

CURRICULUM VITAE

Baofeng Feng

School of Mathematical and Statistical Sciences
University of Texas-Rio Grande Valley
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Education

<u>UNIVERSITY</u>	<u>MAJOR</u>	<u>DEGREE & DATE</u>
Tsinghua University, China	Physics & Mathematics	Double B.S., 1989
Nagoya University, Japan	Computational Mathematics	M.S., 1997
Kyoto University, Japan	Engineering & Applied Mathematics	Ph. D., 2000

Employment

<u>TITLE</u>	<u>EMPLOYER</u>	<u>DATE(S)</u>
Professor	School of Mathematical & Statistical Sciences The University of Texas-Rio Grande Valley	Sep. 2015 – Present
Professor	Mathematics Department The University of Texas-Pan American	Sep. 2013 – Aug. 2015
Associate Professor	Mathematics Department The University of Texas Pan American	Sep. 2007 -Aug. 2013
Assistant Professor	Mathematics Department The University of Texas-Pan American	Sep. 2003- Aug.2007
Visiting Assistant Professor	Mathematics Department The University of Kansas	Jan. 2001 - Aug.2003
Research Fellow	Department of Computational Science The National University of Singapore	May 2000 - Dec. 2000

Memberships

- Member of American Mathematical Society (AMS)
- Lifetime member of Society of Industrial and Applied Mathematics (SIAM)

Main Research Interest

- Continuous and discrete integrable systems
- Scientific computing and numerical methods for partial differential equations (PDEs)
- Mathematical modeling in fluid, solid mechanics and nonlinear optics
- Nonlinear waves, pattern formation and perturbation methods
- Nonlinear optics and fiber-optic communications \

Honors, Fellowships & Awards

- Fellowship of Yoshida Scholarship Foundation, 1995-1997
- Fellowship of Association of International Education of Japan, 1997-1998
- Japanese Government Scholarship, 1998-2000
- Research Fellow, the 21st Century Center of Excellence (COE) program, Japanese Ministry of Education, Culture, Science, Kyoto University, May-June 2004
- Japanese Society for the Promotion of Science (JSPS) Research Fellow, Osaka University, June 6-July 26 2007
- Bridge Research Fellowship for JSPS, Osaka University, Dec. 2012-Jan. 2013
- Visiting Scholar to Institute of Mathematical Sciences, National Taiwan University, Taiwan, Summer 2014
- Visiting Scholar to Institute of Mathematics, Academia of Sinica, Taiwan, Summer 2015
- Visiting Scholar to School of Mathematics, Shanghai Jiaotong University, China, Summer 2016
- Faculty Excellent Award in Research, College of Science, UTRGV, 2017.

Grant Activities

Awarded Grants (External)

- PI: Numerical studies on nonlinear evolution equations of water surface waves, The Japan Science Society No. 11-357M, **500,000JPY**, 1999-2000
- PI: Mathematical Modeling of Micro & Macro Behavior of Nonlinear Materials, the US Department of Defense (DoD), U.S. Army Research Office, with Dr. Y. Chan at University of Houston-Downtown, W911NF-05-1-0029, **\$240,000**, 2005-2009
- Co-PI: Conference on Nonlinear Waves and Integrable System, NSF grant (No. 1000037), **\$26,880** with Dr. Virgil Pierce (PI), Dr. Kenichi Maruno (Co-PI), 2010.
- PI: Propagation of ultra-short optical pulses in birefringent material: integrable models, integrable discretizations and their applications, China Collaboration Research for Overseas Scholars, National Science Foundation of China, No. 11428102, **200,000RMB (~\$3,0400)**, January 2015- December 2016.
- PI: NSF/CBMS Conference: Discrete Painleve Equations, NSF grant (No. 1543860), **\$39,505** with Dr. Andras Balogh (Co-PI), Dec. 2015- Dec. 2017.
- PI: RUI: Mathematical analysis of several models in nonlinear optics, NSF grant (No. DMS-1715991), **\$121,221**, Aug. 2017-July 2020.
- PI: Multi-component generalizations for several integrable nonlinear PDEs of the third-order in shallow water waves, China Collaboration Research for Overseas Scholars, National Science Foundation of China, No. 11728103, **180,000RMB (~\$2,7300)**, January 2018- December 2020.
- Co-PI: Collaborative Research: Enhancing Diversity in the Mathematics Graduate Applicant Pool, NSF grant (No. DMS-1820771), **\$239,713**, with Dr. Tim Huber (PI), Dr. Cristina Villalobos (Co-PI), Sep. 2018-Aug. 2021.

Awarded Grants (Internal)

- PI: Intra-cellular traffic jam in molecular motors: a possible cause for Alzheimer's Disease, STBHDC Pilot project 41IPHP011, **\$11,610**, Jan. 2011-Dec. 2011.
- UTPA Undergraduate Research Initiative with Rodolfo Baez, project title: Cellular automaton and traffic flow, \$2,000, 2011.
- PI, Integrable discretization and self-adaptive numerical methods for a class of soliton equations with cuspon and loop soliton solutions, UTPA faculty research council, **\$4,899**, Sep. 1, 2011-Aug. 31, 2012

- UTPA Faculty Development Council Award to attend summer school and SIDE 10 conference, \$1,845 (2011-2012).
- UTPA Faculty Development Council Award to attend IMACS conference, \$1,466, 2012-2013.
- UTPA Faculty Development Council Award to attend conference and workshop at Cambridge, UK, \$1,945, 2014-2015.
- Undergraduate Research Initiative (URI), Jesus Saldana, project title: Integrable discretizations of nonlinear Schrodinger equation and Heisenberg ferromagnet equation and their computations, 2014-2015, \$2000.
- PI: Mathematical models in nonlinear optics and their applications, Research Enhancement Seed Grant at COS, UTRGV, **\$1,2171**, July 2017-Dec. 2018.

Submitted Proposals (2012-2018):

- Mathematical models and computations for ultra-short laser pulse propagation, DoD Research and Education Program for HBCU/MI FY18 FOA: W911NF-17-S-0010, July, 2017 (internally denied).
- Solvable Nonlinear Systems and Their Applications, submitted to UT System-CONACYT Collaborative Research Grants, March, 2017 (unfunded)
- Integrable System Models in Physical Sciences and Their Applications, Simons Collaborate Grant in Mathematical Science, January, 2017 (unfunded)
- Theoretical and numerical studies of integrable systems, Simons Collaborate Grant in Mathematical Science, Feb., 2016 (unfunded)
- Nonlinear waves and numerical computations, NSF DMS-Applied Mathematics, with Dr. K. Maruno, submitted: November 2012 (unfunded)
- RUI: Complex short pulse and coupled short pulse equations, NSF in Applied Mathematics, November, 2015 (unfunded)

Supervised Students:

Co-supervision of Ph.D. Students

- Junchao Chen, Title of doctoral dissertation: “Application of nonlocal symmetry and bilinear method in nonlinear system”, Eastern China Normal University, China, June, 2016. Dr. Chen visited UTPA for one year from Sep. 2013 to Sep. 2014 under my supervision.
- Quinton Hsiao, Title of doctoral dissertation: “Statistical Methods for Measuring Bubbles Uniformity and Mixing Efficiency in a Direct Contact Heat Exchan”, Kunming University of Science and Technology, China. Mr. Hsiao is scheduled to visit me from April 2018 for one year.

