.G. Estévez.

Very recently, I proposed the negative KdV equation and first time found an integrable system may have both soliton and kink solutions, which is a new discovery for soliton theory (See *Europhys. Lett.*, 94(2011), 50003). Also I have 15 significant articles published in the prestigious international journals such as *Communications in Mathematical Physics*, *Journal of Mathematical Physics*, *Europhysics Letters*, *Physics Reviews E*, *Reviews in Mathematical Physics*, *Communications in Partial Differential Equations*, *IEEE transactions on geoscience and remote sensing*, etc. In the past twenty years, I received 20 grants and 20 honors and distinctions, presented 69 research talks in international and national conferences/workshops and 113 research talks in the invited colloquium presentations and in regional and local conferences. In particular, in September 2008, as a PI, I won a half million grant from the U.S. Department of Defense on the research of partial differential equations and radar image reconstruction (see more details in the newspaper of The Monitor (June 2 version), or <http://www.themonitor.com>, and Edinburg Review (July 7 and July 15 version) or <http://www.edinburgreview.com>. Very recently, as a PI, I won another half million (\$530K) grant from the U.S. Department of Education on the GAANN graduate fellowships program, and the prestigious award from the THECB, called NHARP program grant \$145K, see more details at <http://www.utpa.edu/news/index.cfm?newsid=4050> or campus newsletter. My research proposal in applied mathematics was ranked second out of the eight funded math proposals in all Texas universities and research institutions. This award was among the more than \$15

million awarded to 112 proposals and the only one from NHARP received by UTPA in 2010.

Research grants (20 grants funded, total \$1,788,821.00)

Funded proposal

Date/Status	Project Title	Agency	Amount
2012-2015 PI	GAANN Fellowships in Mathematics at University of Texas – Pan American	DoED	\$533,064.00 Active Grant
2008-2012 PI	Micro-Local PDEs Analysis and Image Reconstruction of Moving Targets	DoD	\$550,646.00 Active Grant
2010-2013 PI	Fourier Integral Operation and Its Applications in Synthetic Aperture Radar (SAR) Image Restoration	NHARP	\$145K Active Grant
2010 – 2011 PI	Summer Initiative Research	UTPA – Graduate Office	\$8,000.00
2008 – 2009 PI	Weak Solutions of integrable equations	UTPA – URI	\$2,000.00
2008 – 2009 PI	Image reconstruction of moving target	UTPA – URI	\$2,000.00
2007 – 2008 Supervisor	Demonstrating important formulas through strict proof	UTPA – LSAMP	\$2,500.00
2007 – 2008 PI	Solitons and integrable equations	UTPA – FRC	\$3,975.00
2007 – 2008 PI	Nonlinear Integrable Equations	UTPA – URI	\$2,000.00
2007 – 2008 PI	Traveling wave solutions for water wave equations	UTPA – URI	\$2,000.00
2005 – 2006 PI	Nonlinear Integrable Equations	UTPA – FRC	\$3,100.00
2004 – 2005 PI	Faculty Development Fund Program	UTPA – FDC	\$1,600.00
1999 – 2005 PI	Nonlinear Integrable Dynamical Systems – Special Grant for the Chinese National Excellent Ph D Thesis	Ministry of Education, PR China	\$60,000.00
2001 – 2004 PI	Integrable equation, r -matrix and algebro-geometric solution	Los Alamos National Laboratory	\$250,000.00
1999 – 2001 PI	Nonlinear Completely Integrable System	the Alexander von Humboldt Foundation	\$100,000.00
1999 – 2004	'Pan Deng Plan', i.e. Chinese	Chinese National	\$10,000.00

Co-PI	National Significant Basic Research Project 'Nonlinear Science'	Association of Science and Technology	
1997 – 1999 PI	r -matrix Structures for Nonlinear Integrable Systems	China Postdoctoral Science Foundation	\$10,000.00
1997 – 1999 PI	Nonlinear Integrable Hamiltonian Systems	Natural Science Foundation of Liaoning Province	\$10,000.00
1996 – 1998 PI	Loop Group and Integrable System	Natural Science Foundation, PR China	\$15,000.00
1995 – 1999 Co-PI	Geometric Theory and Algebraic Methods of Integrable Systems	Ministry of Education, PR China	\$80,000.00

Research Presentations

Research Presentations at National and International Meetings (69 talks)

1. One-hour invited speaker on “negative order KdV equations” at the International Conference on Dynamical Systems and Related Topics, Shijiazhuang, China, 5/25-5/29, 2012.
2. Invited talk on Principles of 3D Turntable Radar Imaging at 2012 4th International Conference on Communications, Mobility, and Computing, 5/21-5/23, 2012, Guilin, China.
3. Invited talk on Edge Detection of Real Synthetic Aperture Radar Images through Filtered Back Projection at The 2012 International Conference on Systems and Informatics (ICSAI 2012), 5/19 – 5/20 2012, Yantai, China.
4. Invited talk on “Negative order KdV equations” at the Sixth International Conference on Recent Advances in Applied Dynamical Systems, 6/25-6/28, 2012, Guangzhou University, Guangzhou, China.
5. Invited presentation on Filtered Back-Projection of Turntable ISAR Image at the international workshop on Challenges in Synthetic Aperture Radar, UCLA – IPAM, Los Angeles, CA, 2/5 – 2/10, 2012.
6. Invited one-hour speaker on “negative order KdV equation with soliton and kink solutions” at the international workshop on Wave Breaking and Global Solutions in the Short-Pulse Dispersive Equations, Field Institute, University of Toronto, Canada, May 2 -5, 2011.
7. Invited presentation on “3D ISAR image reconstruction of targets through 2D rotations”, 2011 SPIE Optical Engineering + Applications, August 21 – 25, 2011, San Diego, California.
8. Invited presentation on “Filtered back projection inversion of turntable ISAR data”, SPIE annual meeting, Defense, Security, and Sensing 2011, April 24-29, 2011, Orlando, Florida.

9. Invited presentation on “Resolution analysis of bistatic SAR image”, SPIE annual meeting, Defense, Security, and Sensing 2011, April 24-29, 2011, Orlando, Florida.
10. Invited presentation on “Synthetic aperture radar image processing in the cross-range”, 2011 Radar Conference, May 22 – 26, 2011, Kansas City, Missouri.
11. Invited presentation on “A Filtered Back-Projection Algorithm for ISAR Imaging”, International Workshop on 2011 Applied Mathematics and Image Processing Summer Workshop, May 31 – June 2, 2011, UTPA, Edinburg, Texas.
12. Invited presentation on “Integral Operators In SAR Imaging”, International Workshop on 2011 Applied Mathematics and Image Processing Summer Workshop, May 31 – June 2, 2011, UTPA, Edinburg, Texas.
13. An invited talk on “negative KdV hierarchy with soliton and kink solutions” presented at The Seventh IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, University of Georgia, Athens, GA, April 4 - 7, 2011.
14. Deliver a talk on “PDEs Analysis and SAR imaging reconstruction” presented at The Department of Defense – the National HBCU and MI Conference, Atlanta, Georgia, March 22 – 24, 2011.
15. Invited one-hour talk on “Negative KdV flows with both kink wave and soliton solutions” at International Workshop for Nonlinear Dispersive Equations, Center for Nonlinear Sciences, Northwest University, Xi'an, China, Jan 8, 2011.
16. Invited one-hour talk on “Negative integrable equations with peakon and cuspon solutions” at International Workshop for Integrable Systems and Solitons, Institute of Mathematics, Fudan University, Shanghai, China, Jan 10, 2011.
17. Invited one-hour talk on “the DP equation and its solutions” at national workshop on Integrable Systems and Applications, University of Texas – Arlington, October 28 – 31, 2010
18. Invited talk on “Integrable systems possessing weak solutions”, The international conference on differential equations and spectral theory, Inner Mongolia University, Hu He Hao Te, China, July 3 - July 5, 2010
19. Invited talk on “Integrable peakon and cuspon equations”, The Fourth Shanghai International Symposium on Nonlinear Sciences and Applications (Shanghai NSA'10) , Xuzhou and Shanghai, June 27-July 2, 2010
20. Invited talk on “Integrable equations with peakon, cuspon and W/M-shape solitons”, the Fourth International Conference on Recent Advances in Applied Dynamical Systems, Jinhua, China, June 17--20th, 2010.
21. Invited presentation on “Cross-range imaging of SAR and PDE analysis”, May 2010, DoD Program Workshop on Applied Math and Analysis for Radar Data and Image, Department of Mathematics, University of Texas Pan-American, Edinburg, Texas.
22. Invited presentation on “Synthetic Aperture Imaging in the Cross-Range”, April 2010, SPIE annual meeting, Orlando, Florida.
23. Invited talk on “partial differential equations and solitons”, January 2010, American Mathematical Society (AMS) annual meeting, San Francisco, CA.
24. An invited talk on “1+1 Dimensional Integrable Peakon and Cuspon Equations” presented at the Sixth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, USA, March 22 – 26, 2009.

