

Workshop
The 11th Japan-Vietnam Joint seminar on Commutative Algebra,
by and for young mathematicians

Institute of Mathematics, VAST
28.3.2023 – 30.3.2023

Sponsors

- Institute of Mathematics, VAST
- International Centre for Research and Postgraduate Training in Mathematics, Institute of Mathematics, VAST

Location: Room 301, A5 Building, Institute of Mathematics, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet Road, Vietnam

Organizing Committee

- Japan
 - **Naoki Endo** (Meiji University)
 - **Naoyuki Matsuoka** (Meiji University)
 - **Kazuho Ozeki** (Yamaguchi University)
- Vietnam
 - **Doan Trung Cuong** (Institute of Mathematics, VAST)
 - **Le Thi Thanh Nhan** (MOET)
 - **Tran Nam Trung** (Institute of Mathematics, VAST)
 - **Hoang Le Trung** (Institute of Mathematics, VAST)

PROGRAM

Tuesday, March 28, 2023

Morning

Chair: Tran Nam Trung

Secretary: Nguyen Thi Anh Hang

- 09:00 – 09:50 **Kei-ichi Watanabe** (Nihon University, Japan)
Normal reduction numbers and Gorenstein property of normal tangent cones of 2 dimensional integrally closed ideals
- 10:10 – 10:40 **Tran Quang Hoa** (Hue University, Vietnam)
Powers of sums and their associated primes
- 10:55 – 11:25 **Ryo Ishizuka** (Tokyo Institute of Technology, Japan)
A mixed characteristic analogue of the perfection of rings
- 11:40 – 12:10 **Hop D. Nguyen** (Institute of Mathematics, VAST, Vietnam)
On regularity and projective dimension up to symmetry

Afternoon

Chair: Doan Trung Cuong

Secretary: Do Van Kien

- 14:00 – 14:50 **Ryo Takahashi** (Nagoya University, Japan)
Faltings' annihilator theorem for complexes over CM-excellent rings
- 15:10 – 15:40 **Yuya Otake** (Nagoya University, Japan)
On spherical modules and torsionfree modules
- 15:55 – 16:25 **Shinnosuke Ishiro** (Nihon University, Japan)
Perfectoid towers and their tilts
- 16:40 – 17:10 **Le Thi Thanh Nhan** (MOET, Vietnam)
Ascent and descent of Artinian modules under flat base changes
- 17:30 **Banquet**

Wednesday, March 29, 2023

Morning

Chair: Hop D. Nguyen

Secretary: Nguyen Thi Thanh Tam

- 09:00 – 09:50 **Ngo Viet Trung** (Institute of Mathematics, VAST, Vietnam)
Multiplicity sequence and integral dependence
- 10:10 – 10:40 **Sora Miyashita** (Osaka University, Japan)
Levelness vs nearly Gorensteinness of homogeneous domains
- 10:55 – 11:25 **Hoang Ngoc Yen** (Thai Nguyen University of Education, Vietnam)
On the sectional genera and Cohen-Macaulay rings
- 11:40 – 12:10 **Kaito Kimura** (Nagoya University, Japan)
On the asymptotic depths of localizations of modules

Afternoon

Chair: Tran Nguyen An

Secretary: Nguyen Thi Anh Hang

- 14:00 – 14:50 **Pham Hung Quy** (FPT University, Vietnam)
Tight Hilbert Polynomial
- 15:10 – 15:40 **Hiroki Matsui** (Tokushima University, Japan)
Categorical entropy of the Frobenius pushforward functor
- 15:55 – 16:45 **Naoki Endo** (Meiji University, Japan)
Generalization of Gorenstein rings – from the past to the future –

Thursday, March 30, 2023

Morning

Chair: Hoang Le Truong

Secretary: Do Van Kien

- 09:00 – 09:50 **Tran Nam Trung** (Institute of Mathematics, VAST, Vietnam)
Regularity of symbolic powers of square-free monomial ideals
- 10:10 – 10:40 **Koji Matsushita** (Osaka University, Japan)
Conic divisorial ideals of toric rings and applications to stable set rings
- 10:55 – 11:25 **Nguyen Thu Hang** (Thai Nguyen College of Sciences, Vietnam)
Stability index of depth function
- 11:40 – 12:10 **Akiyoshi Tsuchiya** (Toho University, Japan)
Perfectly contractile graphs and quadratic toric rings

Afternoon

Chair: Pham Hung Quy

Secretary: Nguyen Thi Thanh Tam

- 14:00 – 14:30 **Nguyễn Công Minh** (HUST, Vietnam)
On the approximately Cohen-Macaulay property of symbolic powers of Stanley-Reisner ideals
- 14:45 – 15:15 **Shinya Kumashiro** (Oyama College, Japan)
Study of \mathbb{Z}_2 graded rings
- 15:35 – 16:05 **Do Van Kien** (Hanoi Pedagogical University 2, Vietnam)
The Koszul property and free resolutions over g -stretched local rings
- 16:20 – 17:10 **Futoshi Hayasaka** (Okayama University, Japan)
Ideals of indecomposable integrally closed modules over two-dimensional regular local rings