

SYMMETRY PLUS INTEGRABILITY 2010

Thursday, June 10

8:30am – 9:00am	Opening Remark: Dr. Cynthia Brown (Vice Provost for Graduate Studies, University of Texas – Pan American)
9:00am – 10:00am	Plenary Talk: Mark J. Ablowitz (University of Colorado, Boulder, USA) A World of Nonlinear Waves: from Beaches to Lasers
10:00am – 10:30am	Coffee Break
10:30am – 11:00am	M. Lakshmanan (Bharathidasan University, India) Integrability of a Class of Nonlinear Ordinary Differential Equations (ODEs) of any Order through Nonlocal Transformations
11:00am – 11:30am	Thiab Taha (University of Georgia, USA) Parallel Numerical Methods for Solving Nonlinear Evolution Equations
11:30am – 12:00pm	Mark Hoefer (North Carolina State University, USA) The Nonlinear Schrödinger equation in the small dispersion regime: applications
12:00pm – 2:00pm	Lunch & Poster Session. Supported by College of Science and Engineering & Office of Graduate Studies, UTPA
2:00pm – 3:00pm	Plenary Talk: Anthony Bloch (University of Michigan, USA) Integrable Flows and Asymptotic Stability
3:00pm – 3:30pm	Barbara Shipman (University of Texas at Arlington, USA) Fixed-point sets of non-maximal torus actions on flag manifolds, and the Toda lattice
3:30pm – 4:00pm	Michael Gekhtman (University of Notre Dame, USA) Hankel determinants, cluster algebras and integrable lattices
4:00pm – 4:30pm	Coffee Break
4:30pm – 5:00pm	Peter Miller (University of Michigan, USA) The Benjamin-Ono equation in the zero-dispersion limit
5:00pm – 5:30pm	Robert Buckingham (University of Cincinnati, USA) Semiclassical spectral confinement for the sine-Gordon equation

Friday, June 11

9:00am – 10:00am	Plenary Talk: Masanobu Kaneko (Kyushu University, Japan) Modular forms satisfying certain differential equation
10:00am – 10:30am	Coffee Break
10:30am – 11:00am	Tim Huber (University of Texas – Pan American, USA) Differential equations for modular forms on $SL(2, \mathbf{Z})$ -conjugate subgroups of level three
11:00am – 11:30am	Sarbarish Chakravarty (University of Colorado, Colorado Springs, USA) Nonlinear differential equations for Triangle groups
11:30am – 12:00pm	Kenji Kajiwara (Kyushu University, Japan) Ultradiscretization of solvable chaotic systems
12:00pm – 2:00pm	Lunch & Poster Session, Supported by College of Science and Engineering & Office of Graduate Studies, UTPA
2:00pm – 2:30pm	Anton Dzhamay (University of Northern Colorado, USA) On Geometric Configurations Related to Matrix Factorizations
2:30pm – 3:00pm	Teruhisa Tsuda (Kyushu University, Japan) UC hierarchy, monodromy preserving deformations and hypergeometric functions
3:00pm – 3:30pm	Takeo Kojima (Yamagata University, Japan) The Integrals of Motion for the Deformed W-algebra $W_{q,t}(\widehat{gl}_N)$
3:30pm – 4:00pm	Coffee Break
4:00pm – 4:30pm	William L. Kath (Northwestern University, USA) Methods to determine large deviations and rare events in optical pulses
4:30pm – 5:00pm	Shinsuke Watanabe (Open University of Japan, Japan) Experiments on shallow water waves
5:10pm – 6:00pm	Special Talk: Yuji Kodama (Ohio State University, USA)
7:00pm – 9:00pm	Banquet at Parrot Eyes (in front of Travelodge) Master of Ceremony: Lokenath Debnath (University of Texas – Pan American) Banquet Speakers: Mark J. Ablowitz (University of Colorado, Boulder, USA) Shinsuke Watanabe (Open University of Japan, Japan)

Saturday, June 12

9:00am – 10:00am	Plenary Talk: Alexander Mikhailov (University of Leeds, United Kingdom) Automorphic Lie algebras and corresponding Integrable Systems
10:00am – 10:30am	Coffee Break
10:30am – 11:00am	Harvey Segur (University of Colorado, Boulder, USA) Tsunamis and other shallow water waves
11:00am – 11:30am	Chiu-Yen Kao (Ohio State University, USA) A pseudo-spectral method with window technique for initial value problems of KP equation
11:30am –	Free Time & Discussion

