

Integrable systems

Prague, June 23–29, 2014

and quantum symmetries



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Schedule

The conference is scheduled for five days. The lectures will start on Tuesday, June 24th, 2014 at 9:00 and will finish on Saturday, June 28th, 2014, in the afternoon. The arrival day is Monday, June 23th, 2014 and the departure day is Sunday, June 29th, 2014.

The address of conference site where the morning and afternoon sessions take place is **Břehová 7, CZ-115 19, Prague 1.**

The registration desk will be opened on Monday, June 23rd, from 17:00 till 21:00 and on Tuesday from 8:00 at the conference site Břehová 7.

More details are available below.

Presentations

All presentations must be prepared in digital form in one of common formats (eg. PDF, Microsoft PowerPoint). Please note that blackboard and transparency overhead (slides) will not be available. Plenary lectures take 50/30 minutes, contributed talks 30 minutes including discussion.

Book of abstracts

Preliminary version of book of abstracts can be downloaded [here](#).

Detailed schedule

Tue Jun 24				
08:00-09:00	conference registration (111)			
	concert hall			
09:00-09:50	M. Del Zotto: Y systems, Q systems and 4D N=2 supersymmetric quantum field theories			
09:50-10:40	V. Dobrev: Multiplet classification for $SU(n,n)$			
10:40-11:00	coffee break			
	concert hall			
11:00-11:50	H. Boos: Factorization vs Integrability			
11:50-12:40	S. Bellucci: Nonlinear realizations and supersymmetric component action approach			
12:40-14:30	lunch break			
	115	103	114	215
14:30-15:00	S. Krivonos: Supersymmetric 3-branes in D=6,8	A. Tselik: Singular Majorana fermion dynamics in Topological Kondo effect	A. Sergyeyev: A new class of (3+1)-dimensional integrable systems related to contact geometry	
15:00-15:30	N. Kozyrev: Partial breaking of global d=3 supersymmetry with hypermultiplet	J. Stokman: Wall crossing formulas for reflection quantum KZ equations and dynamical K-matrices	O. Veliev: On Multidimensional Schrödinger Operator with a Periodic Potential	
15:30-16:00	S. Sidorov: Supersymmetric Mechanics in Deformed Superspace	B. Vlaar: Boundary quantum Knizhnik-Zamolodchikov equations and fusion.	I. Marquette: k-step rational extensions of harmonic and radial oscillator, superintegrability and degeneracies	
16:00-16:30	coffee break			
	115	103	114	215
16:30-17:00	F. Toppan: Four types of (super)conformal transformations	L. Chekhov: Bilinear forms and Poisson Lie structures	P. Papi: Conformal embeddings and simple current extensions	
17:00-17:30	I. Anguelova: Chiral algebras with Γ -type singularities, Virasoro structures and particle correspondences	R. Vlijm: Applications of algebraic Bethe ansatz matrix elements to spin chains in and out of equilibrium	O. Perše: Fusion rules and complete reducibility of certain modules for affine Lie algebras	
17:30-18:00	P. Saksida: On nonlinear Fourier transform	C. Sardon: Lie-Hamilton systems on the plane: properties,	E. Wagner: Equivariance and index	

	classification and applications	computations on a (quantum) 2-sphere	
18:00-18:30	welcome drink		

Wed Jun 25

	concert hall			
09:00-09:50	M. Yakimov: Normal Gelfand-Tsetlin subalgebras and Cluster Algebras			
09:50-10:40	V. Tarasov: Lower bounds in real Schubert calculus			
10:40-11:00	coffee break			
	concert hall			
11:00-11:50	O. Foda: AGT in minimal conformal field theories			
11:50-12:40	A. Isaev: Conformal algebra: R-matrix and star-triangle relations.			
12:40-14:30	lunch break			
	115	103	114	215
14:30-15:00	A. Agore: The extending structures problem for Lie algebras	O. Ragnisco: Shape invariant potentials on curved space: Darboux III and Taub Nut systems revised.	A. Frydryszak: Heisenberg group and generalized phase spaces	N. Izmailyan: Exact finite size corrections and corner free energies for the $c=-2$ universality class
15:00-15:30	K. Andrzejewski: Unitary representations of N-conformal Galilei group	T. Nakatsu: Gauge instantons in noncommutative space	O. M. Lecian: Symmetries in the Quantum characterization of the Cosmological Singularity	E. Winterroth: Topological obstructions in the calculus of variations
15:30-16:00	P. Casati: Integrable systems defined on perfect Lie algebras	A. Restuccia: Consistency and renormalization of the $\lambda = \frac{1}{3}$ soft breaking model of the complete Horava theory	A. Szucs: Temporal extension of particles to interpret and intuitively describe quantum symmetries	M. Cerkaski: Self-organization of electrons in the restricted disk geometry.
16:00-16:30	coffee break			
	115	103	114	215
16:30-17:00	D. Jurman: Fuzzy two-dimensional hyperboloid	T. Matsumoto: Deformations of Superstrings and Classical Yang-Baxter Equation	A. Silantyev: Quiver solutions of a generalized KP-hierarchy	A. Prunotto: Feynman Diagrams and Rooted Maps
17:00-17:30	S. Kožić: Quasi-particle basis of principal subspaces for $U_q(A_n^{(1)})$	G. . Militaru: The global extension problem, crossed products and co-flag non-commutative Poisson algebras	H. . Yamane: Generalized quantum groups and Weyl groupoids	M. Koca: Group Theoretical Analysis of Quasicrystallography from Projections of Higher Dimensional Lattices
17:30-18:00	A. Dobrogowska: Integrable systems related to deformed so (5)	S. Ohya: Supersymmetry, Spectral Degeneracy, and Non-Abelian Holonomy in Quantum Mechanics with Point-like Interactions	J. Mrcun: Proper Lie groupoids and their presentability	N. Koca: 12-fold Symmetric Quasicrystallography from the lattices E6, B6 and F4

