The 43rd Japan Symposium on Commutative Algebra
(The second announcement)

The 43rd Japan Symposium on Commutative Algebra will be held as described below. This symposium is supported by

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Organizers : Yusuke Nakajima (Kyoto Sangyo University)
Akihiro Higashitani (Osaka University)
Ryo Kanda (Osaka Metropolitan University)

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Date & Venue

Venue : Osaka University (Toyonaka Campus) Nambu Yoichiro Hall
(`https://www.sci.osaka-u.ac.jp/ja/nambu-hall/`)
Date : November 14-18 (Mon-Fri), 2022
Style : IN-PERSON
Web page : `https://ryokanda.net/conferences/commalg2022/`

Program

November 14 (Mon)

9:30–11:00	Reception & Free discussion
11:00–11:15	Opening remarks

11:15–11:45 **Koji Nishida** (Chiba University)

On the Hilbert coefficients of graded modules over graded rings

12:00–12:30 **Kazuho Ozeki** (Yamaguchi University)

The first Euler characteristic and the depth of associated graded rings

14:00–14:30 Tomohiro Okuma (Yamagata University),
Kei-ichi Watanabe (Nihon University, Meiji University),
Ken-ichi Yoshida (Nihon University)

Gorensteinness for normal tangent cones of geometric ideals

14:45–15:15 **Toshinori Kobayashi** (Meiji University)

Homological dimension of tensor products of modules

15:35–16:05 **Nayana Shibu Deepthi** (Osaka University)

Non-normal edge ring satisfying (S_2)-condition

16:20–17:10 **Taro Inagawa** (Meiji University), Kazuhiko Kurano (Meiji University)

On finite generation of symbolic Rees rings

November 15 (Tue)

9:30–10:00 **Naoki Terai** (Okayama University)

Stanley–Reisner rings with low codimension

10:15–10:45 **Sora Miyashita** (Osaka University)

Levelness versus nearly Gorensteinness of homogeneous domains

11:00–11:30 **Koji Matsushita** (Osaka University)

Conic divisorial ideals of toric rings and applications to stable set rings

13:00–13:30 Self-introduction of newcomers

13:40–14:10 Kazufumi Eto (Nippon Institute of Technology),
Jun Horiuchi (Nippon Institute of Technology),
Kazuma Shimomoto (Nihon University)

Revisiting Krull's theorem

14:25–14:55 **Shinnosuke Ishiro** (Nihon University)

The canonical module and a Gorenstein criterion of a local log-regular ring

15:10–15:40 **Ryo Ishizuka** (Tokyo Institute of Technology)

An explicit construction of perfectoid almost Cohen–Macaulay algebras in mixed characteristic

16:00–16:30 **Tatsuki Yamaguchi** (The University of Tokyo)

Big Cohen–Macaulay test ideals in equal characteristic zero via ultraproducts

16:45–17:15 **Kenta Sato** (Kyushu University)

General hyperplane section of log canonical threefolds in positive characteristic

November 16 (Wed)

9:30–10:00 Kyohei Hattori (Niigata University), **Hideo Kojima** (Niigata University)

Rings of nilpotent elements for derivations in polynomial rings

10:15–10:45 **Nguyen Thi Thanh Tam** (Hung Vuong University)

The existence of balanced neighborly polynomials

11:00–11:30 **Xin Ren** (Kansai University), Kohji Yanagawa (Kansai University)

Gröbner bases of radical Li–Li type ideals

13:00–13:30 Meeting about the symposia

13:40–14:40 **Anurag K. Singh** (University of Utah)

When are the natural embeddings of classical invariant rings pure?

15:00–15:30 **Kohsuke Shibata** (Okayama University)

Gorenstein indices of invariant rings

15:45–16:15 Kazufumi Eto (Nippon Institute of Technology),
Naoyuki Matsuoka (Meiji University),
Takahiro Numata (Kanagawa Institute of Technology),
Kei-ichi Watanabe (Nihon University, Meiji University)

Defining ideals of affine monomial curves in $\mathbb{A}^4$ and associated projective monomial curves in $\mathbb{P}^4$

16:30–17:00 **Masatake Ikuma** (Meiji University)

Test elements for stretchedness in numerical semigroup rings

November 17 (Thu)

9:30–10:00 **Ryo Takahashi** (Nagoya University)

Dimitrov–Haiden–Katzarkov–Kontsevich complexities for singularity categories

10:15–10:45 **Hiroki Matsui** (Tokushima University)

Spectra of derived categories of algebraic varieties and reconstruction

11:00–11:30 **Naoki Endo** (Meiji University), Shiro Goto (Meiji University)

Reflexive modules over the endomorphism algebras of reflexive trace ideals

13:00–13:50 **Osamu Iyama** (The University of Tokyo)

Realizing stable categories of Cohen–Macaulay modules as cluster categories

14:10–15:00 **Norihiro Hanihara** (The University of Tokyo)

Cohen–Macaulay rings of hereditary representation type

15:20–16:10 **Yuta Kimura** (Osaka Metropolitan University)

Cohen–Macaulay representations over Artin–Schelter Gorenstein algebras of dimension one

16:30–17:00 **Yuya Otake** (Nagoya University)

Stable equivalences between the categories of spherical modules and torsionfree modules

November 18 (Fri)

9:30–10:00 **Futoshi Hayasaka** (Okayama University)

On ideals of indecomposable integrally closed modules over two-dimensional regular local rings

10:15–10:45 **Kaito Kimura** (Nagoya University)

Asymptotic behavior of localizations of modules

11:00–11:50 **Mitsuhiro Miyazaki** (Kyoto University of Education)

On the Ehrhart ring of the stable set polytope of a cycle graph

Infection Prevention Measures

We ask all participants to take the following infection prevention measures:

- Always wear a mask in the lecture room.
- Disinfect your hands when you enter the room or use shared items in the room, such as hand-held microphones, chalks, or erasers.
- Keep your social distance; do not sit right next to another participant.
- Do not eat in the lecture room.
- Check your temperature every morning. If your temperature is 37.5°C or higher, refrain from coming to the campus and inform the organizers.
- Whether you have a fever or not, stay home if you are in bad health potentially related to COVID-19.
- If the guideline of Osaka University changes, the organizers may change the above policies.
- For other measures, have a look at Requests from Osaka Prefecture.
  `https://www.pref.osaka.lg.jp.e.agb.hp.transer.com/kikaku/corona-kinkyuzitai/`

Venue Information

(1) **Room Facilities & Travel Information**

- See the webpage of Nambu Yoichiro Hall for facilities in the lecture room and travel information.
  `http://www.prc.sci.osaka-u.ac.jp/en/facilities`
- eduroam is available in the lecture room. If you have an ID and a password for eduroam issued by your university/organization, you can connect to Wi-Fi in participating organizations (such as Osaka University) without any further application.

(2) **Others**

- Rooms will not be locked during lunch. Please be responsible of your own belongings.
- We do not provide drink or snacks. We do not hold a banquet.