

## MRA2007: “Motives, related topics, applications 2007”



As an international workshop of JSPS Core-to-Core Program No. 18005: “New Developments of Arithmetic Geometry, Motive, Galois Theory, and Their Practical Applications,” we have a workshop “Motives, related topics, applications 2007” (MRA2007) at Hiroshima University.

Date : 5–9, March, 2007

Place : Conference room in Faculty Club, Hiroshima University

Homepage : <http://www.math.sci.hiroshima-u.ac.jp/~m-mat/JSPS-CoreToCore/MOTIVE070305/motive070305.html>

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Program : time, titles may be changed

### 5 March (Monday)

2:00 – 3:00 Go Yamashita (RIMS)

Bounds for the dimensions of the  $p$ -adic multiple zeta value ( $L$ -value) spaces

3:15 – 4:15 Masanori Asakura (Kyushu Univ.)

Chow group of 0-cycles on surface over a  $p$ -adic field with infinite torsion subgroup (with S.Saito)

4:30 – 5:30 Takehiko Yasuda (RIMS)

Flag higher Nash blowups

### 6 March (Tuesday)

10:00 – 11:00 Sampei Usui (Osaka Univ.)

Images of extended period maps

11:15 – 12:15 Thomas Geisser (Univ. of Southern California)

The torus and unipotent part of the Picard scheme

2:00 – 3:00 Kentarou Nakamura (Univ. of Tokyo)

Geometric construction of  $p$ -adic polylogarithm

3:15 – 4:15 Masataka Chida (Tohoku Univ.)

On the equivariant Tamagawa number conjecture for Hecke characters

4:30 – 5:30 Shun-ichi Kimura (Hiroshima Univ.)

Finite dimensional morphisms of motives

### **7 March (Wednesday)**

10:00 – 11:00 Kazuya Kato (Kyoto Univ.)

Introduction to non-commutative Iwasawa theory

11:15 – 12:15 Kazuya Kato (Kyoto Univ.)

Non-commutative Iwasawa theory and Hilbert modular forms

2:00 – 3:00 Takuya Yamauchi (Hiroshima Univ.)

Motives of  $GL_2$ -type over totally real fields

3:15 – 4:15 Makoto Matsumoto (Hiroshima Univ.)

(\*) Random number generation: yet another application of algebra

4:30 – 5:30 Hidekazu Furusho (Nagoya Univ.)

Pentagon and Hexagons

Party

### **8 March (Thursday)**

10:00 – 11:00 Yves André (ENS)

Report on motivic zeta- and L-functions

11:15 – 12:15 Richard Hain (Duke Univ.)

Elliptic Motives

2:00 – 3:00 Fumiharu Kato (Kyoto Univ.)

Birational geometry and rigid geometry

3:15 – 4:15 Takeshi Koshihara (Saitama Univ.)

(\*) Pairing-Based Cryptography: A Survey

4:30 – 5:30 Syoiti Ninomiya (Tokyo Inst. Tech.)

(\*) Applications of Low-discrepancy sequences in practice

### **9 March (Friday)**

10:00 – 11:00 Satoshi Mochizuki (Univ. of Tokyo)

Analogies between multiplicative world and additive world

11:15 – 12:15 Tomohide Terasoma (Univ. of Tokyo)

Polylog complex and motivic cohomology

Talks with (\*) are intended to be some feedback from applied science to mathematicians, which is one of the aims of this JSPS Core-to-Core program. They are not directly related to motives.

Organizers : Shun-ichi Kimura, Makoto Matsumoto, Nobuo Tsuzuki, Nomuyoshi Takahashi (Hiroshima Univ.)