平成 30 年度　教員・数学研究所特任教員の業績
（論文と口頭発表）

(秋吉 宏尚)

・論文・著書

[1] Thin representations for the one-cone torus group, Topology and its Applications に掲載決定.

・口頭発表

[1] Ford and Dirichlet domains for cone hyperbolic manifolds, The 10th KOOK-TAPU Joint Seminar on Knots and Related Topics, 釜山（韓国）, 2018 年 7 月 24 日.
[2] 8の字結び目から得られるいくつかの錐多様体の Dirichlet 領域, 研究集会「拡大 KOOK セミナー2018」, 大阪市立大学, 2018 年 9 月 5 日.
[3] From one-cone tori to two-bridge cone manifolds, Topology and Geometry of Low-dimensional Manifolds, 奈良女子大学, 2018 年 10 月 21 日.
[4] Dirichlet domains for figure-eight cone manifolds, The 14th East Asian Conference on Geometric Topology, 北京（中国）, 2019 年 1 月 21 日.

(阿部　健)

・論文

[1] K. Abe, Vanishing viscosity limits for axisymmetric flows with boundary, arXiv:1806.04811
[2] K. Abe, Liouville theorems for the Stokes equations with applications to large time estimates, arXiv:1807.04436
[3] K. Abe, The Navier-Stokes equations with the Neumann boundary condition in an infinite cylinder, Manuscripta Math., in press, arXiv:1806.04809
[4] K. Abe, G. Seregin, Axisymmetric flows in the exterior of a cylinder, Proc. Roy. Soc. Edinburgh Sect. A, in press, arXiv:1708.00694

・口頭発表

[1] K. Abe, Vanishing viscosity limits for axisymmetric flows with boundary, 3rd meeting of young researchers in PDES, KIAS, Seoul, Korea, Dec. 13-15, 2018
[2] K. Abe, Liouville theorems for the Stokes equations with applications to large time estimates, RIMS conference: Analysis for incompressible flows, December 3-5, 2018
[3] K. Abe, Vanishing viscosity limits for axisymmetric flows with boundary, PDE seminar, Shanghai Jiao Tong University, Shanghai, China, Nov. 28th, 2018
[4] K. Abe, Vanishing viscosity limits for axisymmetric flows, Autumn Meeting of Mathematical Society of Japan, Okayama University, September 2018
[5] K. Abe, Vanishing viscosity for axisymmetric flows with boundary, Workshop on the Navier-Stokes flow, Nagoya University, September 18-19, 2018
[6] K. Abe, Axisymmetric flows in the exterior of a cylinder, PDEs and Mathematical Hydrodynamics: in Honor of Vsevolod Alekseevich Solonnikov's 85'th Birthday, Euler

International Mathematical Institute, St. Petersburg, Russia,
July 30 - August 3, 2018
[7] K. Abe, Axisymmetric flows in the exterior of a cylinder, Nonlinear PDEs modeling fluid dynamics, 12th AIMS conference, Taipei, Taiwan, 2018
[8] K. Abe, Global well-posedness of the two-dimensional exterior Navier-Stokes equations for non-decaying data, Recent Trends in Navier-Stokes Equations and Related Problems, 12th AIMS conference, Taipei, Taiwan, 2018
[9] K. Abe, Axisymmetric flows in an exterior domain, AMS Spring Southeastern Sectional Meeting, Vanderbilt University, Nashville, TN, US, April 14-15, 2018

(糸山 浩司)

