

# **RIMS Workshop**

## **Algebraic Number Theory and Related Topics**

Organizers:

Tomokazu Kashio (Tokyo University of Science)

Masataka Chida (Tokyo Denki University)

Date: December 12 (Mon)– December 16 (Fri), 2022

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

December 12 (Mon)

09:50 – 10:00 Introduction

10:00 – 10:50 Peiduo Wang (The University of Tokyo)  
On generalized Fuchs theorem over  $p$ -adic polyannuli

11:10 – 12:00 Abhinandan (The University of Tokyo)  
Syntomic complex and finite height crystalline representations

13:30 – 14:20 Hyuga Yoshizaki (Tokyo University of Science)  
The  $p$ -adic limits of class numbers in  $\mathbb{Z}_p$ -towers

14:40 – 15:30 Hiroyasu Miyazaki (NTT Institute for Fundamental Mathematics)  
On Hodge realization of motives with modulus

15:50 – 16:50 Kenichi Bannai \* (Keio University / RIKEN)  
On the Equivariant Polylogarithm Class for the Algebraic Torus associated with  
a Totally Real Field

December 13 (Tue)

10:00 – 10:50 Yuta Nakayama (The University of Tokyo)  
Topics related to RSZ Shimura varieties

11:10 – 12:00 Joseph Muller (Université Sorbonne Paris Nord / The University of  
Tokyo)  
On the cohomology of the unramified PEL unitary Rapoport-Zink space of  
signature  $(1, n - 1)$

13:30 – 14:20 Koji Matsuda (The University of Tokyo)  
Modular Jacobian varieties over cyclotomic fields with the Mordell-Weil rank 0

14:40 – 15:30 Yūsuke Okuyama (Kyoto Institute of Technology)  
Stationarity of potential semistable reductions for non-archimedean polynomial  
dynamics

15:50 – 16:50 Kazuhiko Yamaki \* (University of Tsukuba)  
Survey on the geometric Bogomolov conjecture

December 14 (Wed)

- 09:30 – 10:20 Chih-Chiang Kao (Tokyo Institute of Technology)  
Iterated Galois groups of  $X^2 + c$  over quadratic number field with odd class number
- 10:35 – 11:25 Toru Nakahara (University of Malakand)  
Monogeneity of certain abelian and non-abelian extension fields
- 11:40 – 12:30 Yoshinori Kanamura (Keio University)  
Some periodic integer continued fraction expansions of  $\sqrt{m}$  and application to the Pell equations
- 12:40 – Meeting of the steering committee (mainly for the committee members)

December 15 (Thu)

- 10:00 – 10:50 Shingo Sugiyama (Nihon University)  
Integrality of Hecke eigenvalues of modular forms
- 11:10 – 12:00 Shunsuke Yamana (Osaka Metropolitan University)  
On  $p$ -adic  $L$ -functions for  $U(3) \times U(2)$
- 13:30 – 14:20 Ken Ono (University of Virginia)  
Sato-Tate type distributions for hypergeometric varieties
- 14:40 – 15:30 Tuan Ngo Dac (CNRS / University of Caen Normandy)  
On Zagier-Hoffman's conjectures in positive characteristic
- 15:50 – 16:50 Masanobu Kaneko \* (Kyushu University)  
Regularization of Hurwitz type multiple zeta values and Kawashima's relation

December 16 (Fri)

- 09:30 – 10:20 Masao Oi  
On  $l$ -adic Eisenstein classes
- 10:35 – 11:25 Kentaro Nakamura (Saga University)  
Construction of a  $p$ -adic  $L$ -function over the Coleman-Mazur eigencurve
- 11:40 – 12:40 Ryotaro Sakamoto\* (RIKEN / University of Tsukuba)  
Euler systems for  $GSp(4)$  and its applications
- 14:10 – 15:10 Tetsushi Ito\* (Kyoto University)  
Construction of symmetric power liftings of modular forms (after James Newton and Jack Thorne)
- 15:25 – 16:15 Noriyuki Otsubo (Chiba University)  
 $l$ -adic and  $p$ -adic analogues of the Gross-Deligne CM period conjecture
- 16:15 – 16:20 Closing

\* Invited speakers

Program Committee:

Tomokazu Kashio (Tokyo University of Science),  
Masataka Chida (Tokyo Denki University),  
Yukihiro Uchida (Tokyo Metropolitan University)