Sunday, June 13

9:00am – 10:00am	Plenary Talk: Boris Konopelchenko (University of Salento, Lecce, Italy) Singular sectors of integrable hierarchies, degenerate critical points and Euler-Poisson-Darboux equations
10:00am – 10:30am	Coffee Break
10:30am – 11:00am	Takashi Takebe (Higher School of Economics, Russia) hbar-expansion of KP hierarchy: Recursive construction of solutions
11:00am – 11:30am	Johan van de Leur (Mathematical Institute of Utrecht University, Netherland) Givental symmetries of Frobenius manifolds and multi-component KP tau-functions
11:30am – 12:00pm	Wen-Xiu Ma (University of South Florida, USA) Hamiltonian structures of zero curvature equations by variational identities
12:00pm– 2:00pm	Lunch
2:00pm – 2:30pm	Jen-Hsu Chang (National Defense University, Taiwan) The σ -flows in the Novikov-Veselov Equation
2:30pm – 3:00pm	Vladimir Rosenhaus (California State University, Chico, USA) On Differential Equations with Infinite Symmetries and Infinite Conservation Laws
3:00pm – 3:30pm	Coffee Break
3:30pm – 4:00pm	Alejandro Aceves (Southern Methodist University, USA) Traveling wave solutions in discrete systems
4:00pm – 4:30pm	Gregor Kovacic (Rensselaer Polytechnic Institute, USA) Integrable Random Optical Pulse Dynamics in a Resonant Optical Medium
4:30pm – 5:00pm	Hayato Chiba (Kyushu University, Japan) Bifurcation theory of the infinite-dimensional Kuramoto model
5:00pm – 5:30pm	Eleftherios Gkioulekas (University of Texas – Pan American, USA) Can the two-layer QG model explain the Nastrom-Gage energy spectrum of the atmosphere?

Monday, June 14

9:00am – 10:00am	Plenary Talk: Yoshimasa Nakamura (Kyoto University, Japan) Integrable Algorithms: from Moser to I-SVD
10:00am – 10:30am	Coffee Break
10:30am – 11:00am	Satoshi Tsujimoto (Kyoto University, Japan) Orthogonal polynomials and Toda lattice hierarchy
11:00am – 11:30am	Yasuhiro Ohta (Kobe University, Japan) Discrete sine-Gordon equations: hyperbolic and elliptic types
11:30am – 12:00pm	Willy Hereman (Colorado School of Mines, USA) Symbolic Computation of Conservation Laws of Nonlinear Partial Differential Equations in Multiple Space Dimensions
12:00pm – 2:00pm	Lunch
2:00pm – 2:30pm	Takao Suzuki (Kobe University, Japan) A class of higher order Painlevé systems arising from integrable hierarchies of type A
2:30pm – 3:00pm	Junta Matsukidaira (Ryukoku University, Japan) Constructing two-dimensional integrable mappings that possess invariants of high degree
3:00pm – 3:30pm	Daisuke Takahashi (Waseda University, Japan) On some ultradiscrete systems
3:30pm – 4:00pm	Satoru Saito (Tokyo Metropolitan University, Japan) Generations of invariant varieties of periodic points from the singularity confinement

Tuesday, June 15

Departure

Poster Session

Yuhan Jia (Ohio State University, USA)

Higher order corrections to the Miles theory of shallow water waves

Chuanzhong Li (Ohio State University, USA)

The solution of bigraded Toda hierarchy

Czeslaw Maczka (AGH University of Science and Technology, Krakow, Poland)

Traveling wave solutions of the generalized convection-reaction-diffusion equation

Hiroshi Miki (Kyoto University, Japan)

Skew orthogonal polynomials associated with Askey-Wilson polynomials

Nobutaka Nakazono (Kyushu University, Japan)

Hypergeometric solutions to the q-Painlevé IV equation

Noriko Saitoh (Yokohama National University, Japan)

A behavior of Julia set of higher dimensional maps in the integrable limit

Erwin Suazo (University of Puerto Rico, Mayaguez, USA)

On Fundamental Solutions for Evolution Equations

Kouichi Toda (Toyama Prefectural University, Japan)

Axially symmetric soliton solutions in an extended Skyrme-Faddeev model

Hidekazu Tsuji (Kyushu University, Japan)

Two-dimensional interaction of solitary waves in a two-layer fluid with large depth

Sponsors & Support

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Plenary speakers

Mark J. Ablowitz (University of Colorado at Boulder, USA)

Anthony Bloch (University of Michigan, USA)

Masanobu Kaneko (Kyushu University, Japan)

Boris Konopelchenko (University of Salento, Lecce, Italy)

Alexander Mikhailov (University of Leeds, United Kingdom)

Yoshimasa Nakamura (Kyoto University, Japan)

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