

# CFT, Integrable Models And Liouville Gravity

Chernogolovka 2009

**Sunday June 28, 2009. Conference Hall.**

10:10–10:50 Registration, coffee

10:50–11:10 Opening

11:10–11:50 Alexei Shabat (Landau Institute), and R. Garifullin

*On the structure of the polynomial conservation laws*

11:50–12:30 Leonid Chekhov (Steklov Institute, Moscow)

*Algebras of Yangian type from  $D_n$  algebras of geodesics on orbifold Riemann surfaces*

12:30–13:10 Kazuo Hosomichi (Yukawa Institute)

*Boundary phenomena in the dilute  $O(n)$  matrix model*

13:30–14:30 Lunch

14:30–15:10 Frank Göhmann (Wuppertal University)

*Thermal correlation functions of quantum spin chains*

15:10–15:50 Andreas Klümper (Wuppertal University) and B. Aufgebauer

*Spectral properties of quantum spin chains of Temperley-Lieb type*

15:50–16:30 Jun'ichi Shiraishi (Tokyo University)

*Macdonald polynomials and quantum algebras*

16:30–16:50 Coffee break

16:50–17:30 Anatoliy Zhiber (Math. Institute, Ufa) and O. Kostrogina

*Characteristic Lie algebras and nonlinear hyperbolic system of equations*

17:30–18:10 Rustem Garifullin (Math. Institute, Ufa)

*From weak discontinuity to nondissipative shock waves*

18:10–18:50 Bulat Suleimanov (Math. Institute, Ufa)

*“Quantum” linearizations of Painleve equations as one of components of their  $L, A$  pairs.*

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Chernogolovka, 2009

**Monday June 29, 2009. Conference Hall.**

09:30–10:10 Alexander Razumov (IHEP) and Yu. Stroganov

*Three-coloring statistical model with domain wall boundary conditions*

10:10–10:50 Nikita Slavnov (Steklov Institute)

*Long-distance asymptotics of correlation functions of XXZ Heisenberg chain*

10:50–11:10 Coffee break

11:10–11:50 Vitaliy Tarasov (Steklov Inst. St. Petersburg)

*On Gaudin model for vector representations*

11:50–12:30 Rainald Flume (Bonn University)

*Matrix models as scalar field theories*

12:30–13:10 Edward Corrigan (Durham University)

*Aspects of integrable defects*

13:30–14:30 Lunch

14:30–15:10 Giuseppe Mussardo (SISSA Trieste)

*Topological Quantum Computation: The Art of Computing with Icosahedral Group*

15:10–15:50 Andrea Cappelli (INFN, Florence)

*Testing conformal field theory of quantum Hall droplets*

15:50–16:30 Andrei Marshakov (Lebedev Institute and ITEP)

*First-order string theory and the Kodaira-Spencer equations*

16:30–16:50 Coffee break

16:50–17:30 Vyacheslav Spiridonov (JINR)

*Elliptic hypergeometry of supersymmetric dualities*

17:30–18:10 Igor Krichever (Landau Institute and Columbia University)

*Absolute extremals of integrals for solitonic equations and Whitham theory*

18:10–18:50 Vladimir Fateev (LPTA, Montpellier)

*Coulomb gas integrals in Conformal Field Theories*

19:00–22:00 *Banquet*

# CFT, Integrable Models And Liouville Gravity

Chernogolovka, 2009

**Tuesday June 30, 2009.**

## CONFERENCE HALL

09:30–10:10 Herman Boos (Wuppertal University)

*Fermionic structure of the XXZ model and CFT*

10:10–10:50 Sergei Derkachev (Steklov Inst. St. Petersburg)

*Yang–Baxter R operators and parameter permutations*

10:50–11:10 Coffee break

11:10–11:50 Cyril Malyshev (Steklov Inst. St. Petersburg)

*The Correlation Functions of the XXZ Heisenberg Chain in Free Fermion and Strong Anisotropy Limits, and Random Walks of Vicious Walkers*

11:50–12:30 Paul Zinn-Justin (LPTMS)

