# 平成 28 年度 数学研究所研究所員の業績 (論文と口頭発表)

# (河内 明夫)

# ・論文・著書

- [1] Knot theory for spatial graphs attached to a surface, Proceedings of the ICTS Program: Knot Theory and its Applications, Contemporary Mathematics 670 (2016), 141-168.
- [2] A chord graph constructed from a ribbon surface-link, Contemporary Mathematics (to appear).
- [3] (with I. Tayama) Representing 3-manifolds in the complex number plane, Topology and its Applications (to appear).
- [4] (with Y. Joung, S. Kamada and S. Y. Lee) Polynomial invariants for oriented surface-links via quantum A2 invariant, Topology and its Applications (to appear).
- [5] On a cross-section of an immersed sphere-link in 4-space, Topology and its Applications (to appear).
- [6] (with K. Kaur, S. Kamada and M. Prabhakar) Gauss diagrams, unknotting numbers and trivializing numbers of spatial graphs, Topology and its Applications (to appear).
- [7] Supplement to a chord diagram of a ribbon surface-link, Journal of Knot Theory and Its Ramifications 26 (2017), 1750033 (5 pages).
- [8] Splitting criteria for a definite 4-manifold with infinite cyclic fundamental group.
- [9] Cross-index of a graph.
- [10] (with K. Kauer, S. Kamada and M. Prabhacker) Generalized unknotting numbers of virtual knots.
- [11] (with J. Kim) Immersed 2-knots with essential singularity.
- [12] (with A. Shimizu) On the orientations of monotone knot diagrams.

- [1] On a cross-sectional link of an immersed sphere-link in 4-space, Friday Seminar on Knot Theory, 大阪市立大学理学部F棟 415号室(中講究室), 4月8日.
- [2] Characteristic genera of closed orientable 3-manifolds, Seminar Talks, Talk 1: May 3, 2016, Talk 2: May 5, 2016, Dalian University of Technology, Dalian China.
- [3] On a cross-sectional link of an immersed sphere-link in 4-space, 2016 International Workshop on Low-dimensional Topology in Dalian, Dalian University of Technology, Dalian China, May 7, 2016.
- [4] 図形数学の必要性・・・結び目の研究からわかること、大阪私学数学教育研究会春の講演会、大阪私学会館、2016年5月20日.
- [5] Cross-index of a graph, Workshop on graphs and knots, Xiamen University, Xiamen China, June 25, 2016.

- [6] Crossing number of a graph associated to a tree, KOOK-TAPU Joint Seminar on Knots and Related Topics, Pusan National University, Pusan Korea, July 25, 2016.
- [7] Cross-index of a graph, International Workshop: Topology and graphs in polymer chemistry, 東京工業大学東工大蔵前会館手島精一記念会議室, August 6, 2016.
- [8] On Hosokawa polynomial of a link, dedicated to the memory of Professor Fujitsugu Hosokawa, 国際研究集会 KOOK-TAPU Workshop of Knots in Tsushima Island, 長崎県対馬市, September 8, 2016.
- [9] Cross-index of a graph,東北結び目セミナー,東北大学片平キャンパスさくらホール, October 15, 2016
- [10] Analytic function for all the orientable 3-manifolds via Blaschke product, Mini-Workshop on Blaschke Product, 大阪市立大学理学部 E 棟 E408(大講究室), 2016年11月24日.
- [11] Deforming a band-chord graph of a bounded ribbon surface-knot, 2016 年度琉球結び目セミナー, 那覇市てんぶす那覇 2 階那覇市伝統工芸館会議室, 2016 年 12月 18日.