Supervision of Master’s Students

- Austin Mastaller, AY 2018-2019, thesis title: Integrable discretizations of the Euler top.
- Adrian Torres, AY 2018-2020, thesis title: Inverse scattering transform for the NLS equation.
- Andrey Stukopin, AY 2018-2020, thesis title: Inverse scattering transform for the complex sine-Gordon equation
- Cesar Galvan, AY2015, thesis study: “Multi-component integrable equations”.
- Raul M. Guajardo, AY 2013-2015, thesis title: “Complex short pulse equation and its integrable discretizations”.
- Juan Lopez, AY 2011-2012, title: “Curves and integrable systems”, supported by UTPA Faculty Research Council
- Zhijiang Qiao, AY2008-2010, thesis title: “Multi-Soliton solutions to a model equation for shallow water waves”.
- Charles Obare AY2006-AY2008, thesis title: Mechanical Vibration of Beams”.

Supervision of Undergraduate Students

- Andrey Stukopin, project: Inverse scattering transform for the KdV equation, Spring 2018
- Lesley Cueller, project: Inverse scattering transform for the sine-Gordon equation, Spring 2018

- Kimberly Lozano, project: Hirota's bilinear method and sine-Gordon equation, Fall 2017
- Daniela Pezina, project: Coupled dispersionless equation and its soliton solutions, Fall 2017.
- Daniel Montes, project: the mathematics of the billiards, Spring 2017.
- Sergio Saldana, project: the elliptic curves and billiards, Spring, 2017.
- Qianyun Huang, project: the space curves and the nonlinear Schrodinger equation, Fall 2016
- Eduardo Marquez, project: the plane curves and the modified KdV equation, Fall 2016
- Stephany Powell, project: Complex short equation, Spring, 2014
- Jesus Saldana, project: Integrable discretizations of nonlinear Schrodinger equation and Heisenberg ferromagnet equation and their computations, presentation at Undergraduate Research Conference, November, 25-26, 2013.
- Fidelis Dacquel, project: One and two-soliton solutions to the sine-Gordon equation, Spring 2013.
- April Perez, project: Hirota's bilinear method for soliton equations, Spring 2013.
- Jennifer Salina, project: Geometry of integrable equations, 2012.
- Rocio Rodriguez, Spring 2012, UTPA Faculty Research Council.
- Ricardo Hernandez (AY 2010-2012, UTPA Center of Excellence in STEM
- Rodolfo Baez AY 2010-2011, Undergraduate Research Initiative (URI) program
- Carmen Guerrilla, AY 2009-2010, Undergraduate Research Initiative (URI) program
- John Young AY2009-2010, Department of Defense (DoD) grant
- Humberto Morelos, AY 2009-2010, LASAMP program
- John Arellano AY 2007-2008, LASAMP program
- Cynthia Lopez AY 2007-2008, URI program
- Ursula Zavala AY 2006-2007, URI program
- Christopher Trevino, Summer, 2006, URI program.
- Eric Malvaez, AY 2005-2006, Minority in Excellence (MIE) program
- Luke Koong, Spring, 2005, U.S. Department of Defense (DoD) grant
- Juan Gonzalez, Summer and Fall, 2005, Louis Stokes Alliance for Minority Participation (LASAMP) program
- Nam Nguyen, Graduate student, Summer, 2004, Faculty Research Council (FRC)

Courses taught in the past five years (Fall 2012 – Spring 2017)

Academic Year	Courses	Rate of Excellent & Good for all items
2012-2013	<u>Fall</u>	
	MATH 2401.01-Calculus III	96.8%
	MATH 2401.02-Calculus III	95.7%
	<u>Spring</u>	
	MATH 1348.01- Contemporary Math	76.7%
MATH 1348.03- Contemporary Math	74.5%	
MATH 3368.01- Numerical Methods	89.1%	

2013-2014	<u>Fall</u> MATH 1450.02-Precalculus MATH 6375.01-Numerical Analysis <u>Spring</u> MATH 3349.01-Differential Equations MATH 3349.02-Differential Equations MATH 3368.01-Numerical Methods	69.1% 100% 93.3% 71.8% 91.4%
2014-2015	<u>Fall</u> MATH 2401.03-Calculus III MATH 6363.01-Integrable Systems. MATH 7300.02-Master Thesis I <u>Spring</u> MATH 1470.02-Calculus II MATH 1470.02-Calculus II MATH 7301.01-Master Thesis II	84.9% 89.1% N/A 89.1% 91.7% N/A
2015-2016	<u>Fall</u> MATH 1340.08-College Algebra MATH 1348.12-College Algebra MATH 6360.01-Ordinary Diff. Eq. MATH 7300.01-Master Thesis I <u>Spring</u> MATH 2318.02-Linear Algebra MATH 2318.04-Linear Algebra MATH 7301.02-Master Thesis II	81.4% 75.0% 98.2% N/A 100% 95.5% N/A
2016-2017	<u>Fall</u> MATH 2414.02-Calculus II MATH 2414.03-Calculus II MATH 4390.12-Math Project <u>Spring</u> MATH 2414.14-Caculus II MATH 4390.20-Math Project	82.8% 81.1% N/A 95.4% N/A
2017-2018	Fall MATH 4346.01-Integral Transform MATH 3350.02-Introduction to proof Spring MATH 6375.01-Numerical Analysis	91.7% 81.3% 100%
Totals	Total number of sections: 31 Total number of courses: 14 (5 graduate courses)	

University/Department/Community Services

Highlights

- Served Faculty Senator two terms
- Served as Undergraduate Advisor for two years
- Initiated Applied Mathematics in 2004, which is the first academic seminar at UTPA Math Department.
- Initiated Mathematical Physics Seminar in 2014 with Dr. Karen Yagdjian.
- Initiated University Mathematics Math Competition since 2010 with Drs. Maruno, Nguyen and Pierce and co-organized this annual event for nine years.
- Initiated the Rio Grande Valley High School Math Contest in 2013 and has co-organized this annual event for five years with Dr. Dambaru Bhatta

Committee Service (Fall 2012 – Fall 2018)

Academic Year	Committees	Role
2012-2013	University Development Council Applied Mathematics Committee Annual Evaluation Committee Graduate Curriculum Committee Wiener Society for Mathematicians UTRGV SIAM Student Chapter	Member Co-Chair Member Member Advisor Advisor
2013-2014	University Development Council Applied Mathematics Committee Annual Evaluation Committee Annual Evaluation Review Committee Precalculus Committee UTRGV SIAM Student Chapter	Member Chair Member Member Co-Chair Advisor
2014-2015	Mathematics Physics Seminar Director Review Committee Faculty Search Committee Applied Mathematics Committee Problem Solving Committee UTRGV SIAM Student Chapter	Co-Chair Member Member Member Co-Chair Advisor

