Centre de recherches mathématiques
Université de Montréal

8e Conférence internationale «Symétrie et intégrabilité des équations aux différences» (SIDE8)
Du 22 au 28 juin 2008

8th International Conference on Symmetries and Integrability of Difference Equations (SIDE8)
June 22-28, 2008

HORAIRE / *PROGRAM*

Le dimanche 22 juin 2008 / *Sunday, June 22, 2008*

18:00   Départ de la navette du campus de l'Université de Montréal (Pavillon André-Aisenstadt) pour l'Hôtel Mont-Gabriel / *Shuttle departure from the Université de Montréal campus (Pavillon André-Aisenstadt) for the Hotel Mont-Gabriel*

19:30   Dîner / *Dinner*

Le lundi 23 juin 2008 / *Monday, June 23, 2008*

07:30 - 09:00 Petit-déjeuner / *Breakfast*

Session - Géométrie discrète et continue des équations de Painlevé / *Geometry of Discrete and Continuous Painlevé Equations*

09:00 - 09:30 **Frank W. Nijhoff** (University of Leeds)
"Similarity reduction of q-difference equations of KdV type and Chazy-type second-degree q-difference equations"

09:30 - 10:00 **Masatoshi Noumi** (Kobe University)
"Some remarks on tau-functions for discrete Painelevé equations"

10:00 - 10:30 Pause-café / *Coffee break*

10:30 - 11:00 **Yasuhiro Ohta** (Kobe University)
"Bäcklund transformation of Toda lattice and solution of Painlevé equation"

11:00 - 11:30 **Kenji Kajiwara** (Kyushu University)
"Hypergeometric solutions to the Painlevé systems"

Session - Symétries continues des équations discrètes et leur applications en calculs numériques / *Continuous Symmetries of Discrete Equations. Theory and Computational Applications*

11:30 - 12:00 **Vladimir Dorodnitsyn** (Keldysh Institute of Applied Mathematics)
"Non-autonomous dynamical systems and exact solutions of evolution PDEs"

12:00 - 12:30 **Peter Hydon** (University of Surrey)
"Conservation laws for difference equations"

12:30 - 14:00 Déjeuner / *Lunch*

Session - Symétries continues des équations discrètes et leur applications en calculs numériques / *Continuous Symmetries of Discrete Equations. Theory and Computational Applications*

14:00 - 14:30 Rafael Hernandez-Heredero (Universidad Politécnica de Madrid (UPM))
"Classification of integrable difference equations using multiscale techniques"

14:30 - 15:00 Raphaël Rebêlo (Université de Montréal)
"2nd and 3rd order ODEs invariant under SL(2,R) and their symmetry preserving discretizations"

15:00 - 15:30 Pause-café / *Coffee break*

15:30 - 16:00 Christian Scimiterna (University Roma Tre)
"Integrability of discrete systems via multiscale expansions"

16:00 - 16:30 Anastasios Tongas (University of Crete)
"Symmetries and reductions of integrable discrete equations on quad-graphs"

16:30 - 17:00 Jorge Enrique Lopez-Sendino (Universidad de Valladolid)
"Umbral harmonic oscillator and its symmetries"

17:00 - 17:30 Sébastien Tremblay (Université du Québec à Trois-Rivières)
"Symmetries of discrete dynamical systems in a two-dimensional lattice"

17:30 - 18:00 Michael Hay (University of Sydney)
"Completeness study on certain 2X2 partial difference equation Lax pairs"

19:30 Dîner / *Dinner*

Le mardi 24 juin 2008 / *Tuesday, June 24, 2008*

07:30 - 09:00 Petit-déjeuner / *Breakfast*

Session - Applications de Yang-Baxter / *Yang-Baxter Maps*

09:00 - 09:30 Alexander P. Veselov (Loughborough University)
"Yang–Baxter maps: a brief review"

09:30 - 10:00 Vassilios Papageorgiou (University of Patras)
"Integrable lattice equations and Yang–Baxter maps"

10:00 - 10:30 Pause-café / *Coffee break*

10:30 - 11:00 Yuri B. Suris (Technische Universitaet Muenchen)
"Yang–Baxter maps of geometric origin"

