

## Workshop on

Elliptic Hypergeometric Functions in  
Combinatorics, Integrable Systems and Physics

March 20–24, 2017

organized by

Christian Krattenthaler (U Vienna), Masatoshi Noumi (U Kobe),  
Simon Ruijsenaars (U Leeds), Michael J. Schlosser (U Vienna),  
Vyacheslav P. Spiridonov (JINR & NRU HSE), S. Ole Warnaar (U Queensland)

**Monday, March 20, 2017**09:00–09:30 **Opening & Registration**09:30–10:40 **Fokko van de Bult***Introductory Talk 1: Hypergeometric functions and integrals*10:40–11:10 *coffee/tea break*11:10–12:10 **Vyacheslav P. Spiridonov***Introductory Talk 2: Applications of the elliptic hypergeometric integrals*12:10–14:00 *lunch break*14:00–14:50 **Sergey Derkachov***Spin chains and Gustafson's integrals*14:50–15:20 **Dmitri Chicherin***Elliptic solutions of the Yang–Baxter equation*15:20–15:40 *break*15:40–16:10 **S. Ole Warnaar***Known and unknown conjectures from the theory of elliptic hypergeometric functions*16:10–16:40 **Junichi Shiraishi***Some conjectures about the Macdonald polynomials of type C***Tuesday, March 21, 2017**09:00–10:00 **Masatoshi Noumi***Introductory Talk 3: Discrete Painlevé equations and special functions*10:00–10:30 *coffee/tea break*10:30–11:30 **Michael J. Schlosser***Introductory Talk 4: Elliptic hypergeometric combinatorics*11:30–12:00 **Meesue Yoo***Elliptic rook and file numbers*12:00–14:00 *lunch break*

- 14:00–14:50 **Hjalmar Rosengren**  
*Basic hypergeometry and biorthogonal functions related to supersymmetric dualities*
- 14:50–15:20 **Makoto Katori**  
*Elliptic Dyson models*
- 15:20–15:40 *break*
- 15:40–16:40 **Poster Session** (along the Hallway)

**Wednesday, March 22, 2017**

- 09:00–10:00 **Simon Ruijsenaars**  
**Introductory Talk 5:** *Quantum integrable systems of elliptic Calogero–Moser type*
- 10:00–10:30 *coffee/tea break*
- 10:30–11:30 **Andrei Okounkov**  
*Elliptic stable envelopes*
- 11:30–12:10 **Wadim Zudilin**  
*Elliptic dilogarithm and Mahler measures*

**Free afternoon**

**Thursday, March 23, 2017**

- 09:00–09:50 **Eric M. Rains**  
*The monodromy of an elliptic difference equation*
- 09:50–10:20 *coffee/tea break*
- 10:20–11:10 **Hitoshi Konno**  
*Elliptic weight functions and finite dimensional representations of elliptic quantum groups*
- 11:10–11:40 **Simon Ruijsenaars**  
*Hilbert–Schmidt integral operators vs. systems of elliptic Calogero–Moser type*
- 11:40–12:10 **Kouichi Takemura**  
*Degenerations of Ruijsenaars–van Diejen operator,  $q$ -Painlevé equations and  $q$ -Heun equations*
- 12:10–14:00 *lunch break*
- 14:00–14:50 **Jasper Stokman**  
*Elliptic integrable structures arising from harmonic analysis on affine symmetric spaces*
- 14:50–15:20 **Masahiko Ito**  
*A determinant formula associated with the elliptic hypergeometric integrals of type  $BC_n$*
- 15:20–15:40 *break*
- 15:40–16:10 **Yi Sun**  
*Affine Macdonald conjectures and special values of Felder–Varchenko functions*
- 16:10–16:40 **Takashi Takebe**  
 *$Q$ -operators for higher spin eight vertex models*

**Friday, March 24, 2017**

09:00–09:50 **Shlomo S. Razamat**

*$\mathcal{N} = 1$  SCFTs, dualities, and integrable models*

09:50–10:20 *coffee/tea break*

10:20–11:10 **Junya Yagi**

*String theory and integrable lattice models*

11:10–11:40 **Yashiko Yamada**

*$q$ -Garnier system and its autonomous limit*

11:40–12:10 **Andrei Zotov**

*Quantum and classical counterparts of quantum-classical correspondence in integrable systems*

12:10–14:00 *lunch break*

14:00–14:50 **Hee-Cheol Kim**

*Duality domain walls in 5d supersymmetric gauge theories*

14:50–15:20 **Ilmar Gahramanov**

*Integrable lattice spin models from supersymmetric gauge theories*

15:20–15:40 *break*

15:40–16:10 **Discussion & Open Problems Session**

All talks take place at **ESI, Boltzmann Lecture Hall**.