2015-2016	Mathematics Physics Seminar Lecturer Search Committee College Algebra Committee Chemistry Faculty Search Committee UTRGV SIAM Student Chapter	Co-Chair Member Member AAA officer Advisor
2016-2017	Post-tenure Review Committee Director Search Committee Mathematics Physics Seminar SEEMS Faculty Search Committee UTRGV SIAM Student Chapter Colloquium Committee College Tenure/Promotion Committee	Chair member Co-Chair AAA official Advisor Chair Member
2017-2018	Mathematics Physics Seminar UTRGV SIAM Student Chapter Colloquium Committee College Tenure/Promotion Committee	Co-Chair Advisor Chair Member

Professional Activities and Services

a. Conferences/workshops organized

- Japan Society for Promotion of Science(JSPS) US AA Seminar on Mathematical Physics, Edinburg, Texas Nov.30-Dec. 1, 2018.
- Scientific gathering: New Phenomenon in Discrete Systems, Cuernavaca, Mexico, December 9-20, 2017.
- NSF/CBMS conference: Discrete Painleve Equations, supported by NSF (grant No. 1543860) Edinburg, Texas, May 16-20, 2016.
- International Workshop on Integrable Systems-Mathematical Analysis and Scientific Computing, Taipei, October 17-21, 2015.
- International Conference "Symmetry plus Integrability: The First International Conference on Integrable Systems and Nonlinear Waves on the Gulf of Mexico" South Padre Island, TX, June 10-14, 2010

b. Scientific Committee Members for Conferences

- First China-Japan Joint Workshop on Integrable Systems, On the Occasion of Prof. Ryogo Hirota's 77th Birthday, Shaoxing, China, January 7-10, 2010.
- Second China-Japan Joint Workshop on Integrable Systems, Kyoto, Japan, March 16-19, 2013
- Third China-Japan Joint Workshop on Integrable Systems, Xian, China, August 17-20, 2016

- The 10th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 29-April 1, 2017.
- The 9th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 1-4, 2015.
- The 8th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March, 2013.
- The 7th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 4-7, 2011.
- The 6th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 23-26, 2009.
- The 5th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, April, 2007.

c. Conference Special session/Minisymposium organized

- Co-organizer, Special Session “Integrable systems and applications”, at the 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan, July 5-9, 2018.
- Co-organizer, Special session “Integrable systems and applications”, at the AMS Fall Central Sectional Meeting , Denton, TX, September 9-10, 2017.
- Co-organizer, Special session “Integrable systems and the geometry of curves and surfaces,” at the 10th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 29-April 1, 2017.
- Co-organizer, special session, Theoretical and numerical aspects of integrable systems, at the fourth International Conference: Nonlinear Waves—Theory and Applications, June 25-28, Beijing, 2016.
- Co-organizer, Special session, “Structure-preserving numerical methods for Hamiltonian PDEs ,” 8th International Congress on Industrial and Applied Mathematics, Beijing, August 10-14, 2015.
- Co-organizer, Special session “Applications of Discrete and Continuous Integrable System ,” at the 9th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 1-4, 2015.
- Co-organizer, Minisymposium “Algebraic Aspects of Integrable Systems and Applications,” at SIAM conference on nonlinear waves and coherent structures, Cambridge, UK, August, 11-14, 2014.
- Co-organizer, Special session “Discrete Integrable System and Painleve Equation ,” at the 8th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March, 2013.
- Co-organizer, Special session “Numerical Methods for Hamiltonian PDEs,” at the third International Conference: Nonlinear Waves—Theory and Applications, June 12-15, Beijing, 2013.
- Co-organizer, Special session “Symmetry and Integrability of discrete and ultradiscrete systems,” 7th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 4-7, 2011.
- Co-organizer for a special session “Nonlinear Evolution Equation of Mathematical Physics” at the 8th AIMS International Conference on Dynamical Systems, Differential Equations and Applications, Dresden, Germany in May 25-28, 2010
- Co-organizer, Special Session “Nonlinear Waves: Computations and Applications” at International Conference on Scientific Computation and Differential Equations, Beijing, China, May 25-29, 2009.
- Co-organizer, Special session “Discrete and Ultradiscrete Integrable Systems” 6th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 23-26, 2009.
- Co-organizer, Special session “Algebraic and Geometric Aspects of Integrable Systems” with Drs. Kenichi Maruno, Zhijun Qiao, Wen-xiu Ma at AMS meeting, San Diego, January, 2008.
- Organizing committee member, Texas Section Meeting of the Mathematical Association of America, Edinburg, TX, April, 2007.

- Co-organizer, Special session “Advances in Theoretical and Numerical Methods of Discrete Systems” 5th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, April, 2007.
- Co-organizer, Special session “Continuous and Discrete Integrable System and their Applications,” with Drs. Zhijun Qiao and Wen-xiu Ma at AMS meeting, New Orleans, January, 2007.
- Co-organizer, Special sessions “Integrable systems and their applications”, “Numerical study in differential equations” 5th International Conference on Differential Equations and Dynamical Systems, Edinburg, TX, December 16-18, 2006.
- Co-organizer, Special session “Integrable Discrete and Ultra-discrete Systems and Their Applications,” with Drs. Takahashi and Matuskidaira at Second SIAM Conference on Nonlinear Waves and Coherent Structures, Seattle, Washington, September 9-12 2006.
- Organizer, Minisymposium “Analytical and Numerical Study for Nonlinear Waves in Discrete Systems,” at International Conference on Scientific Computation and Differential Equations, Nagoya, Japan, May 23-27, 2005.
- Co-organizer, Special session “Intrinsic Localized Modes in Classical and Quantum Lattices,” with Dr. S. Takeno and Dr. Chris Eilbeck at First SIAM Conference on Nonlinear Waves and Coherent Structures, Orlando, Florida, October 2-5 2004.

d. Journals served as the referees/reviewers for the following journals

- Journal of Computation Physics, Journal of Computational and Applied Mathematics, Numerical Methods for Partial Differential Equations, Proceeding of the Royal Society A, Applied Mathematics Letters, Soliton, Chaos & Fractals, Studied in Applied Mathematics, Wave Motion, J. Physics A, Physical Review E, J. Mathematical Physics, Mathematics and Computers in Simulation, Physics Letters A, Physics Script, SIGMA, Nonlinear Dynamics, Modern Physics Letters B, Computers and Mathematics with Applications, European Physics Letters, Physics A, Physics D, Chaos, Optik – International Journal for Light and Electron Optics, Annals of Mathematical Sciences and Applications, International Journal of Nonlinear Science, Acta Mathematica Scientia, Zeitschrift für Naturforschung A, Science China Mathematics, Communications in Computational Physics, Computer Physics Communications, Int. J. Bifurcation and Chaos.

