

Proceedings of the 45th Symposium
on Ring Theory and Representation Theory

September 7 (Fri.) – 9 (Sun.), 2012
Shinshu University, Japan

Edited by
Kazutoshi Koike
Okinawa National College of Technology

February, 2013
Nago, JAPAN

第45回 環論および表現論シンポジウム報告集

2012年9月7日(金) - 9日(日)
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2013年2月
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Organizing Committee of The Symposium on Ring Theory and Representation Theory

The Symposium on Ring Theory and Representation Theory has been held annually in Japan and the Proceedings have been published by the organizing committee. The first Symposium was organized in 1968 by H. Tominaga, H. Tachikawa, M. Harada and S. Endo. After their retirement, a new committee was organized in 1997 for managing the Symposium and committee members are listed in the web page

<http://fuji.cec.yamanashi.ac.jp/ring/h-of-ringsymp.html>.

The present members of the committee are H. Asashiba (Shizuoka Univ.), S. Ikehata (Okayama Univ.), S. Kawata (Osaka City Univ.) and I. Kikumasa (Yamaguchi Univ.).

The Proceedings of each Symposium is edited by program organizer. Anyone who wants these Proceedings should ask to the program organizer of each Symposium or one of the committee members.

The Symposium in 2013 will be held at Tokyo University of Science for Oct. 12 (Sat.)—14 (Mon.) and the program will be arranged by I. Kikumasa (Yamaguchi Univ.).

Concerning several information on ring theory and representation theory of group and algebras containing schedules of meetings and symposiums as well as ring mailing list service for registered members, you should refer to the following ring homepage, which is arranged by M. Sato (Yamanashi Univ.):

<http://fuji.cec.yamanashi.ac.jp/ring/> (in Japanese)
(Mirror site: www.cec.yamanashi.ac.jp/ring/)

<http://fuji.cec.yamanashi.ac.jp/ring/japan/> (in English)

Shûichi Ikehata
Okayama Japan
February, 2013

Contents

Preface	vi
Program (Japanese)	vii
Program (English)	x
τ -tilting modules for self-injective Nakayama algebras Takahide Adachi	1
Dimensions of triangulated categories with respect to subcategories Tokuji Araya	12
Derived equivalence classification of generalized multifold extensions of piecewise hereditary algebras of tree type Hideto Asashiba and Mayumi Kimura	16
Decomposing tensor products for cyclic and dihedral groups Erik Darpö and Christopher C. Gill	24
Quotients of exact categories by cluster tilting subcategories as module categories Laurent Demonet and Yu Liu	29
Weakly sectional paths and bypasses in the Auslander-Reiten quiver Takahiko Furuya	36
Skew Rees rings which are maximal orders Monika Rianti Helmi, Hidetoshi Marubayashi and Akira Ueda	39
On toric rings arising from cyclic polytopes Akihiro Higashitani	46
Constructions of Auslander-Gorenstein local rings Mitsuo Hoshino, Noritsugu Kameyama and Hirotaka Koga	51
τ -tilting theory Osamu Iyama	58
Cluster-tilted algebras of canonical type and quivers with potential Gustavo Jasso	61
Classifying Serre subcategories via atom spectrum Ryo Kanda	69

Quiver varieties and quantum cluster algebras Yoshiyuki Kimura	74
Cyclotomic KLR algebras of cyclic quivers Masahide Konishi	82
Goldie extending modules Yosuke Kuratomi	88
Realizing cluster categories of Dynkin type A_n as stable categories of lattices Xueyu Luo	92
Characterization of Gorenstein strongly Koszul Hibi rings by F-invariants Kazunori Matsuda	99
Derived Gabriel topology, localization and completion of dg-algebras Hiroyuki Minamoto	108
Selfinjective algebras and quivers with potentials Yuya Mizuno	119
Power residues Kaoru Motose	126
On Hochschild cohomology of a class of weakly symmetric algebras with radical cube zero Daiki Obara and Takahiko Furuya	137
A generalization of Goldie torsion theory Yasuhiko Takehana	146
On the relation of the upper bound of global dimension and the length of serial algebra which has finite global dimension Morio Uematsu	152
Noncommutative graded Gorenstein isolated singularities Kenta Ueyama	158
Ulrich modules and special modules over 2-dimensional rational singularities Kei-ichi Watanabe and Ken-ichi Yoshida	164
On separable polynomials in skew polynomial rings Satoshi Yamanaka	174

Preface

The 45th Symposium on Ring Theory and Representation Theory was held at Shinshu University on September 7th – 9th, 2012. The symposium and this proceedings are financially supported by

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Kazutoshi Koike
Nago, Japan
February, 2013

