Solvable Lattice Models 2004
- Recent Progress on Solvable Lattice Models -

可解格子模型の最近の進展

京都大学数理解析研究所

2006年4月
Solvable Lattice Models 2004
- Recent Progress on Solvable Lattice Models -

RIMS. Kyoto Univ., Kyoto, Japan,
20-23 July, 2004

Workshop held as a part of RIMS Project Research 2004
"Method of Algebraic Analysis in Integrable Systems"

Tuesday 20 July:

10:00 - 10:50  B. McCoy (SUNY, Stony Brook),
                 New development in the 8 vertex model.

11:00 - 11:50  V. Terras (CNRS, Montpelier),
                 Quantum inverse scattering approach to correlation functions
                 of the $XXZ$ model I : Fundamental blocks.

11:50 - 14:00  Lunch Time

14:00 - 14:40  M.J. Martins (Universidade Federal de Sao Carlos),
                 $R$-matrices and Spectrum of Vertex Models based on Superalgebras.

14:50 - 15:30  O. Foda (Univ. Melbourne),
                 Six Vertex Model with domain wall boundary condition

15:30 - 16:00  Tea Break

14:50 - 15:30  Y. Takeyama (Univ. Tsukuba),
                 A recursion formula for the correlation functions of an inhomogeneous
                 XXX model.

16:50 - 17:30  R. Sakamoto (Univ. Tokyo),
                 Jack symmetric functions power sums and representation of
                 the Virasoro algebra.
Wednesday 21 July:

10:00 - 10:50  C. Korff (SUNY, Stony Brook),
Baxter's auxiliary matrices and the algebraic Bethe ansatz.

11:00 - 11:50  N. Kitanine (Univ. Cergy-Pontoise) *
Quantum inverse scattering approach to correlation functions
of the XXZ model II: Two point correlation functions.

11:50 - 14:00  Lunch Time

14:00 - 14:40  M. Batchelor (Australian National University),
Real applications of solvable lattice models.

14:50 - 15:30  M.J. Martins (Universidade Federal de Sao Carlos),
SU(N) Vertex models with non-diagonal boundaries.

15:30 - 16:00  Tea Break

16:00 - 16:40  J. Shiraishi (Univ. Tokyo),
Commutative family of integral transformations and matrix elements
of the vertex operators for Baxter's eight-vertex model.

16:50 - 17:30  T. Deguchi (Ochanomizu Univ.),
Drinfeld polynomials associated with the XXZ Bethe states at roots of
unity and the $sl_2$ loop algebra.

Thursday 22 July:

10:00 - 10:50  Y. Pugai (Landau Institute),
On chiralities and descendants.

11:00 - 11:50  J.-M. Maillet (CNRS, ENS Lyon),
Quantum inverse scattering approach to correlation functions
of the XXZ model III: Master equation for correlation functions.
11:50 - 14:00  Lunch Time

14:00 - 14:40  S. Kakei (Rikkyo univ.),
Symmetry of elliptic root system and Askey-Wilson polynomials.

14:50 - 15:30  K. Takemura (Yokohama City Univ.),
On eigenvalues of Lamé operator.

15:30 - 16:00  Tea Break

16:00 - 16:40  Y. Hara,
Remarks on the Wakimoto representation for $U_q(\widehat{sl}_2)$.

16:50 - 17:30  Y. Komori (Nagoya Univ.),
Elliptic Ruijsenaars operators and elliptic hypergeometric integrals

Friday 23 July:

10:00 - 10:50  M. Lashkevich (Landau Institute),
From form factors of exceptional fields for two parametric family of integrable models.

11:00 - 11:50  N.A. Slavnov (Steklov Mathematical Institute),
Quantum inverse scattering approach to correlation functions of the XXZ model IV : Dynamical correlation functions.

11:50 - 14:00  Lunch Time

14:00 - 14:40  H. Konno (Hiroshima Univ.),
Fusion 8-vertex Model and Elliptic Quantum Group

14:50 - 15:30  Y-H. Quano (Suzuka Univ. Medical Science),
Form factors, correlation functions and vertex operators in the eight-vertex model at reflectionless points,
16:00 - 16:40  M.J. Rodríguez-Plaza (Univ. Comp. Madrid),
Reciprocal equations and "non-Bethe" states

- Informations of this conference are available from

1. Root of unity symmetries in the 8 and 6 vertex models
   Univ. of Wuppertal        Klaus Fabricius
   SUNY, Stony Brook         Barry M. McCoy

2. On the algebraic Bethe Ansatz approach to the correlation functions of the
   XXZ spin-1/2 Heisenberg chain
   CNRS, Univ. de Cergy-Pontoise   N. Kitanine
   CNRS, ENS Lyon                J. M. Maillet
   Steklov Math. Inst.           N. A. Slavnov
   CNRS, Univ. de Montpellier II  V. Taras

3. Integrable Vertex Models with General Twists
   Univ. Federal de S\\'ao Carlos  M. J. Martins

4. A RECURSION FORMULA FOR THE CORRELATION FUNCTIONS OF
   AN INHOMOGENEOUS XXX MODEL
   筑波大・数理物質科学   竹山 美宏(Yoshihiro Takeyama)

5. Jack symmetric functions and representations of the Virasoro algebra
   東大・理学系           坂本 玲峰(Reiho Sakamoto)

6. Representation Theory and Baxter's TQ equation for the six-vertex model.
   A pedagogical overview.

7. The sh loop algebra symmetry of the XXZ spin chain: an algorithm for
   the degeneracy of a regular Bethe state
   お茶の水女子大・理       出口 哲生(Tetsuo Deguchi)

8. On eigenvalues of Lamé operator
   横浜市立大・総合理学     竹村 剛一(Kouichi Takemura)

9. Elliptic Ruijsenaars operators and elliptic hypergeometric integrals
   名大・多元数理科学       小森 靖(Yasushi Komori)
10. Lectures on the eight-vertex model and bosonization

Landau Inst. for Theoretical Physics  Michael Lashkevich

11. Representation of the Elliptic Algebra $U_\mathfrak{e}(\hat{\mathfrak{s}}\mathfrak{l}_2)$ and the Coset Virasoro Modules

広島大・総合科学 今野均(Hitoshi Konno)

12. Form factors, correlation functions and vertex operators in the eight-vertex model at reflectionless points

鈴鹿医療科学大学 桑野泰宏(Yas-Hiro Quano)

13. States with $v_1 = \lambda$, $v_2 = -\lambda$ and reciprocal equations in the six-vertex model

Univ. Complutense de Madrid  M. J. Rodríguez-Plaza