11:00 - 11:30 Barbara Prinari (Universita' del Salento)
"Yang–Baxter properties of vector NLS solitons"

11:30 - 12:00 Omar Rojas (La Trobe University)
"Geometry of tropical QRT integrable maps"

12:30 - 14:00 Déjeuner / *Lunch*

Session - Aspects algébriques des équations discrètes / *Algebraic Aspects of Discrete Equations*

14:00 - 14:30 Vladimir Novikov (Loughborough University)
"Perturbative symmetry approach for differential-difference equations"

14:30 - 15:00 Nalini Joshi (The University of Sydney)
"Direct reductions of differential-difference equations"

15:00 - 15:30 Pause-café / *Coffee break*

15:30 - 16:00 Boris Konopelchenko (Universita del Salento)
"Discrete, q-discrete deformations of associative algebras and integrable systems"

16:00 - 16:30 Jarmo Hietarinta (University of Turku)
"Bilinear forms and soliton solutions to partial difference equations"

16:30 - 17:00 Alexander Mikhailov (University of Leeds)
"Solutions of integrable two dimensional generalisation of the Volterra system"

17:00 - 17:30 Christian Korff (University of Glasgow)
"Representation theory and q-difference equations in quantum integrable lattice models"

17:30 - 18:00 Mariusz Bialecki (Polish Academy of Sciences)
"A discrete Sato-like theory for finite fields"

18:00 - 18:30 Maciej Nieszporski (Uniwersytet Warszawski)
"Integrable dynamics of Toda type on square and triangular lattices"

19:30 Dîner / *Dinner*

Le mercredi 25 juin 2008 / *Wednesday, June 25, 2008*

07:30 - 09:00 Petit-déjeuner / *Breakfast*

Session - Confinement de singularités, entropie algébrique et théorie de Nevanlinna /
Singularity Confinement, Algebraic Entropy and Nevanlinna Theory

09:00 - 09:30 Claude Viallet (CNRS / Univ. Pierre et Marie Curie)
"What values for the algebraic entropy?"

09:30 - 10:00 Stéphane Lafortune (College of Charleston)
"Singularity analysis and Hirota bilinear form for ultra-discrete equations"

10:00 - 10:30 Pause-café / *Coffee break*

10:30 - 11:00 Rodney Halburd (University College London)
"Nevanlinna theory and diophantine approximation in integrable systems and beyond"

11:00 - 11:30 Alfred Ramani (École Polytechnique)
"Do integrable mappings have the Painlevé property?"

Session - Autres / *Others*

11:30 - 12:00 Yunbo Zeng (Tsinghua University)
"A new multi-component two dimensional Toda lattice hierarchy"

12:30 - 14:00 Déjeuner / *Lunch*

14:00 Après-midi libre / *Free afternoon*

Le jeudi 26 juin 2008 / *Thursday, June 26, 2008*

07:30 - 09:00 Petit-déjeuner / *Breakfast*

Session - Géométrie différentielle discrète / *Discrete Differential Geometry*

09:00 - 09:30 **Yuri B. Suris** (Technische Universitaet Muenchen)
"Discrete Koenigs nets"

09:30 - 10:00 **Michael Gekhtman** (University of Notre-Dame)
"Grassmannians, KP tau-functions and Poisson structures"

10:00 - 10:30 Pause-café / *Coffee break*

10:30 - 11:00 **Thomas Wolf** (Brock University)
"Hyperdeterminats as integrable 3D difference equations"

11:00 - 11:30 **Wolfgang Karl Schief** (Technical University Berlin)
"The discretisation of Bertrand curves and Razzaboni surfaces and their underlying "exotic" integrable equations"

12:30 - 14:00 Déjeuner / *Lunch*

Session - Autres / *Others*

14:00 - 14:30 **Atsushi Nagai** (College of Industrial Technology, Nihon University)
"Best constant of Sobolev inequalities"

14:30 - 15:00 **Yang Shi** (university of Sydney)
"Solution to 2x2 isomonodromy problems of the 2nd and 3rd q-discrete Painlevé equation"