Publications

a) Peer-refereed Journals

- 1) Mark J. Ablowitz, Bao-Feng Feng, Xu-Dan Luo, Ziad H. Musslimani, Inverse scattering transform for the nonlocal reverse space-time Sine/Sinh-Gordon equation with nonzero boundary conditions, *Studies in Applied Mathematics*, (2018), DOI: 10.1111/sapm.12222 (41pp).
- 2) Bao-Feng Feng, Mark J. Ablowitz, Xu-Dan Luo, Ziad H. Musslimani, General soliton solutions to the nonlocal nonlinear Schrödinger equation, accepted by *Nonlinearity*.
- 3) Junchao Chen, Bao-Feng Feng, Ken-ichi Maruno, and Yasuhiro Ohta, The Derivative Yajima–Oikawa System: Bright, Dark Soliton and Breather Solutions, *Studies in Applied Mathematics*, 141 (2018), 145–185.
- 4) Junchao Chen, Yong Chen, Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, General high-order rogue wave of the (1+1)-dimensional Yajima–Oikawa system, *J. Phys. Soc. Jpn*, 87 (2018), 094007.
- 5) Mark J. Ablowitz, Bao-Feng Feng, Xu-Dan Luo, Ziad H. Musslimani, Inverse scattering transform for the nonlocal reverse space-time nonlinear Schrödinger equation with nonzero boundary conditions, *Theoretical and Mathematical Physics*, 196 (2018), 1241–1267 (27pp).
- 6) Bao-Feng Feng, Yasuhiro Ohta, N-bright-dark soliton solution to a semi-discrete vector nonlinear Schrödinger equation, *SIGMA* 13 (2017), 071, 16 pages
- 7) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, The Degaperis–Procesi equation, its short wave model and the CKP hierarchy, *Annals of Mathematical Sciences and Applications*, 2 (2017) 285-316.

- 8) Shoufeng Shen, Bao-Feng Feng, Yasuhiro Ohta, A modified complex short pulse equation of defocusing type, *J. Nonlinear Mathematical Physics*, 24 (2017) 195-209.
- 9) Junchao Chen, Yong Chen, Bao-Feng Feng, Bilinear Bäcklund transformation, Lax pair and multi-soliton solution for a vector Ramani equation, *Modern Physics Letters B*, 31(2017) 1750133.
- 10) Liming Ling, Bao-Feng Feng, Zuonong Zhu, General soliton solutions to a coupled Fokas-Lenells equation, *Nonlinear Analysis: Real World Applications*, 33 (2017) 237-252.
- 11) Ching-Hao Yu, Bao-Feng Feng, Tony W. H. Sheu, Numerical solutions to a two-component Camassa-Holm Equation, *Journal of Computational and Applied Mathematics*, 316 (2018) 317-337.
- 12) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Integrable semi-discrete Degasperis-Procesi equation, *Nonlinearity*, 30 (2017) 2246-2267.
- 13) Junchao Chen, Bao-Feng Feng, Yong Chen, Zhengyi Ma, General bright-dark soliton solution to (2+1)-dimensional multi-component long-wave-short-wave resonance interaction system, *Nonlinear Dyn.*, 88 (2017) 1273-1288.
- 14) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, A two-component generalization of the reduced Ostrovsky equation and its integrable semi-discrete analogue, *J. Phys. A.*, 50 (2017) 055201
- 15) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Geometric formulation and multi-dark soliton solution to the defocusing complex short pulse equation, *Studies in Applied Mathematics*, 138 (2016) 343-367.
- 16) Bao-Feng Feng, Liming Ling, Zuonong Zhu, Defocusing complex short-pulse equation and its multi-dark-soliton solution, *Phys. Rev. E*, 93 (2016) 052227.
- 17) Liming Ling, Bao-Feng Feng, Zuonong Zhu, Multi-soliton, multi-breather and higher order rogue wave solutions to the complex short pulse equation, *Physica D*, 327 (2016) 13-29.
- 18) Junchao Chen, Yong Chen, Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Integrable discretizations of the coupled Yajima-Oikawa system, *J. Phys. A* 49 (2016) 165201 (19 pp).
- 19) Senyue Lou, Bao-Feng Feng, Ruoxia Yao, Multi-soliton solution to a two-component Hunter-Saxton equation, *Wave Motion* 65(2016) 17-28.
- 20) Shoufeng Shen, Bao-Feng Feng, Yasuhiro Ohta, From the Real and Complex Coupled Dispersionless Equations to the Real and Complex Short Pulse Equations *Studies in Applied Mathematics*, 136 (2016) 64–88.
- 21) Hengchun Hu, Xiao Hu, Bao-Feng Feng, Nonlocal Symmetry and Consistent Tanh Expansion Method for the Coupled Integrable Dispersionless Equation, *Zeitschrift für Naturforschung A*, 71 (2016) 235-240.
- 22) Bao-Feng Feng, Junchao Chen, Yong Chen, Ken-ichi Maruno, Yasuhiro Ohta, Integrable discretizations and self-adaptive moving mesh method for a coupled short pulse equation, *J. Phys. A*, 48 (2015) 385202 (21pp).
- 23) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Integrable semi-discretization of a multi-component short pulse equation, *J. Math. Phys.*, 56 (2015) 043502.
- 24) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Integrable discretizations of the reduced Ostrovsky equation, *J. Phys. A*, 48 (2015) 135203.
- 25) Junchao Chen, Yong Chen, Bao-Feng Feng, Ken-ichi Maruno, Rational solution to two- and one-dimensional multi-component Yajima-Okawa systems, *Phys. Lett. A*, 379 (2015) 1510-1519.
- 26) Junchao Chen, Yong Chen, Bao-Feng Feng, Ken-ichi Maruno, General Mixed Multi-Soliton Solutions to One-Dimensional Multicomponent Yajima–Oikawa System, *J. Phys. Soc. Jpn.*, 84, (2015) 074001.
- 27) Junchao Chen, Yong Chen, Bao-Feng Feng, Ken-ichi Maruno, Multi-dark soliton solutions of the two-dimensional multi-component Yajima-Okawa systems, *J. Phys. Soc. Jpn.*, 84 (2015) 034002.
- 28) Bao-Feng Feng, Complex short pulse and coupled complex short pulse equations, *Physica D*, 297 (2015) 62-75.
- 29) Junchao Chen, Yong Chen, Bao-Feng Feng, Hanmin Zhu, Pfaffian-Type Soliton Solution to a Multi-Component Coupled Ito Equation, *Chin. Phys. Lett.*, 31 (2014) 110502.
- 30) Bao-Feng Feng, General N-soliton solution to a vector nonlinear Schrödinger equation, *J. Phys. A*, 47 (2014) 355203.