25. An invited talk on “PDEs Analysis and SAR imaging reconstruction” presented at The Department of Defense – the National HBCU and MI Conference, Atlanta, Georgia, February 2 – 4, 2009.
26. An invited talk on “Peakon Equations with New Non-smooth Solutions” presented at the Jointing Annual Meetings of the AMS and MAA, Washington DC, USA, January 5 – 8, 2009.
27. An invited talk on “Integrable Equations with Peakon and Cuspon Solutions” presented at the International Joint Meeting of the AMS and SMS, Dec 17 – 21, 2008, Shanghai, China.
28. An invited talk on “Integrable Peakon and Cuspon Equations” presented at the International Conference of Mathematical Problems in Engineering, Aerospace and Sciences, University of Genoa, Italy, June 25 – 27, 2008.
29. An invited participation and talk on “Integrable Systems with Peakon and Cuspon Solutions” at the Nonlinear Wave 2008 Workshop: Multidimensional Localized Structures, Universita di Roma "La Sapienza", Rome, Italy, July, 2008.
30. An invited participation and talk on “Integrable Peakon Equations” at the workshop "Nonlinear Physics: Theory and Experiment V", the Ecoresort Le Sirenè, Gallipoli, Italy, June 12 – 21, 2008.
31. An invited talk on “M-shape peakon equations” at the 6th International Conference on Differential Equations and Dynamical Systems, Morgan State University, Baltimore, Maryland, USA, May 22 – 26, 2008.
32. An invited talk on “Integrable Equation with W/M Shape Peakons” presented at the Jointing Annual Meetings of the American Mathematical Society and the Society of Industrial and Applied Mathematics in January 2008, San Diego, CA, USA.
33. An invited talk on “Integrable peakon and cuspon equations” presented at the research workshop on solitons and integrable systems in March 2008, UTPA, Edinburg, TX, USA.
34. An invited talk on “Finite-dimensional integrable dynamical systems” presented at the International Workshop: Applied Mathematics – DoD program in Aug 2007, Delaware State University, Dover, Delaware, USA.
35. An invited talk on “CH peakon system and r -matrix structure” presented at the Fifth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, April 2007, Athens, GA, USA.
36. An invited talk on “A new integrable equation and its solution” presented at the Jointing Annual Meetings of the American Mathematical Society and the Society of Industrial and Applied Mathematics in January 2007, New Orleans, LA, USA.
37. An invited talk on “Peaked Solitons Equations” presented at the 5th International Conference on Differential Equations and Dynamical Systems, December 16-18, 2006, Edinburg, Texas, USA.
38. An invited talk on “Toda Lattice and Integrable Symplectic Mapping” presented at the International Conference of the Society of Industrial and Applied Mathematics: SIAM – NW06 in Sept 2006, University of Washington, Seattle, Washington, USA.
39. An invited talk on “Nonlinear Integral Models in Fluid Dynamics II” presented at the International Workshop: Applied Mathematics – DoD program in Aug 2006, Delaware Sate University, Dover, Delaware.

40. An invited talk on “A new integrable equation and its solution” presented at the Jointing Annual Meetings of the American Mathematical Society and the Society of Industrial and Applied Mathematics in January 2006, San Antonio Texas.
41. An invited talk on “Peaked Solitons Equations” presented at the AMS Sectional Meeting in April 2006, University of Notre Dame, Notre Dame, Indiana.
42. An invited talk on “Shallow water equation on a symplectic submanifold and solutions” presented at the AMS Sectional Meeting in Oct 2005, University of Nebraska at Lincoln, Lincoln, Nebraska.
43. An invited talk on “Nonlinear Integrable Models in Fluid Dynamics I” presented at the International Workshop: Applied Mathematics – DoD program in Aug 2005, Delaware Sate University, Dover, Delaware.
44. An invited talk on “Explicit Solution and R-matrix Structure of Integrable Systems”, *Conference on Geometry, Integrability and Quantization*, Bulgarian Academy of Sciences, Varna, Bulgaria, July 2005.
45. An invited talk on “An integrable hierarchy and its parametric solutions” presented at Joint Meeting of AMS, DMV, and ÖMG, June 2005 Johannes Gutenberg University Mainz, Germany.
46. An invited talk on “The Generalized Camassa-Holm Hierarchy and Its Solutions” presented at the 6th International Conference on Symmetry in Nonlinear Mathematical Physics, June 2005, Kyiv, Ukraine.
47. An invited talk on “Cuspon for a family of nonlinear equations” presented at the Jointing Annual Meetings of the American Mathematical Society and the Society of Industrial and Applied Mathematics in January 2005, Atlanta, Georgia.
48. An invited talk on “Nonlinear Peakon-like wave equations and integrability” presented at the International Conference of the Society of Industrial and Applied Mathematics: SIAM – NW04 in Oct 2004, University of Central Florida, Orlando, Florida.
49. In July 2004, an invited attendance on Summer School: Mathematics in Brain Imaging, Institute for Pure and Applied Mathematics (IPAM), University of California – Los Angeles, California.
50. In June - July 2004, an invited talk on “The Camassa-Holm Hierarchy and Its Exact Solution” in the 4th World Congress of Nonlinear Analysisists, Grand Hyatt Cypress, Orlando, Florida, USA.
51. In May 2004, an invited talk on “A New Integrable Hierarchy and Its Exact Solution” in the Sixth International Joint Meeting of the AMS and the Sociedad Matematica Mexicana (SMM), Hyatt Regency Houston, Houston, Texas, USA.
52. In Feb 2004, an invited talk on “Integrable Hamiltonian System in Nonlinear Fluid Dynamics” at the kick-off meeting of the research project between Department of Defence and Delaware State University, Department of Mathematics, Delaware State University, Dover, Delaware.
53. In Jan 2004, an invited talk on “A Hierarchy of Nonlinear integrable PDEs and Its Exact Solution” in the Jointing Annual Meetings of the American Mathematical Society and the Society of Industrial and Applied Mathematics (SIAM), Phoenix, Arizona.

54. In Oct 2003, an invited talk on “Completely integrable systems – the Camassa-Holm hierarchy and algebra-geometric solution” in the AMS Meeting, Department of Applied Mathematics, University of Colorado, Boulder, USA.
55. In May 2003, an invited talk on “Generalized shallow water equation and its solutions” in the International Conference of SIAM Dynamical System 2003, Snowbird, UT.
56. In Apr. 2003, an invited talk on “Generalized Camassa-Holm equation and its solutions” in the 2nd IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, University of Georgia, Athens, GA.
57. In Feb. 2003, an invited talk on “Nonlinear constrained integrable system and solutions for the Camassa-Holm hierarchy” in the Arizona/Los Alamos Days 2003, the International Workshop on Applied Mathematics, Department of Mathematics, University of Arizona, Tucson, AZ, USA.
58. In Nov. 2002, an invited talk on “an integrable hierarchy, parametric solution and traveling wave solution” in the AMS Meeting, Department of Mathematics, University of Central Florida, Orlando, USA.
59. In Oct. 2002, an invited talk on “The Camassa-Holm hierarchy, r -matrix structure, and algebra-geometric solution on a symplectic submanifold” in the AMS Meeting, Department of Mathematics, Northeastern University, Boston, USA.
60. In February 2002, an invited talk on “Finite dimensional integrable systems related to nonlinear wave equations” in the Arizona Days 2002, the International Workshop on Applied Mathematics, T-CNLS, Los Alamos National Laboratory, Los Alamos, USA.
61. In Jan. 2002, an invited attendance on “Nonlinear Evolution Equations and Integrable Systems” in the Jointing Annual Meetings of the American Mathematical Society (AMS) and the Society of Industrial and Applied Mathematics (SIAM), San Diego, California .
62. In July 2001, an invited talk on “Negative MKdV hierarchy and a new Integrable Neuman-like system” in the International Workshop – Nonlinear Evolution Equations and Dynamical Systems (NEEDS-2001), University of Cambridge, Cambridge, England.
63. In June 2001, an invited attendance in the international Conference of Nobel-Prize-Winners, Lindau, Germany.
64. In Oct. 2000, an invited talk on “Integrable Hamiltonian Flows” in the International Workshop on Non-Newtonian and viscoelastic fluid flows: mathematical theory, modeling and applications, Scuola Normale Superiore, Pisa, Italy.
65. In Sep. 2000, an invited attendance on “Computer Algebra – MuPAD future symposium” in the International Workshop of MuPAD, University of Paderborn, Germany.
66. In June and July 2000, an invited talk on “Different integrable systems sharing the same r -matrix structures” in the International Workshop – Nonlinear Evolution Equations and Dynamical Systems (NEEDS-2000), Goekova, Turkey.
67. In July 1999, an invited talk on “ r -matrix structure and algebro-geometric solution of integrable systems” in the 1st DDAP International Conference on Nonlinear Science, Hong Kong, PR China.