・雑誌・論文発表

[1] H. Itoyama, A. Mironov, A. Morozov, "Cut and join operator ring in tensor models", Nucl. Phys. B 932 (2018) 52-118, arXiv:1710.10027 [hep-th]
[2] H. Itoyama, T. Oota, Katsuya Yano, "Discrete Painlevé system and the double scaling limit of the matrix model for irregular conformal block and gauge theory", Phys. Lett. B 789 (2019) 605-609, arXiv:1805.05057 [hep-th]
[3] H. Itoyama, A. Mironov, A. Morozov, "From Kronecker to tableau pseudo-characters in tensor models", Phys. Lett. B 788 (2019) 76-81, e-Print: arXiv:1808.07783 [hep-th]
[4] H. Itoyama, T. Oota, Katsuya Yano, "Discrete Painlev_e system associated with Unitary
matrix model", Journal of Physics: Conference Series "The 32nd International Colloquium on Group Theoretical Methods in Physics (Group32)"
[5] H. Itoyama, T. Oota, Katsuya Yano, "Discrete Painlevé system for the partition function of Nf=2 SU(2) supersymmetric gauge theory and its double scaling limit", arXiv:1812.00811 [hep-th], submitted to Journal of Physics A
[6] H. Itoyama, R. Yoshioka, "Generalized cut operation associated with higher order variation in tensor models", OCU-PHYS 498, NITEP 9

・口頭発表

(国内)

[1] 糸山浩司, 大田武志, 矢野勝也, "Discrete Painlevé system and the double scaling limit of the matrix model for irregular conformal block and gauge theory, I", 日本物理学会、信州大学松本キャンパス, 2018 年 9 月 14 日
[2] 糸山浩司, 大田武志, 矢野勝也, "Discrete Painlevé system and the double scaling limit of the matrix model for irregular conformal block and gauge theory, II", 日本物理学会、信州大学松本キャンパス, 2018 年 9 月 14 日
[3] 糸山浩司, 大田武志, 矢野勝也, "Discrete Painlevé system and double scaling limit of the matrix model for irregular conformal block and gauge theory III", 日本物理学会、九州大学伊都キャンパス, 2019 年 3 月 17 日
[4] 糸山浩司, 大田武志, 矢野勝也, "Log 項をもつユニタリ型行列模型," 日本物理学会、九州

大学伊都キャンパス, 2019 年 3 月 17 日
[5] 糸山浩司, 中島爽太, Interpolating heterotic models with Wilson line , 日本物理学会、九州大学伊都キャンパス, 2019 年 3 月 17 日
[6] 糸山浩司, “場の量子論のすすめ”, 2018 年 7 月 14 日, セミナー、文京区本郷東京大学工学研究科
[7] 糸山浩司,”南部陽一郎先生の物理とその魅力“ 2018 年 12 月 16 日 南部陽一郎先生ノーベル物理学賞受賞 10 周年記念シンポジウム 市民セミナー２０１８、大阪市立大学杉本キャンパス、田中記念館大ホール
(国際)
[8] H. Itoyama, “Discrete Painlevé system and the double scaling limit of the matrix model for irregular conformal block and gauge theory”, The 32nd International Colloquium on Group Theoretical Methods in Physics (Group32), Czech Technical University in Prague, Czech, 9 July 2018
[9] H. Itoyama, “Discrete Painlevé system and the double scaling limit of the matrix model for irregular conformal block and gauge theory”, 2018 年 7 月 25 日 セミナー、京都大学素粒子論研究室
[10] H. Itoyama, “Discrete Painlevé system and the double scaling limit of the matrix model for irregular conformal block and gauge theory”, 20 August, 2018, talk delivered at the workshop on duality, integrability and matrix model, Lebedev Physics Institute, Moscow, invited talk.
[11] H. Itoyama, “More on Cut & Join Operator Ring in Rainbow (Aristotelian) Tensor Model”, Moscow, 25 August, 2018, talk delivered at the workshop on duality, integrability and matrix model, Institute of Information and Transmission Problem(IITP), Moscow, invited talk
[12] H. Itoyama, “Discrete Painleve system and the double scaling limit of the matrix model for irregular conformal block and gauge theory”, Non-Perturbative Methods in Field Theory and String Theory - in memory of Alexei Zamolodchikov -, Kyoto University, 22 October, 2018, invited talk
[13] H. Itoyama, “Cut & Join Operator Ring in Tensor Model”, OIST Mini Symposium ″Holographic Tensors″ OIST, 2 November, 2018, invited talk
[14] H. Itoyama, “Discrete Painleve system and the double scaling limit of the matrix model for irregular conformal block and gauge theory”, East Asia Joint Workshop on Fields and Strings 2018, KIAS, 5 November, 2018, invited talk

