

RIMS Workshop

Algebraic Number Theory and Related Topics

Organizers:

Takeshi Tsuji (University of Tokyo)

Hiroki Takahashi (University of Tokushima)

Date: December 1 (Mon) – December 5 (Fri), 2014

Place: Room 420, Research Institute for Mathematical Sciences (RIMS),
Kyoto University, Kyoto 606-8502, JAPAN

December 1 (Mon)

9:45 – 10:00 Introduction

10:00 – 10:50 Kentaro Nakamura (Hokkaido University)

Local ε -isomorphisms for rank two p -adic representations of $\text{Gal}(\overline{\mathbb{Q}_p}/\mathbb{Q}_p)$ and a functional equation of Kato's Euler system

11:10 – 12:00 Kenji Sakugawa (Osaka University)

Polylogarithmic analogue of the Coleman-Ihara formula
(joint work with H. Nakamura and Z. Wojtkowiak)

13:30 – 14:30 Chikara Nakayama (Hitotsubashi University)

Log abelian varieties (Survey)

14:45 – 15:35 Kazuaki Tajima (Tohoku University)

Stratification of the null cone in the non-split case (joint work with A. Yukiie)

15:50 – 16:40 Yasuhiro Wakabayashi (Kyoto University · Osaka City University)

A theory of dormant opers on pointed stable curves

December 2 (Tue)

10:00 – 10:50 Yuri Yatagawa (University of Tokyo)

Characteristic cycle of a rank 1 sheaf on a surface

11:10 – 12:00 Enlin Yang (Tsinghua University)

Logarithmic version of the Milnor formula and the characteristic cycle of a tamely ramified sheaf

14:00 – 14:50 Yūsuke Okuyama (Kyoto Institute of Technology)

Potential geometry and (non-)archimedean dynamics on the Berkovich projective line

15:05 – 15:55 Hirofumi Niibo (Kyushu University)

Idelic class field theory for 3-manifolds (joint work with J. Ueki)

16:10 – 17:00 Masanori Morishita (Kyushu University)

Arithmetic Milnor invariants and multiple power residue symbols in number fields
(joint work with F. Amano)

December 3 (Wed)

- 9:30 – 10:20 Jerome Dimabayao (Kyushu University)
On the cohomological coprimality of Galois representations of a p -adic field
- 10:35 – 11:25 Tomoki Mihara (University of Tokyo)
On a new geometric construction of a family of Galois representations associated to modular forms
- 11:40 – 12:40 Takahiro Tsushima (University of Tokyo)
Perfectoid spaces I: Foundations (Survey)
- After the talk Meeting of the steering committee (only for the committee members)

December 4 (Thu)

- 9:30 – 10:20 Wataru Kai (University of Tokyo)
On the Albanese cokernel of varieties over p -adic fields
- 10:35 – 11:25 Takamichi Sano (Keio University)
On the Iwasawa main conjecture over a general number field
(joint work with D. Burns and M. Kurihara)
- 11:40 – 12:30 Kashio Tomokazu (Tokyo University of Science)
Stark's conjecture over the rational number field and CM-periods of Fermat curves
- 14:00 – 15:00 Tetsushi Ito (Kyoto University)
Perfectoid Spaces II: Applications to number theory (Survey)
- 15:15 – 16:00 Fuetaro Yobuko (Tohoku University)
Mass formula for abelian varieties
- 16:15 – 17:00 Takuya Maruyama (University of Tokyo)
An effective upper bound for the number of principally polarized abelian schemes
- 18:00 – 20:00 Conference Banquet

December 5 (Fri)

- 10:00 – 10:50 Yasuhiro Kishi (Aichi University of Education)
Continued fraction expansion with even period and a primary symmetric part with extremely large end (joint work with F. Kawamoto, H. Suzuki, K. Tomita)
- 11:10 – 12:00 John C. Miller (Rutgers University)
On class numbers of cyclotomic fields and \mathbb{Z}_p -extensions
- 13:30 – 14:30 Manabu Ozaki (Waseda University)
Non-abelian Iwasawa theory of \mathbb{Z}_p -extensions (Survey)
- 14:45 – 15:35 Takae Tsuji (Tokai University)
On the Iwasawa λ -invariant of the cyclotomic \mathbb{Z}_2 -extension of $\mathbb{Q}(\sqrt{p})$
(joint work with T. Fukuda, K. Komatsu, M. Ozaki)
- 15:50 – 16:40 Noriko Hirata-Kohno (Nihon University)
New Diophantine criterion of polylogarithms over an algebraic number field
(joint work with M. Ito, Y. Washio and S. David)

Program Committee:

Takeshi Tsuji (Univ. of Tokyo), Hiroki Takahashi (Univ. of Tokushima), Yuichiro Hoshi (RIMS, Kyoto Univ.)