68. In Oct.1996, an invited talk on “ r -matrix of the Toda lattice equation” in the Conference of China 863 Plan – Nonlinear Sciences at University of Chinese Science and Technology, Hefei, PR China.
69. In Aug. 1993, an invited talk on “An integrable system associated with the Levi hierarchy” in the 2nd International Conference of Nonlinear Mechanics, Beijing, PR China.

Invited Colloquium Talks and Presentations at State and Local Levels (113 talks)

1. Specially external Invited colloquia speaker to University of Notre Dame, 9/25-10/1, 2012, giving a series of three lectures: 1) The CH peakon system and algebro-geometric solution on a symplectic submanifold, 2) The DP hierarchy, and 3) New integrable peakon, cuspon and kink systems with cubic and quartic nonlinearity.
2. Specially external Invited colloquia speaker to Beihang University, Beijing, China, two periods: 5/9-5/14, 2012, 7/3-7/8, 2012, giving a presentation on Principles of 2D and 3D Turntable Radar Imaging and paying a back visit to Dr. Sun and Dr. Chen's group for a collaborative research.
3. Specially external invited colloquia speaker to Zhaoqing University, one of UTPA partner institutions in China, 5/14-5/18, 2012, giving a presentation on integrable negative order equations and paying a back visit to Vice President of Zhaoqing University Dr. Wang's group for a collaborative research.
4. Specially external invited colloquia speaker to Zhejiang Normal University, Jinhua, China, 6/5-6/9, 2012, giving a series of two talks: one “A Generalized Camassa-Holm Equation and N-Peon Solutions”, and the other “Integrable Negative Order Equations”, and paying a back visit to Prof. Jibin Li's group for a collaborative research.
5. Specially external invited colloquia speaker to Shijiazhuang Tiedao University, Shijiazhuang, China, 5/26-5/29, 2012, giving a series of two talks: one “Integrable Peakon and Cuspon Equations”, and the other “Integrable Negative Order Equations”, and visit Prof. Zhuquan Gu's group for a collaborative research.
6. Specially external invited colloquia speaker to Inner Mongolia University, Huhehaote, China, 6/17-6/18, 2012, giving a series of two talks: one “Frontier trends in solitons and integrable systems - negative order integrable systems”, and the other “Negative Order KdV Hierarchy”, and visit Dr. Alatanjang's group for a collaborative research.
7. Invited colloquia talk on “Integrable Cubic Peakon Equations”, Fudan University, Shanghai, China, 6/1-6/3, 2012.
8. Invited colloquia talk on “A Generalized Camassa-Holm Equation and N-Peon Solutions”, Shanghai University, Shanghai, China, 6/3-6/5, 2012.
9. Invited colloquia talk on “Negative Order KdV Equations”, Ningbo University, Zhejiang, China, 6/9-6/10, 2012.
10. Invited colloquia talk on “Integrable Negative Order Equations”, Xiangtan University, Xiangtan, China, 5/29-6/1, 2012.
11. Invited colloquia talk on “Integrable Peakon Equations”, Hunan University, Changsha, China, 5/30, 2012.
12. Invited colloquia talk on “Integrable Cuspon and Peakon Equations”, Yunnan Normal University, Kunming, China, 5/24-5/26, 2012.

13. Invited colloquia talk on “Integrable Equations with Cuspons and Peakons”, Guilin Electrical Tech University, Guilin, China, 5/21-5/24, 2012.
14. Invited colloquia talk on “Integrable Equations with Cuspons and Peakons”, Shandong University – Weihai, Weihai, China, 5/19-5/21, 2012.
15. Invited colloquia talk on “Integrable Negative Order KdV Hierarchy”, Tsinghua University, Beijing, China, 5/6-5/9, 2012.
16. Invited colloquia talk on “A Generalized Camassa-Holm Equation and N-Peakon Solutions”, School of Mathematical and System Sciences, Chinese Academy of Science, Beijing, PR China, 5/12/2012.
17. Invited colloquia talk on “Negative Order KdV equations”, Institute of Computer Sciences, Chinese Academy of Science, Beijing, PR China, 5/13/2012.
18. Invited colloquia talk on “Integrable Negative Order Equations”, Dalian Technic University, Dalian, China, 6/13-6/16, 2012.
19. Invited colloquia talk on “Frontier trends in solitons and integrable systems - negative order integrable systems”, Inner Mongolia Normal University, Huhehaote, China, 6/16-6/18, 2012.
20. Invited colloquia talk on “Integrable Equations with Cuspons and Peakons”, Huanan Technic University, Guangzhou, China, 6/23-6/27, 2012.
21. Invited colloquia talk on “Frontier trends in solitons and integrable systems – Integrable negative order equations”, China University of Mining, Xuzhou, China, 6/29, 2012.
22. Invited colloquia talk on “Negative order KdV equations”, Jiangsu Normal University, Xuzhou, China, 6/30, 2012.
23. Invited colloquia talk on “Integrable Equations with Cuspons and Peakons”, Shandong University of Technology and Sciences, Qingdao, China, 7/2, 2012.
24. Invited colloquia talk on “Frontier trends in solitons and integrable systems – Integrable negative order equations”, Qingdao Technic University, Qingdao, China, 7/3, 2012.
25. Delivered a lecture on “Negative order KdV equations” at the Applied Math Seminar, Dept Math, UTPA, 2/1/2012.
26. Delivered an invited lecture on “Differential models and ISAR image reconstruction” at Neuroscience and Cell Biology, Division of Gastroenterology, UTMB -- Galveston, Texas, 7/2/2011.
27. Delivered an invited lecture on “Maxwell equations and SAR image reconstruction” at Neuroscience and Cell Biology, Division of Gastroenterology, UTMB -- Galveston, Texas, 3/20/2011.
28. An invited talk on “Integrable CH peakons and cuspons equations”, School of Mathematical Sciences, Georgia State University, Atlanta, Georgia, 3/18/2011.
29. Delivered a lecture on “Integrable systems with diverse solitons – Negative order KdV equation” at the Applied Math Seminar, Dept Math, UTPA, 2/28/2011.
30. An invited talk on “Negative order KdV hierarchy and kink waves”, School of Mathematical Sciences, Shanghai University, Shanghai, PR China, 1/10/2011.
31. An invited talk on “CH peakons and cuspons”, School of Mathematical Sciences, Huadong Normal University, Shanghai, PR China, 1/11/2011.
32. An invited talk on “Negative order integrable equations”, Dept of Computer Sciences, Zhaoqing University, Zhaoqing, PR China, 12/28/2010.

33. An invited talk on “Negative order KdV equations”, School of Mathematical and System Sciences, Chinese Academy of Science, Beijing, PR China, 12/26/2010.
34. An invited talk on “Negative KdV equations with kink wave and solitons”, Institute of Computer Sciences, Chinese Academy of Science, Beijing, PR China, 12/24/2010.
35. An invited talk on “Negative order integrable equations”, School of Mathematical Sciences, Capital Normal University, Beijing, PR China, 12/23/2010.
36. An invited talk on “integrable peakon and cuspon equations”, Holiday workshop on Applied Mathematics, Math Dept. UTPA, 12/19/2010.
37. Delivered a lecture on “Negative order integrable systems” at Math Dept, Texas State University, 12/17/2010.
38. Delivered a lecture on “The Degasperis-Procesi Hierarchy” at the Integrable System Seminar, Dept Math, UTPA, 10/4/2010.
39. An invited colloquium talk on “Cross-Range Imaging of SAR and PDE Analysis”, Radar Lab, Xidian University, Xi'an, China, July 31, 2010.
40. An invited colloquium talk on “How to find peakon and cuspon solutions for some integrable equations”, Northwest University, Xi'an, China, July 30, 2010.
41. An invited colloquium talk on “integrable peakon and cuspon equations”, Inner Mongolia University for Nationality, Tongliao, China, July 21, 2010.
42. An invited colloquium talk on “integrable systems with peakons and cuspons”, Inner Mongolia Normal University, Huhehaote, China, July 9, 2010.
43. An invited colloquium talk on “integrable equations with peakon, cuspon, and W/M shape solitons”, Fudan University, Shanghai, China, June 29, 2010.
44. An invited colloquium talk on “integrable equations with non-smooth solitons”, Shanghai 2nd Polytechnic University, Shanghai, China, June 28, 2010.
45. An invited colloquium talk on “integrable equations with peakon and W/M shape solitons”, Southeastern University, Nanjing, China, June 24, 2010.
46. An invited colloquium talk on “integrable equations with W/M shape solitons”, Zhejiang Normal University, China, June 21, 2010.
47. An invited colloquium talk on “The Degasperis-Procesi equation”, Zhejiang Normal University, China, June 22, 2010.
48. Delivered an invited lecture on “Integrable Systems (III) - Traveling waves for integrable equations” at Zhaoqing University, China, June 16, 2010.
49. Delivered an invited lecture on “Integrable Systems (II) - Traveling waves for integrable equations” at Zhaoqing University, China, June 14, 2010.
50. Delivered an invited lecture on “Integrable Systems (I) - Traveling waves for integrable equations” at Zhaoqing University, China, June 11, 2010.
51. An invited colloquium talk on “integrable equations with peakon, cuspon and W/M shape solitons”, presented at Zhong Shan University, China, June 9, 2010.
52. Delivered a lecture on “Integrability and r-matrix structure of nonlinear equations” at the Applied Math Seminar, Dept Math, UTPA, April 21, 2010.
53. An invited colloquium talk on “integrable peakon and cuspon systems”, presented at University of South Florida, FL, April 9, 2010.
54. An invited colloquium talk on Integrable Systems with W/M-shape Solitons and Cuspons, March 8, 2010, Mathematics Colloquium, Texas State University.
55. An invited colloquium talk on Integrable Systems with Peakons and Cuspons, Feb 8, 2010, Mathematics Colloquium, Texas Tech University.