(大仁田 義裕)
・論文，著書，編集
（論文）
[1] R. Miyaoka and Y. Ohnita: Lagrangian geometry of the Gauss images of isoparametric hypersurfaces in spheres, submitted to Complex Manifolds (a special issue as Proceeding of the workshop ″5th Workshop ″Complex Geometry and Lie Groups, Firenze). OCAMI Preprint Series 18-7.

[2] Y. Ohnita: Minimal Maslov number of R-spaces canonically embedded in Einstein-Kähler C-spaces, submitted to Complex Manifolds (a special issue as Proceeding of the workshop ″5th Workshop ″Complex Geometry and Lie Groups, Firenze). OCAMI Preprint Series 18-8.

・口頭発表

[1]Lagrangian geometry of the Gauss images of isoparametric hypersurfaces in spheres , The 5th Workshop on ″Complex Geometry and Lie Groups″, University of Florence, Florence, Italy, June 11(Mon)-15(Fri), 2018. （共同研究者・東北大学宮岡礼子教授が講演）

[2] Geometry of Harmonic Maps and Integrable System Approach (1), (2), Mini-Workshop on Geometry and Mathematical Science, Osaka City University, July 28-30, 2018, (1)2018.7.29, (2)2018.7.30.

[3]小池の条件を満たす Hermann 作用の極小軌道の分類について ， 部分多様体幾何とリー群作用 2018，東京理科大学森戸記念館第 1 フォーラム， （2018 年 9 月 3 日-4 日），2018 年 9 月 4 日.

[4]Lagrangian geometry of the Gauss images of isoparametric hypersurfaces , Special Session ″Riemannian Geometry and related Topics″, 2018 Joint Meeting of the Korean Mathematical Society and the Germany Mathematical Society, COEX, Seoul, Korea, October 3(Wed)-6(Sat), 2018. 2018 年 10 月 4 日.

[5]アインシュタイン-ケーラーC-空間に標準的に埋め込まれた R-空間の最小マスロフ数， 水戸幾何セミナー，茨城大学理学部数学・情報数理コース， 2018 年 12 月 7 日.

[6]Minimal Maslov number of R-spaces canonically embedded in Einstein-Kaehler C-spaces , Variational Problems in Geometry and Mathematical Physics, UK-Japan Winter School 2019,School of Mathematics, University of Leeds, UK, 7(Mon)-10(Thu), 2019. 2019 年 1 月 7 日.

[7]Minimal Maslov number of R-spaces canonically embedded in Einstein-Kaehler C-spaces , Special talks organized by Professor Hui Ma (Tsinghua Umiversity), Department of Mathematical Sciences, Tsinghua University, Beijing, P.R.China 2019 年 2 月 20 日.

[8]Minimal Maslov number of R-spaces canonically embedded in Einstein-Kaehler C-spaces , The 2nd International Conference ″Geometry of Submanifolds and Integrable Systems″, The 16th OCAMI-RIRCM Joint Differential Geometry Workshop ＆The 4th OCAMI-KOBE-WASEDA Joint International Workshop on Differential Geometry and Integrable Systems (2019.3.22-3.26)大阪市立大学. 2019 年 3 月 26 日.

(尾角 正人)

・論文

[1] M. Okado, A.Schilling, T. Scrimshaw,
Rigged configuration bijection and proof of the X=M conjecture for nonexceptional affine types,
J. Algebra, 516 (2018), 1--37.

[2] A. Kuniba, H. Lyu, M. Okado,
Randomized box-ball systems, limit shape of rigged configurations and Thermodynamic Bethe ansatz,
Nuclear Physics B 937 (2018) 240-271.