## (佐官 謙一)

- [1] Quasiconformal harmonic mappings with the convex holomorphic part (joint research with D. Partyka and Jian-Feng Zhu), 2016年6月3日, 14:30~16:30, 島根大学, 複素解析セミナー.
- [2] Quasiconformal harmonic mappings with the convex holomorphic part (joint research with D. Partyka and Jian-Feng Zhu), 2016年6月27日, 11:20~11:45; XVIII-th Conference on Analytic Functions and Related Topics, Chelm (Poland), June 26-29, 2016.
- [3] Quasiconformal harmonic mappings with the convex holomorphic part (joint research with D. Partyka and Jian-Feng Zhu), 2016年8月25日, 15:30~16:20; Workshop on Geometric Function Theory and Special Functions (2016 August 25~26) Middle Lecture Hall, Graduate School of Information Sciences, Aobayama Campus, Tohoku University, Sendai, JAPAN.
- [4] Quasiconformal harmonic mappings of the unit disk onto a convex domain (joint research with D. Partyka), 2016年9月2日, 15:00~16:00, Xiamen Campus room E4-102, Huaqiao University, China.
- [5] Quasiconformal harmonic mappings with the convex holomorphic part (joint research with D. Partyka and Jian-Feng Zhu), 2016年9月6日, 15:00~16:00, Quanzhou Campus Mathematical building room 306, China.
- [6] Quasiconformal harmonic mappings with the convex holomorphic part (joint research with D. Partyka and Jian-Feng Zhu), 2016年12月3日, 15:40~16:40, Workshop "Prospects of Theory of Riemann surfaces "(2016 December 2~4), Main Building Room 128, Faculty of Science, Yamaguchi

University.

[7] Quasiconformality of Poisson integrals, 2017 年 3 月 10 日, 14:30~16:30, 島根大学, 複素解析セミナー.

# (神谷 茂保)

## 論文

[1] Notes on non-discrete complex hyperbolic triangle groups of type  $(n,n,\infty;k)$  || (to appear)

#### • 口頭発表

- [1] 2 次元複素双曲空間に作用する理想三角群、 複素解析セミナー、大阪市立大学、2016年5月12日
- [2] 2 次元複素双曲空間に作用する(n,n,<sup>∞)</sup>型複素双曲三角群、 複素解析セミナー、大阪市立大学、2016年6月9日
- [3]  $(n,n,\infty;k)$ 型の複素双曲三角群について、

ポテンシャルセミナー、名城大学、2016年10月21日

[4] 複素双曲三角群(1)、

春の代数的位相幾何学セミナー、岡山理科大学、2017年3月29日

[5] 複素双曲三角群(2)、

春の代数的位相幾何学セミナー、岡山理科大学、2017年3月29日

#### (阿部 拓)

#### 論文

- [1] H. Abe and P. Crooks, "Hessenberg varieties for the minimal nilpotent orbit, to appear in Pure Appl. Math. Q.
- [2] H. Abe and S. Billey, "Consequences of the Lakshmibai-Sandhya Theorem: the ubiquity of permutation patterns in Schubert calculus and related geometry", to appear in Advanced Studies in Pure Mathematics.
- [3] H. Abe and T. Horiguchi, "The torus equivariant cohomology rings of Springer varieties", Topology Appl. ¥textbf{208} (2016), 143-159.
- [4] H. Abe, L. DeDieu, F. Galetto, M. Harada, ``Geometry of Hessenberg varieties with applications to Newton-Okounkov bodies", arXiv:1612.08831. (プレプリント)

- [1] H. Abe, "Flat families of Hessenberg varieties with an application to Newton-Okounkov bodies", Geometry and Topology seminar, The University of Western Ontario, Jan. 2017.
- [2] H. Abe, "Flat families of Hessenberg varieties with an application to Newton-Okounkov bodies", AMS special session on combinatorial and

cohomological invariants of flag manifolds and related varieties, Atlanta, Jan. 2017.

- [3] H. Abe, "Flat families of Hessenberg varieties with an application to Newton-Okounkov bodies", Algebra/Combinatorics/Geometry research seminar, Smith College, Dec. 2016.
- [4] H. Abe, "A Weyl character formula for Hessenberg varieties", CMS Session on Combinatorial Algebraic Geometry, Niagara falls, Dec. 2016.
- [5] H. Abe, "On flat degenerations of regular semisimple Hessenberg varieties", Mini-Workshop on Toric Topology in Okayama, Okayama University of Science, May. 2016.
- [6] H. Abe, "On the flatness of certain families of Hessenberg varieties", Toric Topology 2016 in Kagoshima, Kagoshima University, Apr. 2016.

