Spring School on Representation Theory

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Time: March 13--March 17 2017
Place: Room 117(main)/Room 128(discussion)
       Graduate School of Mathematical Sciences,
       University of Tokyo, Komaba Campus.
Banquet: March 15 (Wed), 18:30-- at Shibuya approx 7000 yen
                         (registration is required)


Speakers: Michio Jimbo, Atsushi Matsuo, Evgeny Mukhin,
          Leonid Rybnikov, Daisuke Sagaki, Jun'ichi Shiraishi
          (and potentially others)
Organizers: Syu Kato/Yoshihisa Saito
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Time Schedule (tentative)

	Mon.	Tue.	Wed.	Thurs.	Fri.
10:00–11:00			Mukhin	Mukhin	Rybnikov
11:30–12:30	Matsuo	Sagaki	Jimbo	Rybnikov	Mukhin
14:30–15:30	Sagaki	Sagaki		Shiraishi	spare slot
16:30–17:30	Shiraishi	Rybnikov		Shiraishi	spare slot

Introduction to ODE/IM correspondence (in Japanese)

Michio Jimbo (Rikkyo)

Introduction to vertex algebras and Gaudin models (in Japanese)

Atsushi Matsuo (Tokyo)

The theory of q-characters for quantum affine algebras

Evgeny Mukhin (Indiana)

Gaudin algebras, Opers and Crystals

Leonid Rybnikov (Higher School of Economics)

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1. Gaudin algebras from the center on the critical level.
   (main references: Boris Feigin, Edward Frenkel, Nikolai Reshetikhin, Gaudin Model, Bethe Ansatz and Critical LevelarXiv:hep-th/9402022 and B. Feigin, E. Frenkel, V. Toledano-Laredo, Gaudin models with irregular singularities arXiv:math/0612798)

2. Bethe ansatz conjecture and opers on the projective line.
   (main references: Boris Feigin, Edward Frenkel, Leonid Rybnikov, Opers with irregular singularity and spectra of the shift of argument subalgebra arXiv:0712.1183 and Leonid Rybnikov, A proof of the Gaudin Bethe Ansatz conjecture

3. Crystal structure and cactus group action on the set of Bethe vectors.
   (work in progress with Joel Kamnitzer, reference: Leonid Rybnikov, Cactus group and monodromy of Bethe vectors arXiv:1409.0131)

Introduction to extremal weight modules for quantum affine algebras

Daisuke Sagaki (Tsukuba)

Deformed $\mathcal{W}$-algebras and Macdonald polynomials

Some conjectures about Macdonald polynomials in type C

Jun'ichi Shiraishi (Tokyo)

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