・口頭発表

[1] A型一般化量子群の KR クリスタル、
日本数学会２０１８年度秋季総合分科会 無限可積分系一般講演、
２０１８年９月２４日～２７日、岡山大学
[2] Integrable systems arising from Kirillov-Reshetikhin crystals of quantum affine algebras, SIDE 13, Nov 11-17, 2018, Fukuoka

（加藤　信）

・論文

[1] K.Hashimoto, S.Kato:
Bicomplex extensions of zero mean curvature surfaces in ${¥bf R}^{2,1}$ and ${¥bf R}^{2,2}$,
J. Geom. Phys. 138 (2019), 223-240.

・口頭発表

[1] ${¥bf R}^{2,1}$ 内の平均曲率 0 曲面のコンパクト化の補足,
淡路島幾何学研究集会 2019,
南あわじ市阿那賀地区公民館, 2019 年 1 月 27 日.
[2] ${¥bf R}^{2,1}$ 内の Willmore 型曲面,
2019 名城幾何学研究集会「多様体上の種々の幾何構造の融合」,
名城大学理工学部, 2019 年 3 月 6 日.
[3] 平均曲率零曲面の双複素拡張,
講演会「多様体上の変分問題とその周辺領域」―変分問題で現れる曲面の幾何学―,
山口大学理学部, 2019 年 3 月 14 日..

(兼田 正治)

・雑誌・論文発表--名前、タイトル、雑誌名、等

[1] Kaneda, M.,
On the Frobenius direct image of the structure sheaf of a homogeneous projective variety, J. Alg. 512 (2018), 160-188
[2]Gros, M. and Kaneda, M., Contraction par Frobenius et modules de Steinberg,
Ark. Mat. 56 (2018), 319-332

・セミナー等での口頭発表--タイトル、場所、セミナー(等)名、日程、等

[1]Exceptional sequences in positive characteristic,
大阪市立大学最終講義, 2019/3/15
[2]Frobenius contraction,
大阪表現論 seminar, 2019/3/4
[3]Splitting of the Frobenius morphism,

富山大学数学教室談話会, 2019/2/19

(金信 泰造)

・論文・著書

[1] Kanenobu, T. and Sumi, T., Classification of a family of ribbon 2-knots with trivial Alexander polynomial, Communications of the Korean Mathematical Society 33 (2018), no. 2, 591- 604.

[2] Kanenobu, T. and Sumi, T., Twisted Alexander polynomial of a ribbon 2-knot of 1-fusion, preprint.

・口頭発表

[1] Twisted Alexander polynomial of a ribbon 2-knot of 1-fusion,The 10th KOOK-TAPU Joint Seminar on Knots and Related Topics, Busan, Republic of Korea, 2018 年 7 月 26 日.

[2] ２次元リボン結び目のねじれアレキサンダー多項式，研究集会「拡大 KOOK セミナー 2018」，大阪市立大学理学部，2018 年 9 月 5 日.

[3] H(2)-unknotting numbers of prime 10-crossing knots，瀬戸内結び目セミナー，大島商船高等専門学校，2018 年 9 月 15 日.

[4] 結び目の２重ケーブル絡み目のジョーンズ多項式，研究集会「トポロジーとコンピュータ 2018」，奈良女子大学，2018 年 10 月 12 日.

[5] Twisted Alexander polynomial of a ribbon 2-knot, The 14th East Asian Conference on Geometric Topology, 北京大学，2019 年 1 月 22 日.