15:00 - 15:30 Pause-café / *Coffee break*

Session - Systèmes intégrables discrets et transformations isomonodromiques / *Discrete Integrable Systems and Isomonodromy Transformations*

15:30 - 16:15 **Alexei Borodin** (Caltech)
"Isomonodromy transformations of difference equations and probability"

16:15 - 17:00 **Dmytro Arinkin** (University of North Carolina)
"Geometric approach to discrete isomonodromy transformations"

17:00 - 17:45 **Eric M. Rains** (California Institute of Technology)
"An isomonodromy interpretation of the elliptic Painlevé equation"

17:45 - 18:30 **Anton Dzhamay** (The University of Northern Colorado)
"On the Lagrangian structure of the discrete isomonodromic and isospectral dynamics"

19:30   Dîner / *Dinner*

Le vendredi 27 juin 2008 / *Friday, June 27, 2008*

07:30 - 09:00 Petit-déjeuner / *Breakfast*

Session - Fonctions spéciales comme solutions des équations à différences et à q-différences / *Special Functions as Solutions of Difference and Q-difference Equations*

09:00 - 09:30 **Mizan Rahman** (Carleton University)
"A q-analogue of the 9-j symbols"

09:30 - 10:00 **Natig Atakishiyev** (Universidad Nacional Autonoma de Mexico)
"On a q-extension of Mehta's eigenvectors of the finite Fourier transform for q a root of unity"

10:00 - 10:30 Pause-café / *Coffee break*

10:30 - 11:00 **Alexei Zhedanov** (Donetsk Institute for Physics and Technology)
"Elliptic solutions of the restricted Toda chain, the Lamé polynomials and a generalization of the elliptic Stieltjes polynomials"

11:00 - 11:30 **Walter Van Assche** (Katholieke Universiteit Leuven, Belgium)
"Multiple orthogonal polynomials, recurrence relations and the corresponding Toda lattice"

11:30 - 12:00 **Boyka Aneva** (Bulgarian Academy of Sciences)
"Boundary Askey-Wilson symmetry and related spectral problem"

12:00 - 12:30 **Paul Spicer** (University of Sydney)
"Semiclassical orthogonal polynomials and related difference equations"

12:30 - 14:00 Déjeuner / *Lunch*

Session - Autres / *Others*

14:00 - 14:30 Oleg Bogoyavlenskij (Queen's University)
"Method of descent for integrable lattices"

14:30 - 15:00 John Harnad (Université de Montréal & Concordia University)
"Tau functions, random processes and equilibrium models of 1-D fermi gases"

15:00 - 15:30 Pause-café / *Coffee break*

15:30 - 16:00 Andrei Bogatyrev (Russian Academy of Sciences)
"Pictorial representation of solutions of PS-3 integral equation"

16:00 - 16:30 Primitivo Belen Acosta-Humanez (Universidad Politécnica de Cataluna)
"Galoisian approach to supersymmetric quantum mechanics - Work in progress"

16:30 - 17:00 Valentina Golubeva (VINITI)
"On integrability of two-parametric Knizhnik-Zamolodchikov equations of B_n type and some other field-theoretic equations"

17:00 - 17:30 Oleksii Mokhonko (Kyiv National Taras Shevchenko University)
"Block Jacobi matrix structure of normal operators with certain spectral properties and the corresponding difference-differential flows"

19:00 Dîner / *Dinner*

Le samedi 28 juin 2008 / *Saturday, June 28, 2008*

07:30 - 09:00 Petit-déjeuner / *Breakfast*

Session - Autres / *Others*

09:00 - 09:30 James Pettigrew (University of New South Wales)
"Characterizing singular curves in parametrized families of biquadratics"

09:30 - 10:00 Willy Hereman (Colorado School of Mines)
"Symbolic computation of Lax pairs of nonlinear partial difference equations"

10:00 - 10:30 Pause-café / *Coffee break*

10:30 - 11:15 F. Alberto Grünbaum (University of California, Berkeley)
"A matrix valued version of the bispectral problem"

12:30 - 14:00 Déjeuner / *Lunch*

14:30 Départ de la navette pour Montréal / *Shuttle departure for Montreal*