

p -adic cohomology and arithmetic geometry 2018

2018 November 5–9

Tohoku University, Aoba Science Hall, Science Complex C, 2nd Floor

Program

November 5, Monday

9:30–10:00 Registration

10:00–11:00 **Hattori, Shin** (Tokyo City University)

Duality of Drinfeld modules and P -adic properties of Drinfeld modular forms

11:15–12:15 **Groechenig, Michael** (University of Toronto)

A higher-dimensional generalisation of the epsilon connection

Lunch Break

13:30–14:30 **Koshikawa, Teruhisa** (Kyoto University)

\mathbf{A}_{inf} -cohomology in the semistable case

15:00–16:00 **Xu, Daxin** (California Institute of Technology)

On higher direct images of convergent isocrystals

November 6, Tuesday

10:00–11:00 **Miyatani, Kazuaki** (Hiroshima University)

p -adic hypergeometric \mathcal{D} -modules and multiplicative convolution

11:15–12:15 **Leal, Isabel** (New York University)

Refined Swan conductors mod p of one-dimensional Galois representations

Lunch Break

13:30–14:30 **Abe, Tomoyuki** (University of Tokyo)

Nearby cycles for arithmetic \mathcal{D} -modules

15:00–16:00 **Ambrosi, Emiliano** (Ecole Polytechnique)

Monodromy groups of convergent isocrystals and applications

16:15–17:15 **Lazda, Christopher** (University of Amsterdam)

Local acyclicity in p -adic cohomology

November 7, Wednesday

- 9:45–10:45 **Ohkubo, Shun** (Nagoya University)
Logarithmic growth filtrations for (φ, ∇) -modules over the bounded Robba ring
- 11:00–12:00 **Kramer-Miller, Joe** (University College London)
Ramification of p -adic étale sheaves coming from ordinary F -isocrystals on curves

Excursion

Reception at an izakaya

November 8, Thursday

- 10:00–11:00 **Wakabayashi, Yasuhiro** (Tokyo Institute of Technology)
Symplectic aspects of the p -adic Teichmüller uniformization
- 11:15–12:15 **Yobuko, Fuetaro** (Nagoya University)
On quasi-Frobenius split height and quasi-Frobenius split schemes

Lunch Break

- 13:30–14:30 **Ito, Kazuhiro** (Kyoto University)
CM liftings of K3 surfaces over finite fields and the Tate conjecture
- 15:00–16:00 **Matsumoto, Yuya** (Tokyo University of Science)
 μ_p and α_p -actions on K3 surfaces in characteristic p
- 16:15–17:15 **Kai, Wataru** (Tohoku University)
Algebraic cycles with modulus and some relative K-groups

November 9, Friday

- 10:00–11:00 **Gregory, Oliver** (Technical University of Munich)
Overconvergent Hyodo-Kato cohomology for semistable varieties
- 11:15–12:15 **Nakamura, Kentaro** (Saga University)
Construction of zeta element for rank two universal deformation
- 14:00– Free discussion

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Organizers: Tomoyuki Abe, Yuki Yoshi Nakajima, Atsushi Shiho, Nobuo Tsuzuki