# p-adic cohomology and arithmetic geometry 2022

November 7–11, 2022

Tohoku University, Katahira campus, Tokyo Electron House of Creativity, 3rd floor

## Program

### November 7, Monday Registration 9:30-10:00 10:00–11:00 Otsubo, Noriyuki (Chiba University) Hypergeometric motives and *p*-adic periods 11:15–12:15 Miyatani, Kazuaki (Tokyo Denki University) Cancellation theorem for *p*-adic hypergeometric sheaves Lunch Break 13:45–14:45 Koshikawa, Teruhisa (RIMS, Kyoto University) Logarithmic prismatic cohomology, I 15:00–16:00 Yao, Zijian (University of Chicago) Logarithmic prismatic cohomology, II November 8, Tuesday (Kyoto University) 10:00–11:00 Takamatsu, Teppei

On Fedder type criteria for Quasi-F-splitting 11:15–12:15 Matsumoto, Yuya (Tokyo University of Science) Inseparable analogue of Kummer K3 surfaces Lunch Break

13:45–14:45 Tsuzuki, Nobuo (Tohoku University) Mod 2 Galois representations of even degree and reciprocity
15:00–16:00 Yamada, Kazuki (Keio University) Poincaré duality for *p*-adic Hodge cohomology
16:15–17:15 Tsuji, Takeshi (University of Tokyo) Prismatic cohomology and *q*-Dolbeault complex

#### November 9, Wednesday

9:45–10:45 Shiho, Atsushi (University of Tokyo) Chern classes of (non locally free) crystals
11:00–12:00 Kedlaya, Kiran (University of California) On the construction of crystalline companions, I

#### November 10, Thursday

10:00–11:00 Kedlaya, Kiran	(University of California)	
On the construction of crystalline co	ompanions, II	
11:15–12:15 <b>Kedlaya, Kiran</b>	(University of California)	
On the construction of crystalline co	ompanions, III	
Lunch Break		
19 45 14 45 Vabulta Fustana	(Namara University)	

13:45–14:45 Yobuko, Fuetaro	(Nagoya University)	
F-splitting, canonical lifting and Hodge-Wittness		
15:00–16:00 <b>D'Addezio, Marco</b>	(Institut de Mathématiques de Jussieu)	
Crew's parabolicity conjecture		
16:15–17:15 Nakkajima, Yukiyoshi	(Tokyo Denki University)	
Theory of Hirsch weight-filtered log crystalline complex		

#### November 11, Friday

10:00-11:00	Tamagawa, Akio	(RIMS, Kyoto University)
Tannakia	n Chebotarev density theorems for	$\cdot$ overconvergent and convergent $F$ -isocrystals
11:15-12:15	Chiarellotto, Bruno	(Università di Padova)
Multivari	able de Rham representations, Ser	n theory and $p$ -adic differential equations
14:00-	Free discussion	

This conference is supported by

- Tohoku Forum for Creativity (Tohoku University);
- JSPS Kakenhi grant (18H03667, 18K03224, 20H01790).

Organizers: Tomoyuki Abe, Yukiyoshi Nakkajima, Atsushi Shiho, Nobuo Tsuzuki