

# The 46th Japan Symposium on Commutative Algebra

November 20-24 (Thu.-Mon.), 2025  
Hotel Fukuracia Osaka Bay Conference Room B

## Program

### November 20 (Thu.)

13:40–13:50 Introduction

13:50–14:40 **Ryo Takahashi** (Nagoya University)  
On the ubiquity of dominant local rings

14:55–15:20 **Shinnosuke Kosaka** (Nagoya University)  
The finiteness of injective dimension of modules over local rings

15:30–15:55 **Yuki Mifune** (Nagoya University)  
Generation of singularity categories and vanishing of cohomology annihilators

16:10–16:35 **Kei-ichiro Iima** (National Institute of Technology (KOSEN), Nara College)  
On the extension-closed subcategories of the Cohen–Macaulay module category over simple singularities

16:45–17:10 **Toshinori Kobayashi** (Meiji University)  
KE-closed subcategories over a commutative noetherian ring

17:20–17:45 **Hiroki Matsui** (Tokushima University)  
A generalization of the maximal Cohen–Macaulay approximation theorem and its applications

## November 21 (Fri.)

- 9:10–10:10 **Uwe Nagel** (University of Kentucky)  
TBA
- 10:30–10:55 **Satoshi Murai** (Waseda University)  
Freeness of restrictions of hyperplane arrangements and  
height two Cohen–Macaulay ideals
- 11:05–11:30 Kazufumi Eto (Nippon Institute of Technology)  
Takahiro Numata (Meiji University)  
**Naoyuki Matsuoka** (Meiji University)  
Kei-ichi Watanabe (Nihon University, Meiji University)  
Stretched semigroup rings and 2-minor generation in defining ideals
- 11:40–12:05 **Kou Takahashi** (Waseda University)  
Defining ideals in numerical semigroup rings with  
arithmetic Pseudo-Frobenius numbers
- Lunch**
- 13:30–14:00 **Meeting about the symposia (For Japanese participants)**
- 14:00–14:50 **Cheng Meng** (Tsinghua University)  
Modular representation theory and limits of  $F$ -invariants
- 15:05–15:30 **Tatsuki Yamaguchi** (Institute of Science Tokyo)  
Mixed characteristic reduction and BCM-regularity
- 15:40–16:05 **Kenta Sato** (Chiba University)  
Extending differential forms in positive characteristic
- 16:15–16:40 **Kaito Kimura** (Nagoya University)  
Conductors, test ideals, and ideals generated by systems of parameters
- 16:50–17:15 Ela Celikbas (West Virginia University)  
Olgur Celikbas (West Virginia University)  
**Naoki Endo** (Meiji University)  
Shinya Kumashiro (Osaka Institute of Technology)  
A note on modules with minimal multiplicity
- 18:00– **Banquet**

## November 22 (Sat.)

- 9:10–10:10 **Aldo Conca** (University of Genova)  
From linear resolutions to Cartwright–Sturmfels ideals
- 10:30–10:55 **Koichiro Tani** (Osaka University)  
Standard multigraded Hibi rings and Cartwright–Sturmfels ideals
- 11:05–11:30 **Koji Matsushita** (The University of Tokyo)  
Gorensteinness of Ehrhart rings of matching polytopes
- 11:40–12:05 **Kenta Mori** (Kwansei Gakuin University)  
Toric ideals of matching polytopes and graph coloring theory

### Lunch

- 14:00–14:50 **Shigeru Kuroda** (Tokyo Metropolitan University)  
Wild polynomial automorphisms over a field of positive characteristic
- 15:05–15:30 **Ryo Ishizuka** (Institute of Science Tokyo)  
Perfectoid towers arising from Frobenius lifts
- 15:40–16:05 **Shinnosuke Ishiro**  
(National Institute of Technology (KOSEN), Gunma College)  
Perfectoid towers and lim Cohen–Macaulay sequences
- 16:15–16:40 **Kazuki Hayashi** (Institute of Science Tokyo)  
A refinement of Fontaine’s map for perfectoid towers and its applications
- 16:55–17:45 **Chikashi Miyazaki** (Kumamoto University)  
Towards a structure theorem for quasi-Buchsbaum bundles on  $\mathbb{P}^3$

## November 23 (Sun.)

- 9:10–10:10 **Somayeh Moradi** (Ilam University)  
Powers of ideals with linear or componentwise linear resolutions
- 10:30–10:55 **Yuji Muta** (Okayama University)  
Naoki Terai (Okayama University)  
Serre depth and symbolic powers on Stanley–Reisner rings
- 11:05–11:30 **Ken-ichi Yoshida** (Nihon University)  
The Golod property of Buchsbaum local rings of maximal embedding dimension
- 11:40–12:05 **Kohji Yanagawa** (Kansai University)  
Combinatorics of  $q$ -deformed rationals

### Lunch

- 14:00–14:50 **Izuru Mori** (Shizuoka University)  
Classification of regular nets of conics
- 15:05–15:30 **Yuya Otake** (Nagoya University)  
On the invariants of Auslander and Martsinkovsky
- 15:40–16:05 **Takuma Seno** (Osaka Metropolitan University)  
A new proof of non-Cohen–Macaulayness of Bertin’s example
- 16:15–16:40 **Ryu Tomonaga** (The University of Tokyo)  
NCCRs of toric singularities with divisor class rank one
- 16:55–17:45 **Norihiro Hanihara** (Kyushu University)  
Non-commutative crepant resolutions via tilting bundles

## November 24 (Mon.)

9:10–10:00 **Mitsuhiro Miyazaki** (Osaka Metropolitan University)  
Canonical trace radical property: a new property of commutative rings

10:15–10:40 **Sora Miyashita** (Osaka University)  
The canonical trace of Stanley–Reisner rings

10:50–11:15 **Taiga Ozaki** (Institute of Science Tokyo)  
On higher dimensional Teter rings via the canonical trace ideal

11:25–12:15 Tomohiro Okuma (Yamagata University)  
Ken-ichi Yoshida (Nihon University)  
**Kei-ichi Watanabe** (Nihon University, Meiji University)  
Nearly Gorenstein and almost Gorenstein 2-dimensional normal local rings