

# GCOE conference: Algebraic and geometric aspects of discrete integrable systems -- Integrable systems and cluster algebras

Tuesday 14 December 2010 ~ Friday 17 December 2010

The University of Tokyo, Graduate School of Mathematical Sciences, Room 002

3-8-1 Komaba Meguro-ku Tokyo 153-8914, Japan

## Program

### 12/14(Tue)

10:00~11:00 Sergey Fomin (University of Michigan)

Total positivity and cluster algebras

11:30~12:30 Allan Fordy (University of Leeds)

Cluster Mutation-Periodic Quivers and Associated Laurent Sequences

14:30~15:30 Christian Korff (University of Glasgow)

Quantum plactic polynomials and a  $q$ -deformation of the  $su(n)$  Verlinde algebra

16:00~17:00 Atsuo Kuniba (University of Tokyo)

Yang-Baxter map, tau functions and crystal energies for type D

17:00~18:00 Masatoshi Noumi (Kobe University)

Birational Weyl group action on the space of matrices and a discrete integrable system

### 12/15(Wed)

9:30~10:30 Yasuhiro Ohta (Kobe University)

Coordinate transformation and discretization for soliton equation

11:00~12:00 Toshiki Nakashima (Sophia University)

Decorated Geometric Crystals, Monomial Realizations and Polyhedral Realizations of Crystal Bases

12:00~13:00 Sergey Fomin (University of Michigan)

Cluster algebras and triangulated surfaces

14:30~15:30 Andrew Hone (University of Kent)  
Symplectic structure of cluster maps associated with quivers

16:00~17:00 Tomoki Nakanishi (Nagoya University)  
Difference equations and cluster algebras I: general T-systems and Y-systems

17:00~18:00 Rei Inoue (Suzuka University of Medical Science)  
Difference equations and cluster algebras II: Poisson structure for the integrable difference equation

18:30~ Conference Banquet

## 12/16(Thu)

10:00~11:00 Sebastian Zwicknagl (University of Bonn)  
Toric Poisson Ideals in Cluster Algebras

11:30~12:30 Michael Shapiro (Michigan State University)  
Poisson geometry of directed networks and integrable lattices

14:30~15:30 Kenji Kajiwara (Kyushu University)  
Motion and Bäcklund transformations of plane discrete curves

16:00~17:00 Saburo Kakei (Rikkyo University)  
From discrete KP to Yang-Baxter maps

17:00~18:00 Max Glick (University of Michigan)  
The pentagram map and Y-patterns

## 12/17(Fri)

10:00~11:00 Yuri Suris (Technical University of Berlin)  
On the Lagrangian structure of integrable quad-equations

11:30~12:30 Claire Gilson (University of Glasgow)  
A direct analysis of solitons in BBS's with background

14:30~15:30 Junkichi Satsuma (Aoyama Gakuin University)  
Solutions of the ultradiscrete Painlevé II equation