



June 27 - July 22, 2011

Room 305, Faculty of Science Building No. 3
Department of Mathematics, Kyoto University

Boris FEIGIN

Characters of representations and difference Toda equations

1. Integrable representations and semi-infinite constructions
2. Coordinate rings of moduli spaces of bundles and Drinfeld and Laumon spaces
3. Fermionic formulas for the characters
4. Toda equations

Kenji FUKAYA

Symplectic geometry and Mirror symmetry

1. Introduction to symplectic geometry
2. Survey on pseudo-holomorphic curve
3. Introduction to Mirror symmetry
4. Homological Mirror symmetry

Masaki KASHIWARA

Microlocal analysis of sheaves on manifolds

1. Introduction of sheaves and derived categories
2. Microsupport of sheaves
3. Fourier-Sato transforms and deformation of normal cones
4. Perverse sheaves

Hiraku NAKAJIMA

Monopoles and quasimaps

1. What is a magnetic monopole ?
2. Monopoles and Nahm's equation
3. Quasimaps to flag varieties
4. Quasimaps and representation theory

Leonid RYBNIKOV

Integrable systems and affine algebras at the critical level

1. Magri - Lenard scheme for classical integrable systems
2. Gaudin algebras
3. Affine algebras at the critical level and quantization of integrable systems
4. Opers on the projective line and spectra of Bethe algebras

••••• All lectures start at 17:15 •••••

	Monday	Tuesday	Wednesday	Thursday	Friday
6/27 - 7/1	FUKAYA 1	FEIGIN 1	FEIGIN 2	FUKAYA 2	FEIGIN 3
7/4 - 7/8	NAKAJIMA 1	RYBNIKOV 1	FEIGIN 4	NAKAJIMA 2	RYBNIKOV 2
7/11 - 7/15	FUKAYA 3	KASHIWARA 1	KASHIWARA 2	NAKAJIMA 3	RYBNIKOV 3
7/18 - 7/22	FUKAYA 4	KASHIWARA 3	KASHIWARA 4	NAKAJIMA 4	RYBNIKOV 4