

# Profinite monodromy, Galois representations, and Complex functions

## RIMS Workshop

Masanobu Kaneko (Rep. Organizer, Kyushu University)

**Date :** May 21 (Mon) — May 23 (Wed), 2018

**Place :** Room 420, Research Institute for Mathematical Sciences, Kyoto University

### May 21 (Mon)

13:30 — 14:20 Henri Darmon (Mcgill University)

The  $p$ -adic uniformisation of modular curves by  $p$ -arithmetic groups

14:50 — 15:35 Yasutaka Ihara (Tokyo University, Kyoto University)

On  $(\infty \times p)$ -adic uniformization of curves mod  $p$  with assigned many rational points

(I) some reviews; Shimura's and Igusa's works as points of departure

16:10 — 17:00 Iwao Sato (National Institute of Technology, Oyama College)

Ihara zeta function and quantum walk

### May 22 (Tue)

10:00 — 10:50 Hiroaki Nakamura (Osaka University)

Arithmetic and combinatorics in Galois fundamental groups

11:10 — 12:00 Arata Minamide (Kyoto University)

The Grothendieck-Teichmüller group as an open subgroup of the outer automorphism group of the étale fundamental group of a configuration space

14:00 — 14:50 Masanori Morishita (Kyushu University)

Arithmetic topology in Ihara theory

— Milnor invariants, Heisenberg covers and triple power residue symbols

15:15 — 16:05 Romyar Sharifi (University of California, Los Angeles)

Modular symbols and arithmetic

16:30 — 17:20 Francis Brown (Oxford University)

The projective line minus 3 points: past, present and future

18:30 — 20:30 Banquet (Camphora, Kyoto University)

### May 23 (Wed)

10:00 — 10:50 Katsutoshi Yamanoi (Osaka University)

Kobayashi hyperbolicity of the complements of ample divisors in abelian varieties

11:10 — 12:00 Kohji Matsumoto (Nagoya University)

On the theory of  $M$ -functions

14:00 — 14:45 Yasutaka Ihara (Tokyo University, Kyoto University)

On  $(\infty \times p)$ -adic uniformization of curves mod  $p$  with assigned many rational points

(II) existence of uniformization is an abelian problem

15:00 — 15:50 Tomoyoshi Ibukiyama (Osaka University)

Ihara lifts and conjectural correspondences between symplectic automorphic forms of genus two