

**Proceedings of the 47th Symposium
on Ring Theory and Representation Theory**

September 13 (Sat.) – 15 (Mon.), 2014
Osaka City University, Japan

Edited by
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Saitama University

February, 2015
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第47回 環論および表現論シンポジウム報告集

2014年9月13日(土) - 15日(月・祝)
大阪市立大学 杉本キャンパス

編集: 飛田明彦 (埼玉大学)

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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 2015 will be held at Nagoya University for Sept. 7 (Mon.)–10 (Thu.) and the program will be arranged by T. Nishinaka (Okayama Shoka 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, 2015

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Preface

The 47th Symposium on Ring Theory and Representation Theory was held at Osaka City University on September 13th – 15th, 2014. The symposium and this proceedings are financially supported by

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This volume consists of the articles presented at the symposium. We would like to thank all speakers and coauthors for their contributions.

We would also like to express our thanks to all the members of the organizing committee and Professor Masahisa Sato for their helpful suggestions concerning the symposium. Finally we would like to express our gratitude to Professor Shigeo Kawata and students of Osaka City University who contributed in the organization of the symposium.

Akihiko Hida
Saitama, Japan
February, 2015

第47回 環論および表現論シンポジウム プログラム

9月13日（土）

9:00–9:30 板垣 智洋・眞田 克典（東京理科大学）

Notes on the Hochschild homology dimension and truncated cycles

9:40–10:10 相原 琢磨（名古屋大学）

On silting-discrete triangulated categories

10:20–10:50 伊山 修（名古屋大学）

Silting reduction of triangulated categories

11:00–11:50 Henning Krause（Bielefeld University）

Deriving Auslander’s formula

13:40–14:10 石岡 大樹（東京理科大学）

Brauer indecomposability of Scott modules

14:20–14:50 中島 健・浅芝秀人（静岡大学）

Tilted algebras and configurations of self-injective algebras of Dynkin type

15:00–15:30 毛利 出（静岡大学）

3-dimensional Calabi-Yau algebras and deformation quantizations

15:50–16:20 劉 裕（名古屋大学）

Half exact functors associated with general hearts on exact categories

16:30–17:00 神田 遼（名古屋大学）

Classification of categorical subspaces of locally noetherian schemes

17:10–18:00 Alexander Zimmermann（Université de Picardie）

Degeneration for triangulated categories

9月14日（日）

9:00–9:30 古賀 寛尚（東京電機大学）・星野光男（筑波大学）・亀山統胤（信州大学）

Dualities in stable categories

9:40–10:10 小原 大樹（東京理科大学）

On the Hochschild cohomology ring modulo nilpotence of the quiver algebra defined by c cycles and quantum-like relation

10:20–10:50 板場 綾子（東京理科大学）・古谷 貴彦（明海大学）・
真田 克典（東京理科大学）

On the decomposition of the Hochschild cohomology group of a monomial algebra satisfying a separability condition

11:00–11:50 Alexander Zimmermann（Université de Picardie）

Batalin-Vilkovisky structure on Hochschild cohomology of Frobenius algebras

13:40–14:10 荒谷 督司（岡山理科大学）・飯間 圭一郎（奈良工業高専）

Gorensteinness on the punctured spectrum

14:20–14:50 高橋 亮・松井 紘樹（名古屋大学）

Singularity categories of stable resolving subcategories

15:00–15:30 加瀬 遼一（奈良女子大学）

Taking tilting modules from the poset of support tilting modules

15:50–16:20 足立 崇英（名古屋大学）

τ -rigid-finite algebras with radical square zero

16:30–17:00 源 泰幸（大阪府立大学）・伊山 修（名古屋大学）

On a generalization of complexes and their derived categories

17:10–18:00 Henning Krause（Bielefeld University）

Highest weight and monoidal structure for strict polynomial functors

18:30–懇親会

9月15日（月・祝）

9:00–9:30 木村 雄太（名古屋大学）

Tilting objects in stable categories of preprojective algebras

9:40–10:10 水野 有哉（名古屋大学）

Tilting complexes over preprojective algebras of Dynkin type

10:20–10:50 小西 正秀（名古屋大学）

Basicalization of KLR algebras

11:10–11:40 木村 真弓（静岡大学）

On isomorphisms of generalized multifold extensions of algebras without nonzero oriented cycles

11:50–12:20 小池 寿俊（沖縄工業高専）

A characterization of the class of Harada rings

The 47th Symposium on Ring Theory and Representation Theory (2014)

Program

September 13 (Saturday)

9:00–9:30 Tomohiro Itagaki, Katsunori Sanada (Tokyo University of Science)

Notes on the Hochschild homology dimension and truncated cycles

9:40–10:10 Takuma Aihara (Nagoya University)

On silting-discrete triangulated categories

10:20–10:50 Osamu Iyama (Nagoya University)

Silting reduction of triangulated categories

11:00–11:50 Henning Krause (Bielefeld University)

Deriving Auslander's formula

13:40–14:10 Hiroki Ishioka (Tokyo University of Science)

Brauer indecomposability of Scott modules

14:20–14:50 Ken Nakashima, Hideto Asashiba (Shizuoka University)

Tilted algebras and configurations of self-injective algebras of Dynkin type

15:00–15:30 Izuru Mori (Shizuoka University)

3-dimensional Calabi-Yau algebras and deformation quantizations

15:50–16:20 Yu Liu (Nagoya University)

Half exact functors associated with general hearts on exact categories

16:30–17:00 Ryo Kanda (Nagoya University)

Classification of categorical subspaces of locally noetherian schemes

17:10–18:00 Alexander Zimmermann (Université de Picardie)

Degeneration for triangulated categories

September 14 (Sunday)

9:00–9:30 Hirotaka Koga (Tokyo Denki University), Mitsuo Hoshino (University of Tsukuba), Noritsugu Kameyama (Shinshu University)

Dualities in stable categories

9:40–10:10 Daiki Obara (Tokyo University of Science)

On the Hochschild cohomology ring modulo nilpotence of the quiver algebra defined by c cycles and quantum-like relation

10:20–10:50 Ayako Itaba (Tokyo University of Science), Takahiko Furuya (Meikai University),

Katsunori Sanada (Tokyo University of Science)

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Singularity categories of stable resolving subcategories

15:00–15:30 Ryoichi Kase (Nara Women's University)

Taking tilting modules from the poset of support tilting modules

15:50–16:20 Takahide Adachi (Nagoya University)

τ -rigid-finite algebras with radical square zero

16:30–17:00 Hiroyuki Minamoto (Osaka Prefecture University), Osamu Iyama (Nagoya University)

On a generalization of complexes and their derived categories

17:10–18:00 Henning Krause (Bielefeld University)

Highest weight and monoidal structure for strict polynomial functors

18:30– Conference dinner

September 15 (Monday)

9:00–9:30 Yuta Kimura (Nagoya University)

Tilting objects in stable categories of Preprojective algebras

9:40–10:10 Yuya Mizuno (Nagoya University)

Tilting complexes over preprojective algebras of Dynkin type

10:20–10:50 Masahide Konishi (Nagoya University)

Basicalization of KLR algebras

11:10–11:40 Mayumi Kimura (Shizuoka University)

On isomorphisms of generalized multifold extensions of algebras without nonzero oriented cycles

11:50–12:20 Kazutoshi Koike (Okinawa National College of Technology)

A characterization of the class of Harada rings