

# Japan-Korea Number Theory Seminar 2011



supported by JSPS and NRF under the Japan-Korea Basic Scientific Cooperation Program

**Date** November 9 (Wed) — 12 (Sat), 2011

**Place** Nagoya University, Higashiyama Campus, Noyori Conference Hall

## Program (\* short talk)

### November 9 (Wed)

10:00 – 10:05 opening

10:05 – 10:55 Park, Jeehoon (POSTECH)

*On a  $p$ -adic deformation of the local Langlands for  $\mathrm{GL}_2$*

11:10 – 12:00 Hachimori, Yoshitaka (Tokyo University of Science)

*Iwasawa  $\lambda$ -invariants of Selmer groups and congruence of Galois representations*

\*13:30 – 13:50 Kim, Dohyeong (POSTECH)

*Construction of a branch of the  $p$ -adic  $L$ -function over nonabelian number fields*

\*14:00 – 14:20 Morisawa, Takayuki (Waseda University)

*On  $\ell$ -indivisibility of class number of  $\mathbb{Z}_{p_1} \times \cdots \times \mathbb{Z}_{p_s}$ -extension of  $\mathbb{Q}$*

14:35 – 15:25 Sun, Hae-Sang (Chungbuk National University)

*Special values of  $L$ -functions and coefficient fields*

15:40 – 16:30 Arai, Keisuke (Tokyo Denki University)

*Algebraic points on Shimura curves of  $\Gamma_0(p)$ -type*

16:45 – 17:35 Choi, Dohoon (Korea Aerospace University)

*Non-vanishing of central values of modular  $L$ -functions mod  $\ell$*

### November 10 (Thu)

9:00 – 9:50 Bannai, Kenichi (Keio University)

*$p$ -adic Eisenstein-Kronecker functions and periods of the elliptic polylogarithm*

10:05 – 10:55 Oh, Byeong-Kweon (Seoul National University)

*Class numbers of ternary quadratic forms*

11:10 – 12:00 Taguchi, Yuichiro (Kyushu University)

*A generalization of a theorem of Imai*

\*13:30 – 13:50 Yhee, Donggeon (Seoul National University)

*Gross-Zagier formula combined with BSD conjecture*

\*14:00 – 14:20 Shiomi, Daisuke (Nagoya University)

*On the  $p$ -rank of the Jacobian of cyclotomic function fields*

14:35 – 15:25 Kim, Hyun Kwang (POSTECH)

*Waring's problem for polytope numbers II*

15:40 – 16:30 Kitaoka, Yoshiyuki (Meijo University)

*A statistical relation of roots of a polynomial in different primes*

- \*16:45 – 17:05 Takai, Yuuki (The University of Tokyo/Keio University)  
*An analogue of Sturm's theorem for Hilbert modular forms*
- \*17:15 – 17:35 Nomura, Jiro (Keio University)  
*A certain example for non-abelian Brumer's conjecture*

### November 11 (Fri)

- 9:00 – 9:50 Yamagami, Atsushi (Kyoto Sangyo University)  
*On  $p$ -adic families of Hilbert eigenforms for the base change of  $p$ -supercuspidal newforms*
- 10:05 – 10:55 Choi, Suh-Hyun (KAIST)  
*Local Universal Lifting Rings of Galois groups when  $\ell \neq p$*
- \*11:10 – 11:30 Takahashi, Yuto (Nagoya University)  
*Class field towers with restricted degrees of extensions*
- \*11:40 – 12:00 Ito, Akiko (Nagoya University)  
*On certain infinite families of imaginary quadratic fields whose Iwasawa  $\lambda$ -invariant is equal to 1*
- \*13:30 – 13:50 Park, Jeongho (POSTECH)  
*Waring's Problem for Polytope Numbers: Local & Combinatorial*
- \*14:00 – 14:20 Suzuki, Kazuyoshi (Nagoya University)  
*Partial Epstein zeta functions for linear codes over  $\mathbb{Z}/p\mathbb{Z}$*
- 14:35 – 15:25 Jeon, Daeyeol (Kongju National University)  
*Bielliptic modular curves and Bring's curves*
- 15:40 – 16:30 Murabayashi, Naoki (Kansai University)  
*On torsion points of CM elliptic curves*
- 16:45 – 17:35 Kang, Soon-Yi (Kangwon National University)  
*Mock theta functions and orthogonal polynomials*
- 18:30 – 20:30 banquet

### November 12 (Sat)

- 9:00 – 9:50 Aoki, Miho (Shimane University)  
*On the Coates-Sinnott conjecture*
- 10:05 – 10:55 Kim, Chang Heon (Hanyang University)  
*Recursion formulas for modular traces of weak Maass forms of weight zero*
- 11:10 – 12:00 Matsumoto, Kohji (Nagoya University)  
*Zeta-functions of root systems and multiple zeta values*
- 12:00 – 17:35 discussion or excursion

**Organizers** (\* representatives) Mizusawa, Yasushi (Nagoya Institute of Technology)\*  
Kim, Chang Heon (Hanyang University)\*  
Furusho, Hidekazu (Nagoya University)  
Yamagami, Atsushi (Kyoto Sangyo University)  
Jeon, Daeyeol (Kongju National University)