- 31) Junchao Chen, Yong Chen, Bao-Feng Feng, Hanmin Zhu, Multi-component generalizations of the Hirota–Satsuma coupled KdV equation, *Appl. Math. Lett.*, 37 (2014) 15-21.
- 32) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Self-adaptive moving mesh schemes for short pulse type equations and their Lax pairs, *Pacific Journal of Mathematics for Industry*, 6 (2014)
- 33) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, On the τ -functions of Degasperis-Procesi equation, *J. Phys. A*, 46 (2013) 045205.
- 34) Bao-Feng Feng, Jun-ichi Inoguchi, Kenji Kajiwara, Ken-ichi Maruno, Yasuhiro Ohta, Integrable discretizations of the Dym equation, *Front. Math. China*, 8(5), 1017-1029 (2013).
- 35) Bao-Feng Feng, Kenichi Maruno, Yasuhiro Ohta, On the τ -functions of the reduced Ostrovsky equation and the A2(2) two-dimensional Toda system, *J. Phys. A*, 45 355203 (2012).
- 36) Bao-Feng Feng, An integrable coupled short pulse equation, *J. Phys. A*, 45, 085202 (2012).
- 37) Bao-Feng Feng, Jun-ichi Inoguchi, Kenji Kajiwara, Ken-ichi Maruno, Yasuhiro Ohta, Discrete integrable systems and hodograph transformations arising from motions of discrete plane curves, *J. Phys. A* 44, 395201 (2011).
- 38) Daisuke Takahashi, Junta Matsukidaira, Hiroaki Hara, Bao-Feng Feng, Max-plus analysis on some binary particle systems, *J. Phys. A* 44 (2011) 135102.
- 39) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, A self-adaptive moving mesh method for the Camassa–Holm equation, *J. Comput. Appl. Math.*, 235 (2010)229-243.
- 40) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Integrable discretizations of the short pulse equation, *J. Phys. A* 43, 085203 (2010).
- 41) Bao-Feng Feng, Ken-ichi Maruno, Yasuhiro Ohta, Integrable discretizations for the short-wave model of the Camassa–Holm equation, *J. Phys. A* 43 (2010) 265202.
- 42) Y.-S. Chan, G.H. Paulino, B.-F. Feng, and A. Sutradhar, Dependence of Crack-tip Singularity on Loading Functions, *Mechanics Research Communications*, 37 (2010) 191-197.
- 43) Yue Liu, Bao-Feng Feng, F. Guo, H. Gao, On the initial-value problem to the Degasperis-Procesi equation with linear dispersion, *Discrete Contin. Dynam. Systems Series A (DCDS-A)*, 26 (2010) 1269-1290.
- 44) Bao-Feng Feng, Yue Liu, An operator splitting method for the Degasperis-Procesi equation, *J. Comput. Phys.* 228 (2009) 7805.
- 45) Yue Liu, Bao-Feng Feng, J. Chen, On the uniform bound of solutions for the KP-type equations, *Nonlinear Analysis*, 71 (2009) e2062,
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- 47) Bao-Feng Feng, K. Maruno, Integrable discretization for a two-dimensional Hamiltonian system with quartic potential, *International Journal of Modern Physics*, 22 (2008) 1-12.
- 48) Bao-Feng Feng, Youn-Sha Chan, Taketomo Mitsui, An efficient pseudo-spectral method for some nonlinear wave equations with higher linear dispersive terms, *Dynamics of Continuous, Discrete and Impulsive Systems* 14 (2007) 264-269.
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- 52) Bao-Feng Feng, Youn-Sha Chan, Nonlinear intrinsic localized modes in a reduced Fermi-Pasta-Ulam chain with on-site harmonic potential, *Math. Comput. Simul.* 74 (2007)292-301.
- 53) Bao-Feng Feng, An Integrable Three Particle System Related to Intrinsic Localized Modes in Fermi–Pasta–Ulam- β Chain, *J. Phys. Soc. Japan*, 75 (2006) 014401.
- 54) Bao-Feng Feng, Yusuke Doi, Takuji Kawahara, A regularized model equation for discrete breathers in anharmonic lattices with symmetric nearest-neighbor potentials, *Physica D*, 214 (2006) 33-41.

- 55) Bao-Feng Feng, Youn-Sha Chan, Solitary wave propagation and interactions for a sixth-order generalized Boussinesq equation, *International Journal of Mathematics and Mathematical Sciences*, 9 (2005) 1435–1448.
- 56) Bao-Feng Feng, Multiplicity and structure for traveling-wave solutions of the Kuramoto-Sivanshinsky equation, *International Journal of Mathematics and Mathematical Sciences*, 70 (2004) 3839-3848.
- 57) Bao-Feng Feng, Yusuke Doi, Takuji Kawahara, Quasi-continuum approximation for intrinsic localized modes in Fermi-Pasta-Ulam lattices, *J. Phys. Soc. Japan*, 73 (2004) 2100-2111.
- 58) Bao-Feng Feng, B. A. Malomed, Antisymmetric solitons and their interactions in strongly dispersion-managed fiber-optic systems, *Optics Communication*, 229 (2004) 173-185
- 59) Bao-Feng Feng, B. A. Malomed, Bound states of solitons between closely spaced WDM channel in a dispersion-managed fiber-optic link, *Optics Communication*, 219 (2003) 143-156
- 60) Bao-Feng Feng, B. A. Malomed, T. Kawahara, Cylindrical solitary pulses in a two-dimensional Kuramoto-Sivashinsky system, *Physica D*, 175, 127-138 (2003)
- 61) Bao-Feng Feng, B. A. Malomed, T. Kawahara, Stable two-dimensional solitary pulses in linearly coupled dissipative Kadomtsev-Petviashvili equations, *Phys. Rev. E*, 66 (2002) 056311
- 62) Bao-Feng Feng, T. Kawahara, Temporal evolutions and stationary waves for a perturbed KdV with nonlocal term, *Int. J. Bifurcation and Chaos*, 12 (2002) 2393-2407.
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- 66) Bao-Feng Feng, T. Kawahara, Temporal evolutions and stationary waves for dissipative Benjamin-Ono equations, *Physica D*, 139 (2000) 301-318
- 67) Bao-Feng Feng, T. Kawahara, Multi-hump wave solutions for Korteweg-de Vries equation with nonlocal perturbations, *Physica D*, 137 (2000) 237-246
- 68) Bao-Feng Feng, T. Kawahara, Stationary traveling-wave solutions of an unstable KdV-Burgers equation, *Physica D*, 137 (2000)228-236
- 69) Bao-Feng Feng, T. Kawahara, T. Mitsui, A conservative spectral method for several two-dimensional nonlinear wave equations, *J. Comput. Phys.*, 153 (1999) 467-487
- 70) Bao-Feng Feng, T. Mitsui, A finite difference method for the Korteweg-de Vries and the Kadomtsev-Petviashvili equations, *J. Comput. Appl. Math.*, 90 (1998) 95-116

b) Proceedings

- 1) Hidekazu Tsuji, Kenichi Maruno, Yuji Kodama, Baofeng Feng: Two-dimensional interaction of solitary waves of Benney-Luke equation (7 pages, written in Japanese), Proceedings of the annual meeting of Japan Society of Fluid Mechanics 2011, 2B23
- 2) Kenichi Maruno, Baofeng Feng, Jun-ichi Inoguchi, Kenji Kajiwara, Yasuhiro Ohta, Semi-discrete Analogues of the Elastic Beam Equation and the Short Pulse Equation, Referred Proceeding for 2013 International Symposium on Nonlinear Theory and Its Application (NOLTA2013).
- 3) Y. Doi, Bao-Feng Feng, On the collision of intrinsic localized modes in 1D Fermi-Pasta-Ulam lattice, Proceeding of the 32nd International School-Conference, “Advanced Problems in Mechanics”, 118-127 (2004)
- 4) Bao-Feng Feng, Takuji Kawahara, Multiplicity of chaotic and stationary solutions to nonlinear evolution equations, Mathematical aspects of waves with nonlinearity or many degrees of freedom. *Kyokyuroku*, No. 1152, 1-11 (2000)
- 5) Bao-Feng Feng, Takuji Kawahara, Taketomo Mitsui, An ADI scheme for an unstable dissipative-dispersive nonlinear system, Proceeding of the Fourth Hellenic-European Conference on Computer Mathematics and its Application, 1 225-232 (1998)

c) Theses

- 6) Ph. D., “Numerical studies on nonlinear dispersive waves in unstable and dissipative systems,” March 2007
- 7) M.S., “Numerical solutions for some soliton equations,” March 1997

