

## RIMS Workshop

### The 35<sup>th</sup> Japan Symposium on Commutative Algebra

2 Mon.-6 Fri. December, 2013

Room 420, Research Institute for Mathematical Sciences,  
Kyoto University

#### Monday, 2 December

10:10-10:50 Ryo Takahashi (Nagoya U.)  
Annihilation of Ext modules and generation of derived categories

11:00-11:40 Ryo Kanda (Nagoya U.)  
Partial orders on atom spectra of Grothendieck categories

13:20-14:00 Osamu Iyama (Nagoya.U.)  
Geigle-Lenzing weighted projective spaces

14:10-14:50 Ken-ichi Yoshida (Nihon U.), Shiro Goto (Meiji U.),  
Kazuho Ozeki (Yamaguchi U.), Ryo Takahashi (Nagoya U.), Kei-ichi  
Watanabe (Nihon U.)  
Ulrich ideals on hypersurfaces

15:00-15:40 Takahiro Numata (Nihon U.)  
Ulrich ideals of Gorenstein numerical semigroup rings

15:50-16:30 Chikashi Miyazaki (Saga U.)  
A variant of Horrocks criterion for vector bundles on multiprojective  
space through regularity method

#### Tuesday, 3 December

9:20-10:00 Mitsuyasu Hashimoto (Okayama U.)  
The Picard and the class groups of an invariant subring

10:10-10:50 Shigeru Kuroda (Tokyo Metropolitan U.)  
The automorphism group of a UFD over the kernel of a locally

nilpotent derivation

11:00-11:40 Akiyoshi Sannai (U.Tokyo)  
Invariant subring of the Cox rings of K3 surfaces

13:20-14:20 [invited talk] Peter Symonds (U. Manchester)  
Group actions on rings and the Cech complex

14:30-15:10 Ken-ichiroh Kawasaki (Nara U. Education)  
On the characterizations of cofinite complexes

15:20-16:10 [survey talk] Junzo Watanabe (Tokai U.)  
What do we know about the conjecture "Complete intersections have  
the strong Lefschetz property"

16:20-17:00 Akihito Wachi (Hokkaido U. Education)  
The Lefschetz property of coinvariant rings of complex reflection groups

#### Wednesday, 4 December

9:10-10:00 [survey talk] Kei-ichi Watanabe (Nihon U.)  
Introduction to Commutative Algebra of Singularities

10:10-10:50 Masataka Tomari (Nihon U.)  
On Demazure's construction of finite Abelian coverings of normal graded rings

11:00-11:40 Shunsuke Takagi (U.Tokyo), Yoshinori Gongyo (U. Tokyo, Imperial Col.  
London)  
Surfaces of globally F-regular and F-split type

13:20-14:20 [invited talk] Kevin Tucker (U. Illinois)  
Rationality of the F-Pure Threshold in Power Series Rings

14:30-15:10 Yusuke Nakajima (Nagoya U.)  
Dual F-signature of Cohen-Macaulay modules over quotient surface  
singularities

15:20-16:00 Kei-ichi Watanabe (Nihon U.), Tomohiro Okuma (Yamagata U.)  
Ken-ichi Yoshida (Nihon U.)  
Good Ideals on 2-dimensional normal singularities

16:10-16:50 Toshiaki Maeno (Meijo U.) , Yasuhide Numata (Shinshu U.)

Finite Geometry and the Lefschetz property

Thursday, 5 December

10:00-10:40 Kazuho Ozeki (Yamaguchi U.), Shiro Goto (Meiji U.)

The first Euler characteristics versus the homological degrees

10:50-11:30 Naoki Taniguchi (Meiji U.), Shiro Goto (Meiji U.), Ryo Takahashi (Nagoya U.), Hoang Le Truong (IMVAST)

Huneke-Wiegand conjecture of rank one with the change of rings

13:30-14:10 Koji Nishida (Chiba U.), Kosuke Fukumuro (Chiba U.), Hirofumi Kume (Chiba U.)

On modules of linear type

14:20-15:00 Shiro Goto (Meiji U.), Jooyoun Hong, (Southern Connecticut State U.), Wolmer V. Vasconcelos (Rutgers U.)

On the vanishing of  $j$ -multiplicities

15:10-15:50 Kazunori Matsuda (Rikkyo U., JST CREST)

Strong Koszulness of toric rings associated with stable set polytopes of trivially perfect graphs

16:00-16:40 Kyouko Kimura (Shizuoka U.), Naoki Terai (Saga U.)

Arithmetical rank of Gorenstein squarefree monomial ideals of height three

18:00-20:00 Banquet at

Kyoto University Clock Tower Centennial Hall

Friday, 6 December

9:00-10:00 [invited talk] Mutsumi Saito (Hokkaido U.)

The ring of differential operators of an affine semigroup algebra

10:10-12:00 [short communications]

10:10-10:35 Futoshi Hayasaka (Hokkaido U. Education)

A computation of Buchsbaum-Rim multiplicities in a special case

10:35-11:00 Naoya Hiramatsu (Kure Natl. Col. Tech.)

On degenerations of graded Cohen-Macaulay modules

11:10-11:35 Tokuji Araya (Okayama U. Science)

Thick subcategories of stable categories over graded Gorenstein rings

11:35-12:00 Akihiro Higashitani (Osaka U.)

Normality of edge rings and Minkowski sums

13:30-14:10 Kazuma Shimomoto (Meiji U.)

Almost purity theorem and the homological conjectures

14:20-15:00 Vivek Sadhu (Indian Inst. Tech.)

Subintegrality, Invertible Modules and Polynomial Extension

15:10-15:50 Kazuhiko Kurano (Meiji U.)

On the limit of Frobenius in the Grothendieck group

Organizers

Kiriko Kato (Osaka Prefecture University)

Keiichiro Iima (Nara National College of Technology)

Ken-ichiroh Kawasaki (Nara University of Education)

Jun-ichi Nishimura (Osaka Electro-Communication University)

Mitsuhiro Miyazaki (Kyoto University of Education)

Kohji Yanagawa (Kansai University)

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