# (綾野 孝則)

# • 論文

[1]T. Ayano, "On Jacobi Inversion Formulae for Telescopic Curves", SIGMA 12 (086), 2016年8月.

#### • 口頭発表

- [2] "Jacobi Inversion Formulae for Telescopic Curves", Characteristic classes and the intersection theory, Higher School of Economics, 2016年10月6日. [3] "Jacobi Inversion Formulae for Telescopic Curves", Weekly seminar of the Laboratory of algebraic geometry, Higher School of Economics, 2016年10月14日.
- [4] Telescopic 曲線に対する代数積分の逆関数について、日本応用数理学会 2017年研究部会連合発表会「数論アルゴリズムとその応用」、電気通信大学、2017年3月7日。
  [5] Inversion of algebraic integrals for telescopic curves、
- 第22回代数学若手研究会、岡山大学、2017年3月9日

#### (岡崎 真也)

#### • 口頭発表

[1] S. Okazaki, Constituent knots of a handlebody-knot, The 12th East Asian School of Knots and Related Topics, The University of Tokyo, February 13, 2017.

## (大田 武志)

#### 論文

- [1] H. Itoyama, T. Oota and R. Yoshioka, "q-Vertex Operator from 5D Nekrasov Function," J.Phys. A49 (2016) no.34, 345201.
- [2] H. Itoyama, T. Oota, T. Suyama and R. Yoshioka,
- "Cubic constraints for the resolvents of the ABJM matrix model and its cousins," e-Print: arXiv:1609.03681 [hep-th], プレプリント,
- to appear in International Journal of Modern Physics A.

#### • 口頭発表

[1] "Loop equations for Chern-Simons-matter matrix models,"

理化学研究所(和光)統合支援施設 二階 大会議室,理化学研究所ワークショップ「超対称理論の数理的理解の進展」susyiTHES2016,

2016年8月17日(水)-8月19日(金)開催,2016年8月19日(金).

[2] "Elliptic algebra at root of unity limit,"大阪市立大学学術情報総合センター10 階会議室,国際会議"Progress in Quantun Field Theory and String Theory II," 2017年3月27日(月)-3月31日(金)開催,3月28日(火).

# (河村 建吾)

# • 論文

- [1] K. Kawamura, K. Oshiro and K. Tanaka, Independence of Roseman moves including triple points, Algebr. Geom. Topol. 16(4) 2443-2458, 2016 年 9 月.
- [2] S. Kamada and K. Kawamura, Ribbon-clasp surface-links and normal forms of immersed surface-links, Topology Appl., to appear.
- [3] K. Kawamura, Ribbon-clasp T^2-knots and semi-welded knots, preprint.

## • 口頭発表

- [1] Surface-links which bound immersed handlebodies, 研究集会「Intelligence of Low-dimensional Topology」, 京都大学, 2016 年 5 月 19 日.
- [2] Diagrams of immersed surface-knots and quandle (co)homology groups, 研究集会「拡大 KOOK セミナー2016」, 大阪電気通信大学, 2016 年 8 月 25 日.
- [3] Immersed surface-knots and quandle (co)homology groups, 研究集会「東北結び目セミナー2016」,東北大学,2016年10月16日.
- [4] 4 次元空間にはめ込まれた曲面とカンドルホモロジー群について,近畿大学数学教室講演会,近畿大学,2016 年 12 月 9 日.

# (梶ヶ谷 徹)

#### 論文

- [1]. Takahiro Hashinaga and Toru Kajigaya, A class of non-compact homogeneous Lagrangian submanifolds in complex hyperbolic spaces, Ann. Global Anal.Geom. 51 (2017), no. 1, 21-33.
- [2]. 梶ヶ谷徹, 複素双曲空間内の等質ラグランジュ部分多様体, 数理解析研究所講究録 No.2017, 部分多様体の微分幾何学的研究,pp.84-103.
- [3]. Toru Kajigaya, Reductions of minimal Lagrangian submanifolds with symmetries, 21pages, submitted.