Presentations

a. Presentations at Conferences and Workshops

- 1) Soliton solutions to the nonlocal NLS and coupled NLS equations, The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, July 5-9, 2018.
- 2) Bilinearization and reductions for the NLS, derivative NLS, complex sine-Gordon and Fokas-Lenells equations, Texas DE Conference, San Antonio, March 24, 2018.
- 3) New wave phenomenon in discrete nonlinear systems, The 2017 International Symposium on Nonlinear Theory and Its Applications (NOLTA2017), Cancun, Mexico, December 6, 2017
- 4) Self-adaptive moving mesh method for differential equations, Japan-US Science Forum, Harvard University, Nov. 18, 2017.
- 5) General soliton solutions to nonlocal NLS and coupled NLS equations with zero and nonzero boundary conditions, Colorado Nonlinear Days, Colorado Springs, CO, Nov. 11, 2017.
- 6) Semi-discrete analogues of the complex short pulse and coupled complex short pulse equations based on the KP hierarchy reduction, AMS Fall Sectional Meeting, Denton, TX, Sep. 10, 2017.
- 7) The geometric interpretation of the complex short pulse equation, 10th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 29-April 1, 2017.
- 8) The geometric interpretation of the complex short pulse equation, AMS South Sectional Meeting, Charleston, March 11, 2017.
- 9) The complex short pulse equation and the complex sine-Gordon equation, Texas Analysis and Mathematical Physics Seminar, Rice University, Houston, Oct. 22, 2016.
- 10) The geometric and algebraic aspects of the complex short pulse equation, AMS Central Sectional Meeting, Denver, Oct. 8, 2016.
- 11) Two-component generalization of the reduced Ostrovsky equation and its integrable discretization, the fourth International Conference: Nonlinear Waves-Theory and Applications, June 27, Beijing, 2016.
- 12) A complex short pulse equation of focusing and defocusing type, Texas PDE Conference, San Marcos, April 8, 2016
- 13) Self-adaptive moving mesh methods, International Workshop on Integrable Systems - Mathematical Analysis and Scientific Computing, Taipei, Taiwan, Oct. 17, 2015.
- 14) A new model for ultra-short pulse propagation in nonlinear optics, Cross-Straight Workshop on Integrable Systems and Related Topics, Xiamen, China, Oct. 25, 2015.
- 15) The complex short pulse and complex short pulse equations, Workshop on integrable systems and nonlinear mathematics physics, Zhenjiang, Jiangsu, China, June 6, 2015.
- 16) The physical, geometric and algebraic aspects of the complex short pulse equation, the 9th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 1, 2015.
- 17) A self-adaptive moving mesh method for a short pulse equation and its two-component generalization, Japan Society for the Promotion of Science (JSPS) 5th Multidisciplinary Science Forum, University of Florida, Gainesville, FL, November 7, 2014.
- 18) Self-adaptive moving mesh method for a class of nonlinear wave equations with hodograph transformation, Kyoto Conference on Numerical Analysis and Differential Equations, Kyoto, Japan, Sep. 18, 2014.
- 19) Complex and coupled complex short pulse equations: Integrability, discretization and numerical simulations, SIAM conference on nonlinear waves and coherent structures, Cambridge, UK, August 11-14, 2014.
- 20) General soliton solution to a vector nonlinear Schrodinger equation, Department of Mathematics and

- Statistics, University of Glasgow, Glasgow, August 8, 2014.
- 21) Complex and coupled complex short pulse equations, Department of Mathematical Science, Tsinghua University, Beijing, China, June 30, 2014.
 - 22) Integrable systems and self-adaptive moving mesh method, Workshop on integrable systems and nonlinear mathematics physics, Zhenjiang, Jiangsu, China, June 7, 2014.
 - 23) A class of nonlinear wave equations and their integrable discretizations, Taida Institute for Mathematics Sciences, Taipei, June 13, 2014.
 - 24) General bright-dark soliton solution to the continuous and discrete vector nonlinear Schrodinger equation, Institute of Mathematics, Academia Sinica, Taipei, June 12, 2014.
 - 25) Self-adaptive moving mesh methods for a class of nonlinear wave equations with hodograph transformation, 2013 Tokyo Workshop on Structure-Preserving Method, the University of Tokyo, January 8, 2013.
 - 26) A self-adaptive moving mesh method for a short pulse equation and its two-component generalization, Japan Society for the Promotion of Science (JSPS) 3rd Multidisciplinary Science Forum, Chapman University, Orange County, CA, Feb. 1, 2013.
 - 27) A self-adaptive moving mesh method for a short pulse equations and its multi-component generalization, 2nd China-Japan Joint Workshop on Integrable Systems, Kyoto, Japan, March 17, 2013.
 - 28) Integrable discretizations and self-adaptive moving mesh method for a class of soliton equations, the 8th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, March 26, 2013.
 - 29) Self-adaptive moving mesh methods for a class of nonlinear wave equations, the third International Conference: Nonlinear Waves—Theory and Applications, June 12, Beijing, 2013.
 - 30) Integrable discretizations for the short wave limit of the Degasperis-Procesi equation, the third International Conference: Nonlinear Waves—Theory and Applications, June 15, Beijing, 2013.
 - 31) Integrable discretizations and self-adaptive moving mesh schemes of soliton equations, 10th International Conference on Symmetry Integrability and Difference Equations (SIDE), June 15, 2012
 - 32) An integrable coupled short pulse equation, AMS Southeastern section meeting, Tampa, March 11, 2012
 - 33) Bilinearization of the Degasperis-Procesi equation, AMS-JMM Joint Mathematics Meetings, Boston, Jan 9, 2012
 - 34) Integrable discretization of the Harry-Dym equation, the 7th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 4-7, 2011.
 - 35) Integrable discrete systems constructed from several soliton equations with cuspon or loop solutions, The 8th AIMS International Conference on Applications, Dresden, Germany, May 25-28, 2010
 - 36) Integrable discretization and self-adaptive moving mesh method for the Harry-Dym equation, The 8th AIMS International Conference on Applications, Dresden, Germany, May 25-28, 2010.
 - 37) Integrable discretizations of a short-wave model of the Camassa-Holm Equation, China-Japan Joint Workshop on Integrable System, Shaoxing, China, January 7-10, 2010.
 - 38) A self-adaptive moving mesh method for the Camassa-Holm equation, NSF/CBMS conference, Edinburg, Texas, May 17-21, 2010.
 - 39) Integrable discretization and the self-adaptive moving mesh method, the 33rd Texas PDE Conference, Austin, April, 10-11, 2010.
 - 40) Numerical Study of Resonant Solitons in Two-dimensional Boussinesq Equation, the International Conference on Scientific Computation and Differential Equations (SciCADE09), Beijing, China, May 25-29, 2009.
 - 41) Integrable discretizations for the Camassa-Holm and short pulse equations, the 6th IMACS Conference on Nonlinear Evolution Equation and Wave Phenomena: Computation and Theory, Athens, GA, March 22-26, 2009
 - 42) Bilinear Equations, semi-discretization, and novel numerical computations for the Camassa-Holm equation, Joint Mathematics Meetings, Washington D.C., Jan 9, 2009.