Thu Jun 26

	concert hall			
09:00-09:50	V. Terras: Form factor approach to the correlation functions of quantum massless integrable models.			
09:50-10:40	J. Caux: Dynamics in one dimension: from fractional excitations to new out-of-equilibrium states of matter			
10:40-11:00	coffee break			
	concert hall			
11:00-11:50	E. Mukhin: Representations of quantum toroidal algebras			
11:50-12:40	V. Futorny: Representations of Lie algebra of vector fields on a torus			
12:40-14:30	lunch break			
	115	103	114	215
14:30-15:00	P. Winternitz: Lie Point Symmetry Preserving Discretization of Partial Differential Equations: The Liouville Equation	M. Schreck: From noncommutative spacetimes to Lorentz symmetry violation	A. Stan: A class of Meixner random vectors	T. F. Görbe: On the derivation of Darboux form for the action-angle dual of trigonometric BC_n Sutherland system
15:00-15:30	A. Botero: Integrability of the planar three-body problem in a strong magnetic field	F. J. Diaz-Otero: Variational approach and impact evaluation of higher-order perturbation terms in strongly dispersion-managed soliton interactions	Y. K. Ha: Bosonization and Lie Group Structure	Ö. Legeza: Tensor factorization in high dimensional problems and applications in quantum many body systems.
15:30-16:00				

	M. Marvan: Symmetries and recursion operators from zero curvature representations and the Darboux--Egoroff system	A. M. Grundland: Soliton surfaces and generalized symmetries of integrable systems	F. J. Herranz: An integrable curved Henon-Heiles system	J. Lee: Scattering Amplitudes for Multi-indexed Extensions of Solvable Potentials
16:00-16:30	coffee break			
	115	103	114	215
16:30-17:00	R. Kycia: A Mathematica package to derive weight-homogeneous decompositions of vector fields	B. Hoare: The q -deformation of the $AdS_5 \times S^5$ superstring	J. . Chang: The Interactions of Solitons in the Novikov-Veselov Equation	A. Bihlo: Invariant discretization schemes
17:00-17:30	D. Riglioni: Superintegrable systems with spin induced by coalgebra symmetry	S. Itaya: Vortex solutions in a Witten-type model	M. Palese: Geometric properties of reaction-diffusion equations	A. Burinskii: Solitonic Source of the Kerr-Newman Spinning Particle and Emergence of the Dirac Equation
17:30-18:00				
19:00-21:00	conference dinner			

Fri Jun 27				
	115	103	114	215
09:00-09:30	K. De Commer: A new presentation for quantum flag manifolds	N. Sawado: Numerical vortex solutions in (3+1) dimensions for the extended CP^N Skyrme-Faddeev model	A. Sotomayor: Hamiltonian structure for a class of parametric coupled systems of the Korteweg-de Vries type	
09:30-10:00	P. Aniello: Phase Space Dynamics of Open Quantum Systems	M. Visinescu: Killing forms on toric Sasaki-Einstein spaces	K. Takesue: Calorons and the monopole limit	
10:00-10:30	N. Stoilov: Riemann Equations in Bidifferential Calculus	M. Stetsko: Dirac oscillator and Snyder-de Sitter algebra	A. Gusev: Barrier metastable states of system of identical particles coupled by harmonic oscillator potential	
10:30-11:00	coffee break			
	115	103	114	215
11:00-11:30	J. Smotlacha: Electronic properties of the graphitic wormhole	M. Sajedi: Two-dimensional superintegrable quantum systems with potentials expressed in terms of Painlevé transcendents	J. Fuksa: Fermionic representation of XXZ-spin chain	
11:30-12:00	R. Ó Buachalla: The de Rham Cohomology of Quantum Projective Space	A. Dzhamay: Discrete Schlesinger Equations and Difference Painlevé Equations.	P. Orland: Correlation functions of the SU (infinity) principal chiral model	
12:00-12:30	A. F. Reyes Lega: Quantum phase transitions, geometric phases, spin chains	A. Breev: Symmetry of the Dirac equation on a homogeneous space in external Yang-Mills gauge field		
12:30-14:30	lunch break			
	concert hall			
14:30-15:20	T. Miwa: Integrable Spin Chains and Fermionic Basis			
15:20-16:10	R. Kirschner: Yangian symmetry and scattering amplitudes			
16:10-16:40	coffee break			
	concert hall			
16:40-17:30	S. Catto: Exceptional Structures and Relativistic Quark Model			
17:30-18:20	B. Basu-Mallick: Clusters of bound particles in a quantum integrable many-body system and number theory			
18:20-20:00	farewell drink (on the terrace)			

Sat Jun 28				
	concert hall			
09:00-09:50	D. Sternheimer: Generalized Quantum AdS, a basis for a (new) Standard Model in particle physics?			
09:50-10:40	A. Stolin: Belavin-Drinfeld cohomologies and introduction to classification of quantum groups			
10:40-11:30	O. A. Laudal: Cosmos and its furniture			
11:30	closure			