- [1]. \*On homogeneous Lagrangian submanifolds in complex hyperbolic spaces\*, Geometry Seminar, Durham University, May. 2016.
- [2]. 複素双曲空間内の等質ラグランジュ部分多様体, RIMS 研究集会, 京都大学, 2016 年6月.
- [3]. Reductions of minimal Lagrangian submanifolds with symmetries,

微分幾何小研究集会, 東北大学, 2017年2月.

- [4]. \*On Lagrangian \*\*submanifolds with symmetries\*, The 2nd OCAMI-KOBE-WASEDA Joint International Workshop on Differential Geometry and Integrable Systems, Osaka City University, Mar. 2017.
- [5]. 対称性を持つ極小ラグランジュ部分多様体のリダクション, 日本数学会, 首都大学東京, 2017年3月.
- [6]. \*Reductions of minimal Lagrangian submanifolds with symmetries\*, The 13th OCAMI-RIRCM Joint Differential Geometry Workshop on Submanifold Geometry and Lie Theory, Osaka City University, Mar. 2017.

## (関 穣慶)

#### 論文

[1] "Entanglement Entropy of Scattering Particles" Robi Peschanski and Shigenori Seki, Physics Letters B758 (2016) 89-92

# • 口頭発表

- [1] "Entanglement Entropy of Scattering Particles" セミナー, Shigenori Seki, 2016年6月2日 場所: IPhT, CEA-Saclay, フランス
- [2] "Entanglement Entropy of Scattering Particles in S-matrix Formalism" セミナー, Shigenori Seki, 2016 年 6 月 22 日 場所:京都大学理学部素粒子論研究室
- [3] "Momentum Space Entanglement Entropy of Scattering Particles" セミナー、関 穣慶, 2017年3月15日 場所:近畿大学理工学部
- [4] "Entanglement Entropy of Particles in Scattering Process" Robi Peschanski, 関 穣慶(登壇者),日本物理学会第 72 回年次大会, 2017年3月17日 場所:大阪大学豊中キャンパス

#### ポスター発表

[1] "Entanglement Entropy of Scattering Particles", Shigenori Seki, Yukawa International Seminar 2016 "Quantum Matter, Spacetime and Information" 2016年6月15日 場所:京都大学基礎物理学研究所

#### (滝岡 英雄)

#### • 論文

- [1] Hwa Jeong Lee and Hideo Takioka, On the arc index of cable links and Whitehead doubles, Journal of Knot Theory and Its Ramifications 25 (2016), no. 7, 1650041, 23pp.
- [2] Hwa Jeong Lee and Hideo Takioka, On the arc index of Kanenobu knots, Journal of Knot Theory and Its Ramifications 26 (2017), 1750015, 26pp.
- [3] Hideo Takioka, A characterization of the \$\footnote{\text{Gamma\$-polynomials}} of knots with clasp number at most two, Journal of Knot Theory and Its Ramifications 26 (2017), 1750013, 27pp.
- [4] Hideo Takioka, The \$\footnote{\text{Gamma\$-polynomials of Abe-Tange's ribbon knots, preprint.}

[5] Hideo Takioka, Infinitely many knots with the trivial \$(2,1)\$-cable \$\text{Gamma\$-polynomial, preprint.}

# • 口頭発表

[1] Infinitely many knots with the trivial \$(2,1)\$-cable \$\times Gamma\$-polynomial, The 2nd OCAMI-KOBE-WASEDA Joint International Workshop on Differential Geometry and Integrable Systems, Osaka City University, 14 MAR 2017.

# (堀口 達也)

## 論文

[1] H. Abe and T. Horiguchi, "The torus equivariant cohomology rings of Springer varieties". Topology Appl. 208(2016), 143-159.

#### • 口頭発表

- [1] "Hessenberg varieties and hyperplane arrangements (poster session)", The Fields Institute for Research in Mathematical Sciences, Introductory Workshop on Combinatorial Algebraic Geometry, August 16, 2016.
- [2] "ヘッセンバーグ多様体と超平面配置", 姫路市市民会館, 第 43 回変換群論シンポジウム, 2016 年 11 月 17 日.
- [3] "Hessenberg varieties and graph theory", 九州大学, 九州大学トポロジー金曜セミナー, 2016 年 11 月 25 日.
- [4] "Hessenberg varieties and hyperplane arrangements", Pusan National University, PNU MATH FORUM 2016, December 3, 2016.
- [5] "Hessenberg varieties and hyperplane arrangements", The Unipark of Jeju National University, 4th Korea Toric Topology Workshop, December 27, 2016.