- 43) A novel numerical method for discontinuous solutions of the Camassa-Holm and the Degasperis-Procesi equations, 17th STMC Meeting, Edinburg, TX, Feb, 21, 2009.
- 44) Non-smooth solutions of the the Cammassa-Holm (CH) equation and the Degasperis-Procesi (DP) equation and their numerical aspects, World Congress of Nonlinear Analysis (WCNA), Orlando, FL, July 2-9, 2008.
- 45) The global weak solutions of the Degasperis-Procesi (DP) equation and its numerical aspects, 7th AIMS International Conference on Dynamical Systems, Differential Equations and Applications, Arlington, TX, May 18-21, 2008.
- 46) An integrable difference scheme for the Camassa-Holm equation and numerical computation, special session "Nonlinear waves and integrability", International Conference: Nonlinear Waves--Theory and Applications, Beijing, June 9-12, 2008.
- 47) Reduced models for the interactions of discrete breathers in Fermi-Pasta-Ulam lattices, special session "Solitary wave interactions and collisions in non-integrable systems", International Conference: Nonlinear Waves--Theory and Applications, Beijing, June 9-12, 2008.
- 48) A short pulse equation: loop, breather solitons and integrable semi-discretization, Texas PDE Conference, Houston, TX, April 5-6, 2008.
- 49) A long-short wave equation in Fermi-Pasta-Ulam lattice, SIAM Conference on Analysis of PDEs, Mesa, AZ, Dec., 10-12, 2007.
- 50) Non-smooth solitary wave solutions of the Cammassa-Holm equation and the Degasperis-Procesi (DP) equation, the 7th National Conference of Solitons and Integrable Systems, Xuzhou, China, August 10, 2007.
- 51) Interaction of discrete breathers in Fermi-Pasta-Ulam chain, SIAM Conference on Dynamical Systems and its Applications, Utah, Snowbird, May 30, 2007.
- 52) Interaction of discrete breathers in Fermi-Pasta-Ulam Chain, the 5th IMACS Conference on Nonlinear Evolution Equation and Wave Phenomena: Computation and Theory, Athens, GA, April 16-19, 2007
- 53) An operator splitting scheme for the peakon and shock-peakon solutions of Degasperis-Procesi equation, 30th Annual Texas PDE Conference, San Antonio, March 24, 2007
- 54) Wave phenomenon in nonlinear lattices, 15th Annual South Texas Mathematics Consortium, Brownville, TX, February 10, 2007
- 55) A numerical method to the Cammassa-Holm and Degasperis-Procesi equations, Joint Mathematics Meetings, New Orleans, Louisiana, January 7, 2007
- 56) A symmetric three-level pseudo-spectral method for some nonlinear wave equations, 5th International Conference on Differential Equations and Dynamical Systems, Edinburg, TX, December 17, 2007
- 57) Integrable Discretization of Several Integrable Two-dimensional Hamiltonian Systems, 2nd SIAM Nonlinear Waves and Coherent Structures Conference, Seattle, Washington, September 9-12, 2006.
- 58) Integrable discretizations of a two-dimensional Hamiltonian system with quartic potential, 28th Texas PDE conference, Arlington, March 25, 2006.
- 59) Integrable discretization for integrable finite-dimensional Hamiltonian systems, AMS joint meetings, San Antonio, TX, Jan. 14, 2006.
- 60) Recent development on the study of intrinsic localized modes, invited talk at workshop of intrinsic localized modes in nonlinear lattices, NTT Communication Research Lab., Nara, Japan, May 30, 2005.
- 61) An approach to discrete breathers in Fermi-Pasta-Ulam chain based on two models, The International Conference on Scientific Computation and Differential Equations (SciCADE05), Nagoya, Japan, May 23-27, 2005.
- 62) A reduced three particle model for the study of intrinsic localized modes in Fermi-Pasta-Ulam chain, The Fourth International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 13, 2005.
- 63) Finite-dimensional behavior of a dissipative PDE with Hilbert transform terms on a center-unstable manifold, 28th Texas PDE conference, March 20, 2005.
- 64) Crack Problems for Advanced Material Modeling," 28th Texas PDE conference (with Y.-S. Chan), March 20, 2005.

- 65) Stable cnoidal waves in a coupled Kuramoto-Sivashinsky-Korteweg-de Vries equation, Joint AMS-MAA meetings, Atlanta, January 8, 2005.
- 66) Regularized Model Equations for Intrinsic Localized Modes in Nonlinear Lattices, First SIAM Nonlinear Waves and Coherent Structures Conference, Orlando, Florida, October 2-4, 2004.
- 67) On the collision of intrinsic localized modes in 1D Fermi-Pasta-Ulam lattice, APM2004 Conference at A.F. Ooffe Physical Technical of the Russian Academy of Sciences, St. Petersburg, Russia, June 27-30, 2004.
- 68) Continuum models for intrinsic localized modes in the nonlinear lattices at 27th Annual Texas PDE Conference, Texas A&M University, College Station, Texas, April 3, 2004.
- 69) Regularized model equations for discrete breathers in anharmonic lattices, Annual Conference of Applied Mathematics of Japan, Kyoto, Japan, December 19, 2003.
- 70) Temporal evolutions and traveling-wave solutions for nonlinear wave equations with instability and dissipation, International Conference on Nonlinear Waves, Hongkong, June, 2000.
- 71) Numerical computation for stationary traveling-wave solutions of the Kuramoto-Sivashinsky equation: A rational spectral approach, the 4th International Congress on Industrial and Applied Mathematics, Edinburgh UK, July, 1999.
- 72) The traveling-wave solutions of Kuramoto-Sivashinsky equation, Annual Conference in Applied Mathematics of Japan, Kyoto Japan, December 1998.
- 73) The linearized spectral methods for nonlinear wave equations, 27th Symposium on Numerical Analysis of Japan, Hamamatsu, Japan, June, 1998.
- 74) Solitary-wave propagation and interactions for a generalized Boussinesq equation, Annual Conference of Japanese Society of Industrial and Applied Mathematics (JSIAM), Nagoya, Japan, October 1997.
- 75) Finite difference method for Kadomtsev-Petvishvili equation, Annual Conference in Applied Mathematics of Japan, Kyoto, Japan, December 1996.