56. Delivered a lecture on “CH equation” at the Integrable System Seminar, Dept Math, UTPA, November 9, 2009.
57. Delivered a lecture on “CH hierarchy” at the Integrable System Seminar, Dept Math, UTPA, November 16, 2009.
58. An invited talk on “Integrable peakon and cuspon models: The DP Hierarchy and Its Solutions I – traveling wave peakon solutions”, presented at Southern Polytechnic State University, Marietta, GA, March 26, 2009.
59. Delivered a lecture on “New integrable equations with non-smooth solitons” at the Integrable System Seminar, Dept Math, UTPA, February 21, 2009.
60. An invited talk on “Integrable peakon and cuspon equations”, Department of Mathematics, Florida International University, February 5, 2009,
61. An invited talk on “ r -matrix Structures of Integrable Systems” at the First South Texas Algebra Colloquium, UTPA, January 21, 2009.
62. An invited colloquium talk on “On Micro-local analysis of SAR Imaging”, National Key Lab of Microwave Imaging Technology, Institute of Electronics, Chinese Academy of Sciences January 8, 2009.
63. An invited talk on “Integrable peakon and cuspon models: The DP Hierarchy and Its Solutions I – traveling wave peakon solutions”, School of Mathematical Sciences, Capital Normal University, Beijing, PR China, January 7, 2009.
64. An invited talk on “Integrable Symplectic Mapping and r -matrix Structures”, Peking University, Beijing, PR China, January 6, 2009.
65. An invited talk on “Integrable peakon and cuspon equations”, Chinese Academy of Science, Beijing, PR China, January 5, 2009.
66. An invited talk on “Integrable Peakon and Cuspon Equations”, Inner Mongolia University, Huhehote, PR China, December 25, 2008.
67. An invited talk on “An New Integrable Hierarchy I: peakon solutions”, Inner Mongolia University, Huhehote, PR China, December 24, 2008.
68. An invited talk on “The DP Hierarchy and Its Solutions – constraint systems and parametric solutions”, Inner Mongolia Normal University, Huhehote, PR China, December 26, 2008.
69. An invited talk on “Integrable DP hierarchy I: traveling wave peakon solutions”, Shanghai University, Shanghai, PR China, December 21, 2008.
70. An invited talk on “A new integrable equation with new type peakons and cuspons”, Department of Mathematics and Center for Nonlinear Studies, Northwestern University, Xi'an, China, December 2008.
71. Delivered a lecture on “An integrable hierarchy with peakon and cuspon” at the Applied Math Seminar, Dept Math, UTPA, October 1, 2008.
72. An invited talk on “ r -matrix structures of integrable systems” at Texas PDE Conference, UHD, Houston, TX, April 5, 2008
73. An invited talk on “Integrable peaked and cusped equations”, University of Hannover, Hannover, Germany, July 15, 2008.
74. An invited talk on “Integrable peakon and cuspon equations”, University of Goettingen, Goettingen, Germany, July 17, 2008.
75. Delivered 3 lectures on “KdV equations and Conservation Laws” at the Integrable Systems Seminar in Sept 2007, Dept Math, UTPA.

76. Delivered 3 lectures on “Lax pairs and Hamiltonian Structures” at the Integrable Systems Seminar in Feb 2008, Dept Math, UTPA.
77. An invited talk on “The Degasperis-Procesi Hierarchy - Part I”, Ningbo University, Ningbo, PR China, June 30, 2007.
78. An invited talk on “Integrable peakon equation”, Zhengzhou University, Zhengzhou, PR China, June 24, 2007.
79. An invited talk on “Integrable peaked soliton equations”, Liaoning University, Shenyang, PR China, June 19, 2007.
80. An invited talk on “Integrable CH peakon equation”, Shanghai University, Shanghai, PR China, June 14, 2007.
81. An invited talk on “Integrable peaked CH equation”, Fudan University, Shanghai, PR China, June 12, 2007.
82. An invited talk on “Integrable peaked soliton equations and related topics”, Ningbo University, Ningbo, PR China, June 5, 2007.
83. An invited talk on “Integrable peakon equations and related topics”, Chinese Academy of Science, Beijing, PR China, June 1, 2007.
84. An invited talk on “The Degasperis-Procesi Hierarchy and Its Solution”, Chinese Academy of Science, Beijing, China, May 31, 2007.
85. An invited talk on “Integrable peaked and cusped equations and related topics”, Tsinghua University, Beijing, China, May 29, 2007.
86. An invited talk on “The Degasperis-Procesi Hierarchy and Its Solutions” at Texas PDE Conference in March 2007, UTSA.
87. Delivered a lecture on “The Degasperis-Procesi Hierarchy” at the Applied Math Seminar in April 2007, Dept Math, UTPA.
88. Delivered a lecture on “Toda Lattice and Integrable Symplectic Mapping” at the Applied Math Seminar in Sept 2006, Department of Mathematics, UTPA.
89. An invited talk on “A new integrable equation with multi-peaks solitons and tiny solitons” at 2006 Texas Partial Differential Equations Conference in March 2006, University of Texas at Arlington, Arlington, Texas.
90. Delivered a lecture on “Integrable Systems (VII) - A new integrable equation and W-shape soliton solution” at the Applied Math Seminar in Feb 2006, Department of Mathematics, UTPA.
91. An invited talk on “Introduction to Shallow Water Waves and Their Mathematical Theories” presented at Southern Polytechnic State University in Nov 2005, Marietta, GA.
92. Delivered a lecture on “Integrable Systems (II) - Traveling waves for integrable equations (II)” at the Applied Math Seminar in Sept 2005, Department of Mathematics, UTPA.
93. Delivered a lecture on “Integrable Systems (I) - Traveling waves for integrable equations (I)” at the Applied Math Seminar in Sept 2005, Department of Mathematics, UTPA.
94. An invited talk on “Integrable Camassa-Holm equation on symplectic sub-manifold”, *International Center of Theoretical Physics (ICTP) – Italy*, Trieste, Italy, July 2005.
95. Delivered a series of lectures on “Traveling wave solutions for nonlinear partial differential equations (I)” at Applied Math Seminar, Delaware State University in June 2005, Delaware State University, Dover, Delaware.

96. Delivered a series of lectures on "Traveling wave solutions for nonlinear partial differential equations (II)" at Applied Math Seminar, Delaware State University in June 2005, Delaware State University, Dover, Delaware.
97. Delivered a series of lectures on "Traveling wave solutions for nonlinear partial differential equations (III)" at Applied Math Seminar, Delaware State University in June 2005, Delaware State University, Dover, Delaware.
98. An invited lecture on "A New Integrable Hierarchy and its Solutions" at 2005 Texas Partial Differential Equations Conference in March 2005, University of Texas - Pan American, Edinburg, Texas.
99. Delivered a lecture on "Complete Integrable Systems (II) - How to generate an integrable hierarchy from a spectral problem" at the Applied Math Seminar in Feb 2005, Department of Mathematics, UTPA, Edinburg, Texas 78539, USA.
100. Delivered a lecture on "Complete Integrable Systems (I) - Finite Dimensional Case" at the Applied Math Seminar in Sept 2004, Department of Mathematics, UTPA, Edinburg, Texas.
101. An invited talk on "Peaked solution for a shallow water equation", Department of Mathematics, Liaoning University, Shenyang, PR China, December 2004.
102. An invited talk on "Peaked soliton solution and nonlinearization for the Camassa-Holm hierarchy", Institute of Condensed Matter Physics Shanghai Jiao Tong University, Shanghai, PR China, December 2004.
103. An invited talk on "Peakon for the Camassa-Holm equation", Institute of Mathematics, Fu dan University, Shanghai, PR China, December 2004.
104. In May 2004, an invited colloquium talk on "Integrability for Soliton Equations" in the Department of Mathematics, Texas A&M University - Kingsville, Kingsville, Texas.
105. In Feb 2004, an invited colloquium talk on "Integrability for Nonlinear Partial Differential Equations" in the Department of Mathematics, University of Texas - Pan American, Edinburg, Texas.
106. In Oct 2003, a series of invited colloquium talks on Completely Integrable Systems II" in the Center for Nonlinear Studies, Los Alamos National Laboratory, Los Alamos, New Mexico.
107. In Sept 2003, a series of invited colloquium talks on "Completely Integrable Systems I" in the Center for Nonlinear Studies, Los Alamos National Laboratory, Los Alamos, New Mexico.
108. In March 2003, an invited colloquium talk on "Completely integrable system, Camassa-Holm hierarchy, and algebro-geometric solution" in the Department of Mathematics, State University New York - Utica, Utica, New York.
109. In February 2003, an invited colloquium talk on "Completely integrable finite dimensional systems related to soliton equations" in the Department of Mathematics, University of New Mexico Technology and Mining, Socorro, New Mexico.
110. In Nov. 2000, an invited colloquium talk on "How to generate integrable mechanical Hamiltonian systems" in the Institute of Mechanics, University Kassel, Germany.
111. In Oct. 2000, an invited colloquium talk on "Finite dimensional integrable systems" in the Center of Mathematics, Technical University of Muenchen, Germany.
112. In April 1998, an invited colloquium talk on "Soliton equations and integrable systems" in the Department of Mathematics, Peking University, PR China.