#### (村井実)

#### • 口頭発表

[1]On the equiblium states of an inextensible elasite ring under the uniform pressure

2016 年7月 The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications Orland, America

# (森澤 理之)

## ・口頭発表

- [1] 森澤理之,「軌道空間の Killing テンソルについて」, 宇宙物理(重力)・素粒子論研究室コロキウム, 大阪市立大学, 2016年5月27日
- [2] 森澤理之, "Integrability of cohomogenity one string in AdS spacetime", 第 18 回特異点研究会「特異点と時空、および関連する物理」, 立教大学, 2016 年 12 月 27 日・ポスター発表
- [1] Yoshiyuki Morisawa, "Cohomogenity one string in AdS spacetime", The 26th Workshop on General Relativity and Gravitation in Japan (JGRG26), 大阪市立大学, 2016年10月24-28日

# (吉岡 礼治)

#### • 論文

[1] "Cubic constraints for the resolvents of the ABJM matrix model and its cousins" H. Itoyama, T. Oota, T. Suyama, R. Yoshioka, arXiv:1609.03681 [hep-th] to appear in Int. J. Mod. Phys. A.

#### (大野 晋司)

## ・論文・著書

- [1]S. Ohno, A sufficient condition for orbits of Hermann actions to be weakly reflective, Tokyo journal mathematics. 39 (2016) 537--564.
- [2]S. Ohno, T. Sakai and H. Urakawa, Biharmonic homogeneous submanifolds in compact symmetric spaces and compact Lie groups, arXiv:1612.01063.
- [3]S. Ohno, Biharmonic orbits of isotropy representations of symmetric spaces, preprint.

# • 口頭発表

- [1]「A construction of weakly reflective submanifolds in compact symmetric spaces」, RIMS 研究集会 部分多様体の微分幾何学的研究,京都大学 数理解析研究所, 2016年6月28日
- [2]「A construction of biharmonic submanifolds in compact symmetric spaces」, 首都大学東京幾何セミナー, 首都大学東京, 2016 年 7 月 15 日
- [3] 「A construction of weakly reflective submanifolds in compact symmetric spaces」, The 20th International Workshop on Hermitian Symmetric Spaces and Submanifolds, Kyungpook National University, Daegu, Korea, July 29, 2016
- [4]「コンパクト対称空間内の弱鏡映部分多様体の構成」,第63回幾何学シンポジウム,岡山大学津島キャンパス,2016年8月28日
- [5]「コンパクト対称空間内の弱鏡映部分多様体の構成」, 部分多様体幾何とリー群作用 2016, 東京理科大学森戸記念館, 2016 年 9 月 2 日
- [6]大野晋司, 酒井高司, 浦川肇 「コンパクト Lie 群内の二重調和等質超曲面の構成」, 日本数学会秋季総合分科会, 関西大学, 2016 年 9 月 17 日
- [7] Biharmonic orbits of isotropy representations of symmetric spaces, The 13th OCAMI-RIRCM Joint Differential Geometry Workshop on Submanifold Geometry and Lie Theory, Osaka City University, March 27 (Mon), 2017

#### (松野 研)

- [1] Ken Matsuno, Hideki Ishihara, Shuto Teramae, "Particle acceleration by spherical soliton", 第 26 回「一般相対論と重力」研究会, 大阪市立大学, 2016 年 10月 26日.
- [2] 松野研, 石原秀樹, 寺前柊斗, 高橋真聡, "プラズマ中の密度波ソリトンによる荷電粒子加速", 日本物理学会第72回年次大会, 大阪大学, 2017年3月17日.

# (真瀬 真樹子)

#### 論文

[1] Makiko Mase, Polytope duality for families of K3 surfaces associated to transpose duality, Commentalli Math. St. Pauli., vol.65, no. 2, (2016), pp. 131--139.