b. Seminars and Colloquia

- 1) The complex sine/sinh-Gordon equations and the complex short pulse equation, Integrable and random matrix theory seminar, University of Michigan, October 23, 2017.
- 2) KP-Toda hierarchy reduction method for soliton equations, Colloquium talk at the College of Charleston, March 17, 2017.
- 3) An integrable model for light propagation in ultra-short pulse regime, Colloquium talk at UT Dallas, Dallas, April 21, 2017.
- 4) A focusing and defocusing complex short pulse equation, Workshop on Mathematical Physics and Integrable Systems, School of Mathematical Sciences, The University of Science and Technology of China, Hefei, China, January 7, 2017.
- 5) A two-component Degasperis-Procesi equation and its short wave limit, Zhejiang Normal University, Jinhua, Dec. 21, 2016.
- 6) The complex sine-Gordon and sinh-Gordon equations, Department of Applied Mathematics, the University of Colorado-Boulder, Oct. 7, 2016.
- 7) A complex short pulse equation: The physical, geometric and algebraic aspects, Institute of Mathematics, Academia Sinica, Taipei, June 16, 2015.
- 8) A two-component Hunter-Saxton equation, Shanghai Jiaotong University, Shanghai, June 12, 2015
- 9) A two-component generalization of the reduced Ostrovsky equation, Shanghai University, Shanghai, July 22, 2015
- 10) Integrable discretizations and the self-adaptive moving mesh method, Mathematics Research Seminar, UT-Brownsville, March 5, 2010.
- 11) Interaction of discrete breathers in Fermi-Pasta-Ulam lattice, Hiroshima University, Hiroshima, Japan, June 30, 2009.
- 12) Integrable self-adaptive mesh methods for the Camassa-Holm and the short pulse equations, Kyoto Station Seminar in Nonlinear Science, Kyoto, Japan, June 26, 2009.

- 13) Mach Reflection of Solitary Waves in Shallow Water Waves, ZhouPeiyuan Center for Applied Mathematics, Tsinghua University, Beijing, China, May 22, 2009.
- 14) Integrable self-adaptive mesh methods for the Camassa-Holm and the short pulse equations, China University of Mining & Technology, Beijing, China, June 19, 2009.
- 15) Semi-discretization, and novel numerical computations for the Camassa-Holm equation, University of Houston-Downtown, Oct. 3, 2008.
- 16) Bilinear Equations, semi-discretization, and novel numerical computations for the Camassa-Holm equation, UTPA Applied Mathematics Seminar, Sep. 10, 2008.
- 17) Interactions of solitary waves in dispersive systems, Nonlinear Science Center, Northwestern University, Xian, China, August 17, 2007.
- 18) Interactions of localized coherent structures in nonintegrable dispersive systems, Nonlinear Studies and Computation (NSC) seminar, Research Institute of Electronics Sciences (RIES), Hokkaido University, Sapporo, Japan, July 26, 2007.
- 19) Non-smooth solitary wave solutions of the Degasperis-Procesi (DP) equation and their numerical aspect, Department of Mechanical Science and Bioengineering, Graduate School of Engineering Science, Osaka, Japan, July 10, 2007.
- 20) Recent Developments on Quasi-continuum Approximation of Intrinsic Localized Modes, 2nd Workshop on Intrinsic Localized Modes (ILMs), Osaka University, Osaka, Japan, June 30, 2007.
- 21) A reduced model for collisions of intrinsic localized modes in Fermi-Pasta-Ulam lattice, special Lecture of the 21st Century Program, Center of Excellence for Research and Education on Complex Functional Mechanical Systems, Kyoto University, Kyoto, Japan, June 15, 2007.
- 22) A combined method for singular perturbation problems, Kyusyu University, Applied Math Seminar, June 26, 2006.
- 23) Multiple scales strained coordinates method; a unified approach for singular perturbation problems, Applied Math Seminar, UTPA, April 12, 2006.
- 24) Integrable discretizations of a two-dimensional Hamiltonian with quartic potential," Applied Math Seminar, UTPA, March 1, 2006.
- 25) Introduction to Hirota's Bilinear Method (II), Applied Math Seminar, UTPA, Oct. 24, 2005
- 26) Introduction to Hirota's Bilinear Method (I), Applied Math Seminar, UTPA, Oct. 17, 2005.
- 27) Optical solitons in fiber communication systems, Research Institute of Computational Mathematics and Scientific Engineering Computing, Beijing, China, July 28, 2005.
- 28) Discrete breathers in Fermi-Pasta-Ulam atomic chain, Research Institute of Computational Mathematics and Scientific Engineering Computing, Beijing, China, July 27, 2005.
- 29) Variational approximation for nonlinear wave equations, Kyoto University, Kyoto, Japan, June 1, 2005.
- 30) Intrinsic localized modes in Fermi-Pasta-Ulam atomic chain, Department of Mathematics, the University of Kansas, March 9, 2005.
- 31) Stable solitary waves in stabilized two-dimensional Kuramoto-Sivashinsky systems, Princeton Plasma Physics Laboratory, Princeton University, January 4, 2005.
- 32) 1D and 2D Intrinsic Localized Modes in Nonlinear Lattices, Department of Computer and Mathematical Sciences, The University of Houston-Downtown, November 19, 2004.
- 33) Symmetric and antisymmetric solitons in strongly dispersion-management fiber-optic systems, Department of Mathematical Science, Osaka University, Osaka, Japan, June 9, 2004.
- 34) Application of variational methods in fiber-optic communication systems at Research Institute of Mathematical Sciences (RIMS), Kyoto, Japan, June 7, 2004.
- 35) Variational methods in fiber-optic communication systems, one hour colloquium talk at Department of Information Engineering, Nagoya University, Nagoya, Japan, June 4, 2004.
- 36) How far could a continuum model say about the Intrinsic Localized Modes (ILMs) in nonlinear lattices?, one hour invited talk at Kyoto University, Kyoto, Japan, May 31, 2004.
- 37) Bound states of solitons between closely spaced WDM channels in a dispersion managed fiber optic link, Computational & Applied Math Seminar, the University of Kansas, October 2002.
- 38) Stable cnoidal-like waves in coupled Kuramoto-Sivashinsky-Korteweg-de Vries equations, Computational & Applied Math Seminar, the University of Kansas, April, 2002.

- 39) A stabilized Kuramoto-Sivashinsky system, Kansas Center for Advanced Scientific Computing (KCASC) seminar, the University of Kansas, April 20, 2001.
- 40) Multi-hump traveling-wave solutions to nonlinear dispersive equations in unstable and dissipative systems, Mathematical Science Seminar, Osaka University, Osaka, Japan, January 2000.
- 41) Initial value problems and multi-hump traveling-wave solutions to nonlinear wave equations with stability and dissipation, Mathematical Science Seminar, Ryukoku University, Kyoto Japan, December 1999.
- 42) A class of linearized implicit finite difference method with free parameter θ , Mathematical Science Seminar, Osaka University, Osaka, Japan, November 1997.