113. In Nov. 1997, an invited colloquium talk on “ r -matrix structures of integrable systems” in the Department of Mathematics, University Kassel, Germany.

Scholarly publications (2 monographs and 112 articles published in refereed journals)

Book Publications (2 research monographs)

1. **Zhijun Qiao** (2002): Finite-dimensional Integrable System and Nonlinear Evolution Equations (English), 230 pages, ISBN 7-04-010516-0, Chinese National Higher Education Press, Beijing, PR China.
2. **Zhijun Qiao** with Fengshan Liu, Zuhair Nashed, Gaston Nguerekata, Dragoljub Pokrajac, Xiquan Shi, and Xianggen Xia, (2006): *Advances in Applied and Computational Mathematics*, Nova Science Publication, Inc., USA.

List of 15 significant articles published in refereed journals at international level

1. Zhijun Qiao with Engui Fan (2012): Negative-order Korteweg–de Vries equations, <i>PHYSICAL REVIEW E</i> 86, 016601.
2. Zhijun Qiao with Lei Zhang et al (2012): High Resolution ISAR Imaging by Exploiting Sparse Apertures, <i>IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION</i> , VOL. 60, 997.
3. Zhijun Qiao with Ming Chen (2011) and Yue Liu: Stability of solitary waves and global existence of a generalized two-component Camassa-Holm system, <i>Communications in Partial Differential Equations</i> , 36, 2162.
4. Zhijun Qiao (2007): New integrable hierarchy, parametric solutions, cuspons, one-peak solitons, and M/W-shape peak solutions, <i>Journal of Mathematical Physics</i> 48, 082701-20.
5. Zhijun Qiao with Guoping Zhang (2007): Cuspons and Smooth Solitons of the Degasperis-Procesi Equation under Inhomogeneous Boundary Condition, <i>Mathematical Physics, Analysis and Geometry</i> 10, 205 – 225.
6. Zhijun Qiao (2006): A new integrable equation with cuspons and W/M-shape-peaks solitons, <i>Journal of Mathematical Physics</i> 47, 112701-09.
7. Zhijun Qiao with Zhang G. (2006): On peaked and smooth solitons for the Camassa-Holm equation, <i>Europhys. Lett.</i> , 73, 657 – 663.
8. Zhijun Qiao with Li S. (2004): A new integrable hierarchy, parametric solution, and traveling wave solution, <i>Mathematical Physics, Analysis and Geometry</i> 7(4), 289-308.
9. Zhijun Qiao (2004): Integrable hierarchy (DP hierarchy), 3×3 constrained systems, and parametric and stationary solutions, <i>Acta Applicandae Mathematicae</i> 83, 199-220.
10. Zhijun Qiao (2003): “The Camassa-Holm hierarchy, N-dimensional integrable systems, and algebro-geometric solution on a symplectic submanifold”, <i>Communications in Mathematical Physics</i> 239, 309-341.
11. Zhijun Qiao and Strampp W. (2002): Negative order MKdV hierarchy and a new

integrable Neumann-like system, <i>Physica A</i> 313, 365-380.
12. Zhijun Qiao (2001): Generalized r -matrix structure and algebro-geometric solution for integrable system, <i>Reviews in Mathematical Physics</i> 13, 545-586.
13. Zhijun Qiao (1999): r -matrix and algebraic-geometric solution for the integrable symplectic map, <i>Chinese Science Bulletin</i> 44, 114-119.
14. Zhijun Qiao (1993): A new completely integrable Liouville's system produced by the Kaup-Newell eigenvalue problem, <i>Journal of Mathematical Physics</i> 34, 3110-3120.
15. Zhijun Qiao (1993): Bargmann system and the involutive solutions of the Levi hierarchy, <i>Journal of Physics A</i> 26, 4407-4417.

Journal Publications (112 refereed journal articles)

List of articles published in Refereed Journals at National and International Levels (MR – Mathematical Reviews, USA; Zentralblatt MATH, Germany)

- Zhijun Qiao** with Engui Fan (2012): Negative-order Korteweg–de Vries equations, *PHYSICAL REVIEW E* 86, 016601.
- Zhijun Qiao** with Bing Sun and Jie Chen (2012): Outer circular synthetic aperture radar imaging based on Maxwell's equations, *Journal of Applied Remote Sensing*, 0635471.
- Zhijun Qiao** with Jibin Li (2012): Bifurcations and Exact Travelling Wave Solutions for the Generalized Two-Component Camassa-Holm Equation, accepted for publication in: *International Journal of Bifurcation and Chaos*.
- Zhijun Qiao** with Lei Zhang et al (2012): A Robust Motion Compensation Approach for UAV SAR Imagery, *IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING*, VOL. 50, 3202.
- Zhijun Qiao** with Lei Zhang et al (2012): Wave number-domain Autofocusing for Highly Squinted UAV SAR Imagery. *IEEE SENSORS JOURNAL*, VOL. 12, 1574.
- Zhijun Qiao** with Lei Zhang et al (2012): High Resolution ISAR Imaging by Exploiting Sparse Apertures, *IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION*, VOL. 60, 997.
- Zhijun Qiao** with Neo Pena, Guillermo Garza, and Yufeng Cao (2012): Edge Detection of Real Synthetic Aperture Radar Images through Filtered Back Projection, *IEEE* 978-1-4673-0199-2/12, 1915.
- Zhijun Qiao** with Timothy P. Ray and Jaime X. Lopez (2012): Principles of 3D Turntable Radar Imaging, *IEEE* 978-1-4673-0658-4, 0758.
- Zhijun Qiao** with Alex Martinez, Juan F. Lopez, and Yufeng Cao (2012): A Mathematical Model For MIMO Imaging, *Proc. of SPIE* Vol. 8393 839308-1.
- Zhijun Qiao** with Neo Pena and Guillermo Garza (2012): Filtered Back Projection Type Direct Edge Detection of Real Synthetic Aperture Radar Images, *Proc. of SPIE* Vol. 8394 83940N1.
- Zhijun Qiao** with Timothy Ray, Yufeng Cao, and Genshe Chen (2012): 2D and 3D ISAR image reconstruction through filtered back projection, *Proc. of SPIE* Vol. 8361 836107-1.

12. **Zhijun Qiao** with Lei Zhang et al (2011): High-Resolution ISAR Imaging With Sparse Stepped-Frequency Waveforms, *IEEE transactions on geoscience and remote sensing* 49, 4630.
13. **Zhijun Qiao** with Jibin Li (2011): Negative order KdV equation with both solitons and kink wave solutions, *Europhys. Lett.*, 94, 50003.
14. **Zhijun Qiao** with Ming Chen and Yue Liu (2011): Stability of solitary waves and global existence of a generalized two-component Camassa-Holm system, *Communications in Partial Differential Equations*, 36, 2162.
15. **Zhijun Qiao** with Jaime Lopez (2011), Filtered back projection inversion of turntable ISAR data, *Proceedings of SPIE Vol. 8051*, 805109.
16. **Zhijun Qiao** with Guillermo Garza (2011), *Resolution analysis of bistatic SAR*, *Proceedings of SPIE Vol. 8021*, 802169.
17. **Zhijun Qiao** with Junfeng Song and Changzheng Qu (2011): A new integrable two-component system with cubic nonlinearity, *J. Math. Phys.* 52, 013503.
18. **Zhijun Qiao** with Jibin Li (2011): Explicit soliton solutions of the Kaup-Kuperschmidt equation through the dynamical system approach, *Journal of Applied Analysis and Computation*, 1(2), 243 – 250.
19. **Zhijun Qiao** with Guangcai Sun et al (2011): Focus Improvement of Highly Squinted Data Based on Azimuth Nonlinear Scaling, *IEEE transactions on geoscience and remote sensing* 49, 2308 – 2322.
20. **Zhijun Qiao** with Xianqi Li (2011), AN INTEGRABLE EQUATION WITH NONSMOOTH SOLITONS, *Theoretical and Mathematical Physics*, 167(2): 584 – 589.
21. **Zhijun Qiao** with Jinbing Chen (2011): The Neumann Type Systems and Algebro-Geometric Solutions of a System of Coupled Integrable Equations, *Math Phys Anal Geom*, 14(2): 171 – 183.
22. **Zhijun Qiao** with Zhaqilao (2011): Darboux transformation and explicit solutions for two integrable equations, *Journal of Mathematical Analysis and Applications*, 380(2), 794-806.
23. **Zhijun Qiao** with Jinbing Chen (2011): Decomposition of the modified Kadomtsev-Petviashvili equation and its finite band solution, *Journal of Nonlinear Mathematical Physics*, 18(2): 191-203.
24. **Zhijun Qiao** with Taixi Xu (2011): Darboux Transformation and Shock Solitons for Complex MKdV Equation, *Pacific Journal of Applied Mathematics* 3, Issue 1 – 2, 135 – 145.
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28. **Zhijun Qiao** with Jinbing Chen and Xianguo Geng (2010): New finite gap solutions of the coupled Burgers equations, *Chinese Physics B* 19, 090403 – 1 -10.
29. **Zhijun Qiao** with Guoping Zhang (2010): Cusp solitons of the Degasperis-Procesi equation, *Journal of Nonlinear Studies* 17(4): 339 – 346.
30. **Zhijun Qiao** with Liping Liu (2009): A new integrable equation with no smooth