[2] Makiko Mase, Lattice duality for families of \$K3\$ surfaces associated to transpose duality, Submitted.

## • 口頭発表

[1]On families of K3 surfaces, 第 9 回 数論女性の集まり(2016年5月21日), 上智大学

[2] Dualities of families of K3 surfaces associated to bimodal singularities --remaining cases, 4th workshop on K3 and Enriques surfaces (2016年10月11日), 北海道教育大学

[3]Lattice duality of families of K3 surfaces associated to bimodal singularities --comparing with Pinkham's and Rohsiepe's works, 特異点論月曜セミナー(2016年12月26日), 日本大学

[4] Duality of lattices of families of K3 surfaces associated to bimodal singularities, 代数幾何ミニ研究集会(2017年3月6日), 埼玉大学

# (安本 真士)

## 論文

- [1] W. Rossman and M. Yasumoto, Discrete Linear Weingarten Surfaces and their Singularities in Riemannian and Lorentzian spaceforms, to appear in Advanced Studies in Pure Mathematics.
- [2] C. Müller and M. Yasumoto, Semi-discrete constant mean curvature surfaces of revolution with singularities in Minkowski space, Proceedings of the International Conference on Geometry, Integrability and

Quantization 18 (2017), 191-202.

- [3] W.Y. Lam and M. Yasumoto, Trivalent maximal surfaces in Minkowski space, preprint.
- [4] W. Rossman and M. Yasumoto, Semi-discrete Linear Weingarten Surfaces and their Singularities in Riemannian and Lorentzian spaceforms, preprint.
- [5] 安本真士, 三価グラフの極大曲面, 第63回幾何学シンポジウム予稿集, 157-160.
- [6] Y. Ogata and M. Yasumoto, Construction of discrete constant mean curvature surfaces in Riemannian spaceforms and applications, to appear in Differential Geometry and its Applications.

- [1] M. Yasumoto, Two types of discrete isothermic surfaces in Minkowski space, SFB-Seminar Berlin, TU Berlin, 2016年5月.
- [2] M. Yasumoto, Semi-discrete constant mean curvature surfaces of revolution

- in Minkowski space, International Conference on Geometry, Integrability and Quantization, Hotel Koral, 2016年6月.
- [3] M. Yasumoto, Discrete constant mean curvature surfaces in Minkowski space, Symmetries and Integrability in Difference Equations (SIDE 12), Hotel Le Chantecler, 2016年7月.
- [4] M. Yasumoto, Construction of discrete constant mean curvature surfaces in Riemannian spaceforms and applications, Differential Geometry and its Applications, Masaryk University, 2016年7月.
- [5] 安本真士, 三価グラフの極大曲面, 第63回幾何学シンポジウム, 岡山大学, 2016年8月.
- [6] M. Yasumoto, Trivalent maximal surfaces in Minkowski space, 8th International Meeting on Lorentzian Geometry (GeLoMa 2016), Universidad de Málaga, 2016 年 9 月.
- [7] M. Yasumoto, Semi-discrete linear Weingarten surfaces with singularities, Geometry and Topology Seminar, UMass Amherst, 2016年11月.
- [8] M. Yasumoto, Trivalent maximal surfaces in Minkowski space, The 2nd OCAMI-KOBE-WASEDA Joint International Workshop on Differential Geometry and Integrable Systems, Osaka City University, 2017年3月.
- [9] M. Yasumoto, Discrete timelike minimal surfaces and discrete wave equations, The Tenth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory (IMACS 2017), University of Georgia, 2017 年 3 月.

#### (吉脇 理雄)

#### 論文

- [1] M. Yoshiwaki, Relative derived dimensions for cotilting modules, arXiv:1611.00535(submitted).
- [2] H. Asashiba, K. Nakashima and M. Yoshiwaki, Decomposition theory of modules: the case of Kronecker algebra, arXiv:1703.07906(submitted).
- [3] H. Minamoto, K. Yamaura and M. Yoshiwaki, A construction of Iwanaga-Gorenstein algebras of finite Cohen-Macaulay type, preprint.
- [4] O. Iyama and M. Yoshiwaki, Configurations for 1-Iwanaga-Gorenstein algebras, preprint.
- [5] H. Asashiba, M. Kimura, K. Nakashima and M. Yoshiwaki, On isomorphisms of generalized multifold extensions of algebras without nonzero oriented cycles, preprint.