(鎌田 聖一)

・論文・著書・編集

[1] Atsushi Ishii, Masahide Iwakiri, Seiichi Kamada, Jieon Kim, Shosaku Matsuzaki and Kanako Oshiro, A multiple conjugation biquandle and handlebody-links, Hiroshima Mathematical Journal 48 (2018), no. 1, 89-117. (arXiv:1702.01363)

[2] Seiichi Kamada, Akio Kawauchi, Jieon Kim and Sang Youl Lee, Presentation of immersed surface-links by marked graph diagrams, J. Knot Theory Ramifications 27 (2018), no. 10, 1850052 (10 pages). (arXiv:1707.04688v1)

[3] Seiichi Kamada, Akio Kawauchi, Jieon Kim and Sang Youl Lee, Biquandle cohomology and state-sum invariants of links and surface-links, J. Knot Theory Ramifications 27 (2018), no. 11, 1843016 (37 pages). (arXiv:1803:03137v1)

[4] Atsushi Ishii, Masahide Iwakiri, Seiichi Kamada, Jieon Kim, Shosaku Matsuzaki and Kanako Oshiro, Biquandle (co)homology and handlebody-links, J. Knot Theory Ramifications 27 (2018), no. 11, 1843011 (33 pages). (arXiv:1801.07602v1)

[5] Andrew Bartholomew, Roger Fenn, Naoko Kamada and Seiichi Kamada, On Gauss codes of virtual doodles, J. Knot Theory Ramifications 27 (2018), no. 11, 1843013 (26 pages). (arXiv: 1806.05885v1)

[6] Andrew Bartholomew, Roger Fenn, Naoko Kamada and Seiichi Kamada, Doodles on surfaces, J. Knot Theory Ramifications 27 (2018), no. 12, 1850071 (26 pages).

(arXiv:1612.08473)
[7] Kirandeep Kaur, Seiichi Kamada, Akio Kawauchi, Prabhakar Madeti, An unknotting index for virtual knots, Tokyo J. Math., 出版受理. (arXiv:1709.00817v1)
[8] Celeste Damiani and Seiichi Kamada, On the group of ring motions of an H-trivial link, Topology Appl., 出版受理. (arXiv:1804.02133)
[9] Andrew Bartholomew, Roger Fenn, Naoko Kamada and Seiichi Kamada, Colorings and doubled colorings of virtual doodles, Topology Appl., 出版受理. (arXiv:1804.06198v2)

・口頭発表

[1] S. Kamada, Two-dimensional braids, their graphical description and application to knot theory, 国際会議「The 2018 International Conference of the Honam-Youngnam Mathematical Societies」, Seogwipo KAL Hotel, Jeju Island, Korea, 招待講演, 2018 年 6 月 21 日-24 日（講演 6 月 23 日）.
[2] 鎌田聖一, Doodle、仮想 doodle と交換子関係式, 大岡山談話会, 東京工業大学, 2018 年 7 月 4 日.
[3] Seiichi Kamada, On virtual links which are equivalent as twisted links, The 10th KOOK-TAPU Joint Seminar on Knots and Related Topics, Pusan National University, 招待講演, 2018 年 7 月 24 日-26 日（講演 7 月 25 日）.
[4] Seiichi Kamada, On surfaces immersed in 4-space, 国際研究集会「4-Dimensional Topology」, 大阪市立大学, 招待講演, 2018 年 9 月 6 日-10 日（講演 9 月 9 日）.
[5] Seiichi Kamada, Quandle colorings of knot diagrams with cut points, 研究集会「2018 琉球結び目セミナー」, 那覇市伝統工芸館, 一般講演, 2018 年 12 月 8 日-9 日（講演 12 月 8 日）.
[6] Seiichi Kamada, Lifting of surface foldings in dimension 3 to braided surfaces, 国際会議「The 14th East Asian Conference on Geometric Topology」, Peking University, 北京,中国, 招待講演, 2019 年 1 月 21 日-24 日（講演 1 月 22 日）.
[7] Seiichi Kamada, Graphic descriptions of surface foldings and braided surfaces, ″2019 KMJ Conference for Accreditation Strategies″ and the ″2019 Winter TAPU Workshop on Knot Theory and Related Topics″ , Kyungpook National University, テグ,韓国, 招待講演, 2019 年 2 月 14 日-15 日 （講演 2 月 15 日）.
[8] Youngju Bae, Naoko Kamada, Seiichi Kamada (発表者), Byeorhi Kim, Quandle colorings of knots with cut points, AMS Sectional Meeting Program: Spring Central and Western Joint Sectional Meeting, Special Session on Algebraic and Combinatorial Structures in Knot Theory, University of Hawaii at Manoa, Honolulu, 米国, 2019 年 3 月 22 日-24 日（講演 3 月 24 日）.