第45回 環論および表現論シンポジウム プログラム

9月7日(金)

9:00–9:30 Monika Rianti Helmi (Andalas University), 丸林英俊 (徳島文理大学),
植田 玲 (島根大学)

Skew Rees rings which are maximal orders

9:40–10:10 亀山 統胤 (信州大学), 星野 光男 (筑波大学), 古賀 寛尚 (筑波大学)

Constructions of Auslander-Gorenstein local rings

10:20–10:50 上山 健太 (静岡大学)

Noncommutative graded Gorenstein isolated singularities

11:00–11:30 松田 一徳 (名古屋大学)

Characterization of Gorenstein strongly Koszul Hibi rings by F-invariants

11:40–12:10 東谷 章弘 (大阪大学)

Toric rings arising from cyclic polytopes

13:30–14:00 神田 遼 (名古屋大学)

Classifying Serre subcategories via atom spectrum

14:10–14:40 源 泰幸 (名古屋大学)

Derived Gabriel topology, localization and completion of dg-algebras

14:50–15:20 竹花 靖彦 (函館工業高等専門学校)

A generalization of Goldie torsion theory

15:40–16:10 本瀬 香

Power residues

16:20–16:50 山中 聡 (岡山大学)

On separable polynomials in skew polynomial rings

17:00–17:30 倉富 要輔 (北九州工業高等専門学校)

On Goldie extending modules with finite internal exchange property

9月8日(土)

9:00–9:30 木村 真弓 (静岡大学), 浅芝 秀人 (静岡大学)

Derived equivalence classification of generalized multifold extensions of piecewise hereditary algebras of tree type

9:40–10:10 Liu Yu (名古屋大学)

Quotients of exact categories by cluster tilting subcategories as module categories

10:20–10:50 荒谷 督司 (徳山工業高等専門学校)

Dimensions of triangulated categories with respect to subcategories

11:00–11:30 吉田 健一 (日本大学), 渡辺 敬一 (日本大学)

Ulrich modules and special modules over 2-dimensional rational singularities

11:40–12:10 木村 嘉之 (大阪市立大学)

Quiver varieties and quantum cluster algebras

13:30–14:00 小西 正秀 (名古屋大学)

Cyclotomic KLR algebras of cyclic quivers

14:10–14:40 Luo Xueyu (名古屋大学)

Realizing cluster categories of Dynkin type A as stable categories of lattices

14:50–15:20 Gustavo Jasso (名古屋大学)

Cluster-tilted algebras of canonical type and quivers with potentials

15:40–16:10 伊山 修 (名古屋大学)

τ -tilting theory

16:20–16:50 足立 崇英 (名古屋大学)

τ -tilting modules for self-injective Nakayama algebras

17:00–17:30 Martin Herschend (名古屋大学)

2-hereditary algebras and quivers with potential

17:40–18:10 水野 有哉 (名古屋大学)

Selfinjective algebras and quivers with potentials

18:40 懇親会

9月9日(日)

9:00–9:30 植松 盛夫 (上武大学)

On the relation of the upper bound of global dimension and the length of serial algebra which has finite global dimension

9:40–10:10 Laurent Demonet (名古屋大学)

Mutation of quiver with potential at several vertices

10:20–10:50 Erik Darpö (名古屋大学)

On the representation rings of the dihedral 2-groups

11:00–11:30 小原 大樹 (東京理科大学), 古谷 貴彦 (東京理科大学)

On Hochschild cohomology of a class of weakly symmetric algebras with radical cube zero

11:40–12:10 古谷 貴彦 (東京理科大学)

On the existence of a bypass in the Auslander-Reiten quiver

The 45th Symposium on Ring Theory and Representation Theory (2012)

Program

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9:00–9:30 Monika Rianti Helmi (Andalas University), Hidetoshi Marubayashi (Tokushima Bunri University), Akira Ueda (Shimane University)

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On separable polynomials in skew polynomial rings

17:00–17:30 Yosuke Kuratomi (Kitakyushu National College of Technology)

On Goldie extending modules with finite internal exchange property

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9:00–9:30 Mayumi Kimura (Shizuoka University), Hideto Asashiba (Shizuoka University)

Derived equivalence classification of generalized multifold extensions of piecewise hereditary algebras of tree type

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Ulrich modules and special modules over 2-dimensional rational singularities

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9:00–9:30 Morio Uematsu (Jobu University)

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On the representation rings of the dihedral 2-groups

11:00–11:30 Obara Daiki (Tokyo University of Science), Furuya Takahiko (Tokyo University of Science)

On Hochschild cohomology of a class of weakly symmetric algebras with radical cube zero

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