- solitons, *Chaos, Solitons and Fractals* 41, 587- 593.
31. **Zhijun Qiao** with Guillermo Garza, Jaime X. Lopez (2009): Cross-Range Imaging of Synthetic Aperture Radar Data, *Pacific Journal of Applied Mathematics* 2, 247 – 264.
 32. **Zhijun Qiao** with Xianqi Li and Taixi Xu (2009), r -Matrix Structure for the Finite-Dimensional Hamiltonian System with a General Even Function, *Pacific Journal of Applied Mathematics* 2, 101-112.
 33. **Zhijun Qiao** with Jules Sadefo Kamdem (2008): Decomposition Method for the B-Balanced Shallow Water Equation, *International Journal of Evolution Equations* 4(1), 91-102.
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 36. **Zhijun Qiao** with Guoping Zhang and Fengshan Liu (2008): Cusp and Smooth Solitons of the Camassa-Holm Equation under an Inhomogeneous Boundary Condition, *Pacific Journal of Applied Mathematics* 1(1), 113 – 130.
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 38. **Zhijun Qiao** with Xianlin Yang and Shida Tang (2008): Traveling wave solutions of the generalized BBM equation, *Pacific Journal of Applied Mathematics* 1(3), 99-112
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- systems, and algebro-geometric solution on a symplectic submanifold", *Communications in Mathematical Physics* 239, 309-341.
49. **Zhijun Qiao**, Cao C., Strampp W. (2003): "Category of nonlinear evolution equations, algebraic structure, and r -matrix", *Journal of Mathematical Physics* 44, 701-722.
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- equations, and Lax representations, *Journal of Exploration and Research Mathematics* 16, 256-258. MR: 97c:35181; ZMATH: 0871.35084
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Other Scholarly Professional Activities

1. As an expert in integrable system and soliton theory, I was invited to participate in the DoD- Applied Math program and present a research talk at Delaware State University, August 2005, 2006, and 2007.
2. As a regular associate member of International Center of Theoretical Physics (ICTP) and the Third World Academy of Sciences (TWAS), Trieste, Italy, on behalf of UTPA, I was invited to visit for joint research and give research presentations from July to Aug 2005 and from May to August 2008..
3. As a Humboldt research fellow (worldwide reputation) and an expert in integrable system, I was again invited to participate in its follow-up program (based on my previous Humboldt research fellow's research 1999 – 2001) and to do collaboration with my previous German host Prof. Dr. Strampp, Department of Mathematics, University of Kassel, Germany, July 2005 and July – August 2008. All refereed international publications from 1999 to 2001 are cited by the **Alexander von Humboldt Foundation**, Germany in 1999, 2000, and 2001 (see http://www.avh.de/pls/web/pub_hn_query.bibliographia_index_pub?p_lang=en&p_year=1999&p_group=1&p_fg2=2C)
4. As an expert in integrable system, I was appointed a visiting professor to collaborate with Dr. Fengshan Liu at Delaware State University from May to June 2005.

5. As an expert in integrable systems and soliton theory and a visiting professor of Fudan University, I was invited to do the collaborative 985 program from June 1 to June 30, 2007 and present a research talk at Fudan University.
6. As an expert in nonlinear dynamical systems and soliton theory, I was invited to participate in the UT Texas Medical Center – Neuro dynamics study program and research collaboration on image processing with Dr. Chen, five times: May 2007, August 2009, February 2010, March 2011, and October 2011.
7. As an expert in radar imaging processing, I was invited to participate in the University of Houston wavelet/curvelet/shearlet program and paid a back-visit to Dr. Labate for collaboration, September 2011.
8. As an expert in integrable systems and soliton theory, I was invited to participate in the international conference on symmetry and integrability of difference equations (SIDE) 10, Xikou, China, June 2012, and paid a back-visit to Drs. Lou and Qu for their collaboration.
9. In Nov 2008, I invited Dr. Yuji Kodama, a well-known soliton expert at Ohio State University, to the Department of Mathematics, UTPA for collaboration with our faculty and a colloquium talk.
10. In July 2009, Jan – Feb 2010, and May 2010, I invited Dr. Taixi Xu, Southern State Polytechnic University, Dr. Yufeng Zheng, Alcorn State University, Dr. Genshe Chen, DCM Research Resources LLC, Dr. Engui Fan, Fudan University, and Dr. Da-jun Zhang, Shanghai University for collaboration and to give some lectures to train our DoD program students in our 2009 and 2010 DoD Program seminars.
11. Collaboration with Dr. Qinian Jin, University of Texas at Austin, I was invited to do collaborative research on inverse problems with him in May 2009 and August 2009.
12. **Organizing DoD and NHARP program Seminars:** PDE Analysis and Radar Image Reconstruction from Fall 2008 through the whole summer 2012, graduate students participated in it and see more details at www.utpa.edu/dod.
13. I am involved in UTPA Faculty & Staff International Programs – FACULTY EXCHANGE PROGRAMS, international activity – Chinese Mathematics and Physics Platform Project. Recently, on behalf of UTPA, I conduct the collaborative research work and cooperation with Zhaoqing University, one of UTPA sister universities, and already made real progress. Some official document on research and cooperation were already worked out through international program office until signed by presidential office.

Research collaborations (36 visitors and 4 postdoctoral researchers)

In the past several years, I invited and collaborated with 36 visitors and recruited 4 postdocs coming to UTAP math department to conduct their work and doing further cooperation under my grant support and other source, see the following table for details.

Postdoctoral Researcher/Visitor	Math Faculty	Project
Baoqiang Xia (MATH, Jiangsu Normal University, Postdoc at UTPA, Fall 2011)	Zhijun Qiao	TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
David Kaup (MATH, a famous soliton expert, University of Central Florida, April 2012)	Zhijun Qiao	Soliton and math model analysis and TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Jibin Li (MATH, a famous dynamics expert, Zhejiang Normal University, April 2012)	Zhijun Qiao	Soliton and math model analysis and TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Roy Choudhury (MATH, University of Central Florida, April 2012)	Zhijun Qiao	Soliton and math model analysis and TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Shenzhou Zheng (MATH, Beijing Jiaotong University, April 2012)	Zhijun Qiao	Soliton and PDEs analysis and TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Jinbing Chen (MATH, Southeastern University, Postdoc at UTPA, Summer – Fall 2012)	Zhijun Qiao	TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Xuan Zhu (Computer Engineering, Northwestern University, Visit Scholar at UTPA, Jan – July, 2012)	Zhijun Qiao	Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image. We already coauthor one paper and submitted it for publication.
Lin Luo (MATH, Shanghai 2 nd Polytechnic University, Visit Scholar at UTPA, Feb 2012 – Jan, 2013)	Zhijun Qiao	Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image.