- [1] 浅芝秀人, 中島健, 吉脇 理雄, 加群の分解論 (Kronecker algebra を例として), 神楽坂代数セミナー, 東京理科大学, 2016年6月24日(講演者は中島/招待講演).
- [2] 吉脇 理雄, Decomposition theory of modules: the case of Kronecker algebra, 名古屋大学環論表現論セミナー,名古屋大学大学院多元数理科学研究科,2016年07月

- 22日(招待講演).
- [3] 浅芝秀人, 中島健, 吉脇 理雄, Decomposition theory of modules: the case of Kronecker algebra, 第 49 回環論および表現論シンポジウム, 大阪府立大学, 2016 年 9 月 1日(講演者は吉脇).
- [4] 浅芝秀人, 中島健, 吉脇 理雄, Decomposition theory of modules: the case of Kronecker algebra, 日本数学会 2016 年度秋季総合分科会, 関西大学, 2016 年 9 月 15日(講演者は中島).
- [5] 吉脇 理雄, Relative derived dimensions for cotilting modules 2, 日本数学会 2017年度年会,首都大学東京,2017年3月27日.

# (森 淳秀)

#### 論文

- [1] A. Mori, On higher dimensional violation of Thurston-Bennequin inequality. (プレプリント)
- [2] A. Mori, Information geometry in a global setting. (プレプリント)

## • 口頭発表

[1] 森 淳秀,情報幾何のトポロジー,日本数学会年会,首都大学東京2017年3月24日

# (山本 光)

#### 論文

- [1] H. Yamamoto, Special Lagrangians and Lagrangian self-similar solutions in cones over toric Sasaki manifolds, New York J. Math., 22(2016) 501-526.
- [2] H. Yamamoto, Lagrangian self-similar solutions in gradient shrinking Kahler-Ricci solitons, to appear in J. Geom.
- [3] H. Yamamoto, Weighted Hamiltonian stationary Lagrangian submanifolds and generalized Lagrangian mean curvature flows in toric almost Calabi-Yau manifolds, Tohoku Math. J., 68(2016), no. 3, 329-347.
- [4] H. Yamamoto, Examples of Ricci-mean curvature flows, arXiv:1608.04944, preprint
- [5] N. Koike and H. Yamamoto, Gauss maps of the Ricci mean curvature flow, arXiv 1702.04588, preprint

## ・発表

- [1] On coupled flows with Lagrangian mean curvature flows and Kahler-Ricci flows, 2016 年 5 月 21 日, 神楽坂幾何学セミナー, 東京理科大学
- [2] Ricci-mean curvature flows and examples of non-minimal compact self-similar solutions, 2016年6月30日, 福岡大学幾何学セミナー, 福岡大学
- [3] リッチ平均曲率流とその具体例について, 2016 年 8 月 28 日, 第 63 回幾何学シンポジウム, 岡山大学
- [4] Ricci-mean curvature flows in gradient shrinking Ricci solitons, 2016年9月10日, The second China-Japan geometry conference, Fujian Normal University

[5] リッチフローと平均曲率流の混合方程式について, 2016 年 10月 29日, Okayama
Workshop on Partial Differential Equations, 岡山大学
[6]リッチ平均曲率流とその具体例について, 2016年 11月 4日, 福岡大学微分幾何研究
会、福岡大学セミナーハウス
[7] On coupled flows with mean curvature flows and Ricci flows, 2017年1月
28日, Workshop on Analysis in Kagurazaka 2017, 東京理科大学
[8] Ricci-mean curvature flows and its Gauss maps, 2017 年 3 月 28 日, The 13th
OCAMI-RIRCM Joint Differential Geometry Workshop on Submanifold Geometry
and Lie Theory, 大阪市立大学,