*Exactly solvable models of tilings and Littlewood–Richardson coefficients*

12:30–13:10 Alexei Starobinsky (Landau Institute)

*Infrared dynamics of light quantum fields in the 4-D de Sitter space-time*

13:30–14:30 Lunch

## I. CONFERENCE HALL

14:30–15:10 Alexander Zamolodchikov (Landau Institute & Rutgers University)

*Confining Interaction in 1+1 dimensions*

15:10–15:50 Sergei Lukyanov (Landau Institute & Rutgers University)

*On mass spectrum in 't Hooft's 2D model of mesons*

15:50–16:30 Andrei Bytsko (Steklov Institute, St. Petersburg)

*Non-Hermitian spin chains*

16:30–16:50 Coffee break

16:50–17:30 Dimitrii Polyakov (Witwatersrand University)

*Ground Ring of Alpha-Symmetries and Sequence of RNS String Theories*

17:30–18:10 Chihiro Matsui (Tokyo University)

*A relation between integrable systems of quantum and classical statistical mechanics*

18:10–18:50 Mikhail Yurishchev (IPCP, Chernogolovka)

*Fluctuations of entanglement entropy in quantum systems*

18:50 *Chandra: The journey of a star*

by Giuseppe Mussardo and Enrico Agapito. Presentation of DVD.

**See next page.**

## II. 2ND FLOOR HALL

14:30–15:10 Leonid Bogdanov (Landau Institute)

*Multidimensional integrable hierarchies connected with vector fields*

15:10–15:50 Ismagil Habibullin (Math. Institute, Ufa)

*Characteristic Lie algebras and classification of Darboux integrable chains*

15:50–16:30 Anton Zabrodin (ITEP)

*Dyson gas simulation of Laplacian growth: Geometry and integrability*

16:30–16:50 Coffee break

16:50–17:30 Alexander Orlov (Institute of Oceanology)

*Random Processes and Soliton Theory*

17:30–18:10 Khazret Nirov (Wuppertal University)

*New solutions to loop Toda systems*

18:10–18:50 Valeriy Tolstoy (Moscow University)

*Discrete series of irreducible representations for the noncompact quantum algebra*

$U_q(\mathfrak{u}(n-1, 1))$

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Chernogolovka, 2009

**Wednesday July 1, 2009.**

## CONFERENCE HALL

09:30–10:10 Paul A. Pearce (Melbourne University)

*Logarithmic Minimal Models*

10:10–10:50 Ilya Tipunin (Lebedev Institute)

*Lusztig quantum  $sl(2)$  and logarithmic minimal models*

10:50–11:10 Coffee break

11:10–11:50 Hitoshi Konno (Hiroshima University)

*The elliptic quantum group  $U_{q,p}(\widehat{sl}_2)$ : formulation and applications*

11:50–12:30 Sylvain Ribault (LPTA, Montpellier)

*On  $sl_3$  KZ equations and  $W_3$  null-vector equations*

12:30–13:10 Vsevolod Adler (Landau Institute)

*The tangential map and associated integrable equations*

13:30–14:30 Lunch

## I. CONFERENCE HALL

14:30–15:10 Azat Gainutdinov (Lebedev Institute)

*Logarithmic CFT models with extended symmetry, boundary states, and Verlinde-type formulas*

15:10–15:50 Mikhail Bershtein (Landau Institute & IUM)

*Physical states in the  $M(2,3)$  Minimal Liouville gravity*

15:50–16:30 Michael Lashkevich (Landau Institute)

*Form factors of descendant operators: Free field construction and reflection relations*

## II. 2ND FLOOR HALL

14:30–15:10 Sergei Vergeles (Landau Institute)

*500-th solution of 2D Ising model*

15:10–15:50 Andrei Zotov (ITEP)

*Integrable Systems, Monopoles and Modifications of Bundles over Elliptic Curves*

15:50–16:30 Andrei Smirnov (ITEP)

*Characteristic Classes of Bundles over Elliptic Curves and Integrable Systems*

16:30 Coffee break (fourchette)

18:10 The bus to Moscow