Tuncay Aktosun (MATH, University of Texas -- Arlington, Nov 2011)	Zhijun Qiao	Soliton and math model analysis and TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Changzheng Qu (MATH, Northwestern University, Chinese Outstanding Youth Researcher, May 2010 and Nov 2011)	Zhijun Qiao	Soliton and math model analysis and TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Yue (David) Liu (MATH, University of Texas -- Arlington, Nov 2011)	Zhijun Qiao	Soliton and math model analysis and TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported
Da-jun Zhang (MATH, Shanghai University, Visiting Professor at UTPA, Oct – Dec, 2011)	Zhijun Qiao	TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported. Discussing a possible joint Ph D program with Shanghai University.
Bing Sun (Electrical Engineering, Beihang University, Visit Scholar at UTPA, Sept – Nov, 2011)	Zhijun Qiao	Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image. My student: Guillermo Garza received an international invitation from Dr. Sun's institution – Beihang university for attending the Beihang Graduate Students' Forum and giving an invited presentation at Special Forum on information technologies.
Engui Fan (MATH, Fudan University, Postdoc at UTPA, Spring 2011, also visitor Jan – Feb, 2010)	Zhijun Qiao	TX-NHARP program: Fourier integrable operation with solitary wave and its application in synthetic aperture radar (SAR) image supported. Discussing a possible joint Ph D program with Fudan University.
Kevin Vixie (MATH, Washington State University, May – June 2011)	Zhijun Qiao	Geometrical PDE analysis and DoD – PDEs and SAR project supported
Zhangju Liu (MATH, Peking University, Chinese Outstanding Youth Researcher, August 2011)	Zhijun Qiao	Poisson Manifold and Geometrical PDE analysis TX-NHARP program supported

Kui Ren (MATH, University of Texas – Austin, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Thomas Hagstrom (MATH, South Methodist University, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Peijun Li (MATH, Purdue University, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Thomas Asaki (MATH, Washington State University, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Guoping Zhang (MATH, Morgan State University, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Gaik Ambartsoumian (MATH, University of Texas – Arlington, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Kai Huang (MATH, Florida International University, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Malena Espanol (MATH, California Institute of Technology, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Xiaosheng Li (MATH, Florida International University, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Bala Krishnamoorthy (MATH, Washington State University, May – June 2011)	Zhijun Qiao	Geometrical PDE analysis and DoD – PDEs and SAR project supported
Mingrui Yang (MATH, South Carolina University, May – June 2011)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Demetrio Labate (MATH, University of Houston, Nov 2010)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported

Yufeng Zhang (MATH, Liaoning Normal University, May 2010)	Zhijun Qiao	Soliton and math model analysis and UTPA – FRC project supported
Genshe Chen (CTO of DCM Research Resources, May 2010)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Yufeng Zheng (EE, Alcorn State University, May 2010)	Zhijun Qiao	Math model analysis and DoD – PDEs and SAR project supported
Zhong Wang (MATH, Vice President of Zhaoqing University, Jan/Feb 2010)	Zhijun Qiao	Integrable systems, spectral operator analysis and soliton theory, ZQU – UTPA sister university cooperation project.
Taixi Xu (MATH, Southern Polytech State University, July 2009)	Zhijun Qiao	Soliton and math model analysis and DoD – PDEs and SAR project supported
Yuji Kodama (MATH, Ohio State University, November 2008)	Zhijun Qiao	Integrable systems and soliton analysis, UTPA – Math distinguished colloquium lecturers project supported
Wenxiu Ma (MATH, South Florida University, March 2008)	Zhijun Qiao	Integrable systems and soliton analysis, UTPA – workshop project supported
Ruguang Zhou (MATH, Vice President of Xuzhou Normal University, March 2008)	Zhijun Qiao	Integrable systems and soliton analysis, UTPA – workshop project supported
Hongyou Wu (MATH, Northern Illinois University, March 2008)	Zhijun Qiao	Integrable systems and soliton analysis, UTPA – workshop project supported
Yang Kuang (MATH, Arizona State University, September 2006)	Zhijun Qiao	Resource quality dynamics and its implications, UTPA – Math distinguished colloquium lecturers project supported
Senyue Lou (MATH, Shanghai Jiaotong University, Chinese Outstanding Youth Researcher, January 2006)	Zhijun Qiao	Integrable systems and soliton analysis, UTPA – colloquium talk project supported
Mark Mineev – Weinstein (Applied Physics, Los Alamos National Lab, May 2005)	Zhijun Qiao	Integrable systems and soliton analysis, UTPA – NSF/CBMS conference talk project supported

- **Community service (After joining UTPA)**

- Departmental Activities**

- As a full time faculty, I served on/participated in the following committees:
 1. Department Annual Evaluation Committee (2008 – 2010, 2011 – 2013)
 2. Department Annual Evaluation Committee Chair (2011 – 2013)
 3. Mathematics Annual Faculty Evaluation Review Committee (2008 – 2010)
 4. Department Tenure and Promotion Committee (2011 – 2012)
 5. Search Committee Chair for visiting assistant professor and lecture positions for 2005 – 2007.
 6. Graduate Committee (2005 – present).
 7. Graduate Committee Chair and Graduate Program Director (2012 – present).
 8. Ph D Academic Committee Chair (2011 – present)
 9. Department Colloquium and Distinguished Lecture Series Committee (2004 – 2011).
 10. Applied Math Seminar Committee (2005 – 2011).
 11. As a coordinator, organize the “Integrable System Seminar/PDEs and Radar Imaging Seminar” (2006 – present).
 12. Departmental Library Committee (2005 – present).
 13. Texas PDE Conference Committee (2004 – 2005).
 14. Business Mathematics Textbook Committee (2006 – 2008).
 15. Local Arrangement Committee of the 5th International Conference (2006 – 2007).
 16. Serve on the activity of local arrangement Committee for MAA Texas Section, March/April 2007.
 17. Serve on the activity of local arrangement Committee for NSF/CBMS international conferences, May 2005 and May 2010, UTPA.
 18. Chaired five theses defenses, two in 2009 and 2010, two in 2011, one in 2012.
 - Served as the Editor-in-Chief (funder, since 2007) for the international journal: *Pacific Journal of Applied Mathematics*, and referee for *International Journal of Mathematics and Mathematical Sciences*. Both are assigned to our department.

- College/University/Community/Public Activities**

- 1. UTPA graduate council committee member, 2005 – 2008.
 2. UTPA graduate council subcommittee member, 2005 – 2007.
 3. UTPA full time graduate faculty member, 2004 – 2010, 2010 – 2016.
 4. UTPA Student Affairs Advisory Committee (SACC) member, 2006 – 2009.
 5. UTPA Academic Policy Committee, 2011 –
 6. UTPA – COSM Annual Evaluation Committee, member (2011 – 2013)
 7. UTPA Faculty & Staff Involved in International Programs – FACULTY EXCHANGE PROGRAMS, international activity – Chinese Mathematics and Physics Platform Project (2008 – present).

8. Principal organizer and coordinator of DoD/NHARP Program Workshop on Integrable System and Soliton, Math Dept, UTPA, Edinburg, TX, 4/27-28,2012.
9. Principal organizer and coordinator of DoD/NHARP Program Workshop on Frontier Studies on Integrable Systems and Applications, Math Dept, UTPA, Edinburg, TX, 11/11-12,2011.
10. Organizer of the AMS Special Session on Mathematical Principles and Theories of Integrable Systems,1/4-8, 2012, Boston, MA.
11. As a chair of Ph D committee, traveling with department chair to UT-Arlington to make a collaborative Ph D proposal and agreement (trip covered through my own grant), 11/18/2011.
12. As a director of graduate program, I was invited to participate in TX-Bridge and AGEF math conference, UT-Arlington, 8/2 – 4, 2012.
13. As a UTPA faculty representative, served and presented on UT Pan Am - UT Dallas STEM Faculty Research Symposium, 1/12-13, 2012, Dallas, TX.
14. Organizaer of the special Session on Image and Signal Processing at the 2012 International Conference on Systems and Informatics (ICSAI 2012), 5/19 - 20 2012, Yantai, China.
15. Organizer and coordinator of two weekly DoD and NHARP program Seminars: PDE Analysis and Radar Image Reconstruction from Fall 2008 through the whole summer 2012 (www.utpa.edu/dod.)
16. Served on NSF STEP Program peer review committee for UTPA – grant pre-proposal going to NSF, summer 2011.
17. Principal organizer and coordinator of DoD Program Workshop: Applied Math And Image Processing at Math Dept, UTPA, Edinburg, TX, May – June, 2011.
18. Scientific committee member of the 4th International Workshop on Nonlinear Mathematical Physics and the 11th National Conference on Integrable Systems, WIPM (Wuhan Institute of Physics and Mathematics) from July 25-29, 2011.
19. Organizer of the special session on Recent Advances in Integrable Systems and Soliton Theory at the Seventh IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, April 4 – 7, 2011, Athens, GA, USA.
20. Scientific committee member of the 4th International Workshop on Nonlinear Mathematical Physics and the 11th National Conference on Integrable Systems, WIPM (Wuhan Institute of Physics and Mathematics) from July 25-29, 2011.
21. Organizer and coordinator of DoD Program Workshop On Applied Math And Analysis for Radar Data and Image at Math Dept, UTPA, Edinburg, TX, May 2010.
22. Organizer of the special session on Integrability of Dynamical Systems and Solitons Equations at 2010 AMS Annual Meeting with Dr. Taixi Xu (SPSU) and Dr. Wenxiu Ma (USF) in Jan 2010, San Francisco, CA, USA.
23. Scientific committee member of the 3rd International Workshop on Nonlinear Mathematical Physics and the 10th National Conferences on Soliton and Integrable Systems, Huaqiao University, Xiamen, Fujian, China, August 20 – 24, 2010.

24. Scientific committee member of the International Workshop on Nonlinear and Modern Mathematical Physics, Shihezi University, Shihezi, Xinjiang, China, July 15 – 21, 2009.
25. Organizer of the special session on Integrable Dynamical System and Its Applications at International Conference on Applied Analysis and Scientific Computation with Dr. Fan (Fudan University), Shanghai Normal University, Shanghai, China, June 25 – 28, 2009.
26. Organizer of the special session on Recent Developments in Soliton Theory at the Sixth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, March 23 – 26, 2009, Athens, GA, USA.
27. Organizer of the special session on Nonlinear Evolution Equations and Their Applications at 2009 AMS-MAA Annual Meeting with Dr. N'Guerekata (MSU), Dr. Pankov (MSU), and Dr. Zhang (MSU) in Jan 2009, Washington D.C., USA.
28. Organizer of the special session on Integrable System and Its Applications at the First AMS Joint International Meeting with the Shanghai Mathematical Society, with Dr. Fan (Fudan) and Dr. Lou (SJTU) in December 2008, Fudan University, Shanghai, China.
29. Organizer of the special session on Nonlinear PDEs and Applications at the *6th International Conference on Differential Equations and Dynamical Systems* with Dr. Ma (USF), Dr. Biswas (DSU), and Dr. Zhang (MSU), Morgan State University, Baltimore, Maryland, USA, May 22-26, 2008.
30. Organizer of the special session on Algebraic and Geometric Aspects of Integrable Systems at 2008 AMS-SIAM Annual Meeting with Dr. Ma (USF), Dr. Xu (SPSU), and Dr. B. Feng (UTPA) in Jan 2008, San Diego, CA.
31. Organizer and coordinator of research workshop on solitons and integrable systems at Math Dept, UTPA, Edinburg, TX, March 2008.
32. Organizer of the special session on Continuous and Discrete Integrable Systems and Their Applications at 2007 AMS-SIAM Annual Meeting with Dr. Ma (USF), Dr. Xu (SPSU), and Dr. B. Feng (UTPA) in Jan 2007, New Orleans, LA.
33. Organizer of the 2007 DoD – Applied Mathematics Summer Workshop with Fengshan Liu (DSU), Jiguang Sun (DSU), Xiquan Shi (DSU) et al at Delaware State University, August 2007.
34. Organizer of the special session on Advances in Theoretical and Numerical Methods of Discrete Systems at the Fifth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, April 2007, Athens, GA, USA.
35. Organizer of the special session on Integrable Systems and Their Applications at the *5th International Conference on Differential Equations and Dynamical Systems* with Dr. B. Feng (UTPA) and Dr. Maruno (UTPA), UTPA, Edinburg, TX, USA, December 15 – 18, 2006.
36. Organizer of the special session on Nonlinear Dynamical Systems at 2006 AMS-SIAM Annual Meeting with Dr. Balogh (UTPA), Dr. Fei (UMND), and Dr. Z. Feng (UTPA) in Jan 2006, San Antonio, Texas.

37. Organizer of the 2006 DoD – Applied Mathematics Summer Workshop with Fengshan Liu (DSU), Zuhair Nashed (UCF), Xiquan Shi (DSU) et al at Delaware State University, August 2006.
38. Global Organizing Committee Member of the 5th and 6th International Conference on Differential Equations and Dynamical Systems 2006 and 2008, respectively.
39. Organizer of the special session on Nonlinear Geometric Partial Differential Equations at 2006 AMS Sectional Meeting with Jeanne Clelland (UCB), Irina Kogan (NCSU) in Oct 2005, University of Nebraska, Lincoln, Nebraska.
40. Organizer of the 2005 DoD – Applied Mathematics Summer Workshop with Fengshan Liu (DSU), Zuhair Nashed (UCF), Xiquan Shi (DSU) et al at Delaware State University, August 2005.
41. Organizer of the special session in the Jointing Annual Conferences of the American Mathematical Society (AMS) and the Society of Industrial and Applied Mathematics (SIAM), Atlanta, Georgia, 2005.
42. Served as a chairman of the Ph D Dissertation Defense Committee of Department of Mathematics, Xuzhou Normal University, 2004.
43. Reviewing a book for the Publisher *Birkhauser Boston*, and provided a long book review report to this publisher, 2004.
44. TWAS Associate Member at Centers of Excellence in the South, Italy, 1999 – 2004.
45. AMS (American Mathematical Society) Reviewer for Mathematical Reviews, USA, 2000 – present.
46. AMS (American Mathematical Society) member, USA, 1999 – present.
47. SIAM (SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS) member, 2009 – present
48. SIAG member on Imaging Science, 2009 – present
49. SIAG member on Nonlinear Waves and Coherent Structures, 2009 – present
50. SIAG member on Dynamical Systems, 2009 – present
51. SIAG member on Analysis of Partial Differential Equations, 2009 – present
52. SPIE (SOCIETY OF PHOTOGRAPHIC INSTRUMENTATION ENGINEERS) member, 2010 – present
53. IEEE (The Institute of Electrical and Electronics Engineers) member, 2011 – present
54. IEEE Signal Processing Society Membership, 2011 – present
55. IEEE Geoscience and Remote Sensing Society Membership, 2011 – present
56. IEEE Antennas and Propagation Society Membership, 2011 – present
57. IEEE Image Processing Society Membership, 2011 – present
58. Specially invited international reviewer for the evaluation of the application for 2008 State Natural Science Award of the People's Republic of China
59. Specially invited external reviewer of Australian Research Council (ARC) for the ARC Discovery Projects - Agreement to Assess Proposals (2005 – present).
60. Invited guest editor for a special issue of *Mathematics and Computers in Simulation*, 2010.
61. Editor, *International Journal of Nonlinear Operators Theory and Applications*, since 2006.
62. Editor, *ISRN Mathematical Physics*, since 2010.

63. Editor, *Journal of Analysis*, since 2011.
64. Reviewing more than 250 papers for the following 46 international journals:
Journal of Mathematical Physics;
Journal of Geometry and Physics;
Journal of Computational Physics;
Proceedings of the Royal Society A: Math. Phys. & Eng.;
Nonlinearity;
Chaos;
IEEE Transactions on Aerospace and Electronic Systems
IEEE Sensors
Journal of Electromagnetic Waves and Applications (JEMWA)
Progress in Electromagnetic Research (PIER, PIER B,C,M, PIER Letters)
IEEE – ICSSAI 2012 proceedings;
Acta Applicandae Mathematicae;
Physica Scripta;
Nonlinear Analysis Series A;
Nonlinear Analysis Series B;
Journal of Mathematical Analysis and Applications;
Nonlinear Dynamics;
Journal of Analysis;
Digital Signal Processing;
International Journal of Mathematics and Mathematical Sciences;
Electronic Journal of Differential Equations;
Physics Letters A;
International Journal of Theoretical Physics;
Symmetry, Integrability and Geometry: Methods and Applications;
Chaos, Solitons and Fractals;
Applied Mathematics and Computations;
Applicable Analysis;
Modern Physics Letters B;
Advances in Applied and Computational Mathematics;
Mathematics and Computers in Simulation
Mathematical and Computer Modelling
Chinese Physics Letters;
Computers and Mathematics with Applications;
Communications in Nonlinear Science and Numerical Simulation;
Sciences in China A – Mathematics;
Communications in Mathematical Analysis;
International Journal of Nonlinear Operators Theory and Applications;
Communications in Theoretical Physics;
Journal of Nonlinear Evolution Equations and Applications
Turkish Journal of Physics;
ISRN Mathematical Physics;
Acta Mathematica Sinica;
Neural Computations and Applications;
Zeitschrift fuer Naturforschung;

- International Journal of Differential equations;*
Acta of Liaoning University.
65. Book Reviewer for two Publishers: Birkhauser and BookMcGraw-Hill, 2004 – 2006.
 66. Book Reviewer for the Publisher: Mike Murach & Associates, Inc. 2007 – 2009.
 67. Book Reviewer of the book: Stewart, Redlin, and Watson's *Precalculus or Algebra and Trigonometry*, for the Publisher: Brooks/Cole | Cengage Learning. 2008.
 68. Specially Invited External Reviewer of the International Journal: *Chinese Physics Letters*, 1997 – present.
 69. Associate Editor-in-Chief of the Journal: *Acta of Liaoning University*, 1996 – 2005.
 70. Associate Member of Center of Chinese Academic Science and Technology (CCAST, World Laboratory), 1996 – 2006.
 71. Chairman of Rio-Grande-Valley Chinese Scholars and Students Association, UTPA, Edinburg, TX, 2004 – 2007.
 72. Advisor of Rio-Grande-Valley Chinese Scholars and Students Association, UTPA, Edinburg, TX, 2007 – present.