(河村建吾)

・雑誌・論文発表--名前、タイトル、雑誌名、等

[1] K. Kawamura, No immersed 2-knot with at most one self-intersection point has triple point number two or three, Topology and its Applications, to appear.
[2] K. Kawamura, Ribbon-clasp T^2-knots and semi-welded knots, Journal of

Knot Theory and Its Ramifications 27(14) 1850079, 23pp, 2018 年 10 月.

・セミナー等での口頭発表--タイトル、場所、セミナー(等)名、日程、等

[1] Shortcut to unknot a knot diagram by region crossing changes, The 14th East Asian Conference on Geometric Topology, Peking University, Beijing China, 2019 年 1 月 24 日.

[2] 曲面結び目とその図式について, 大阪市立大学数学研究所談話会, 大阪市立大学, 大阪府大阪市, 2018 年 11 月 28 日.

[3] Quandle (co)homology groups and embedded/immersed surface-knots, 研究集会「カンドルと対称空間」, 大阪市立大学, 2018 年 11 月 16 日.

[4] 拡大アレクサンダー行列と曲面結び目について, 研究会「ハンドル体結び目とその周辺 11」, 早稲田大学, 2018 年 10 月 20 日.

[5] A generating set of oriented Roseman moves, Four Dimensional Topology 2018, Osaka City University, 2018 年 9 月 9 日.

[6] Alternative proof for that a region crossing change on a diagram of a proper link is an unknotting operation, 拡大 KOOK セミナー2018, 大阪市立大学, 2018 年 9 月 3 日.

[7] On generating sets of oriented Roseman moves, The 10th KOOK-TAPU Joint Seminar on Knots and Related Topics, Dongnae-gu, Busan, Korea, 2018 年 7 月 24 日.

[8]はめ込み球面結び目の 3 重点数について, N-KOOK セミナー, 大阪市立大学文化交流センター, 2018 年 4 月 21 日.

(小池 貴之)

・論文

[1] T. Koike, Higher codimensional Ueda theory for a compact submanifold with unitary flat normal bundle, to appear in Nagoya Math. J.

・口頭発表

[1] On a neighborhood of a rational curve with a node with Diophantine normal line bundle, 複素解析セミナー, 大阪市立大学, 大阪府大阪市, 2018 年 4 月.

[2] Arnol'd's type theorems on a neighborhood of a curve and gluing construction of K3 surfaces, 幾何セミナー, 東北大学, 宮城県仙台市, 2018 年 4 月.

[3] Gluing construction of K3 surfaces and Arnolds type theorems on a neighborhood of a curve, 代数幾何セミナー, 京都大学, 京都府京都市, 2018 年 5 月.

[4] Arnol'd's type theorems on a neighborhood of a curve and gluing construction of K3 surfaces, Complex geometry and complex dynamics in higher dimension, 大阪市立大学, 大阪府大阪市, 2018 年 6 月.

[5] Gluing construction of non-projective K3 surfaces and holomorphic tubular neighborhoods of elliptic curves, Seminaire (algebre et geometries), Universite Grenoble Alpes, グルノーブル, フランス, 2018 年 9 月.

[6] Gluing construction of non-projective K3 surfaces and holomorphic tubular neighborhoods of elliptic curves, complex analysis special seminar, Chalmers University of Technology and University of Gothenburg, ヨーテボリ, スウェーデン,

2018 年 11 月.
[7] On a higher codimensional analogue of Ueda theory and its applications,
東工大幾何セミナー, 東京工業大学, 東京都目黒区, 2018 年 11 月.
[8] On the neighborhood of a torus leaf and dynamics of holomorphic foliations,
複素力学系研究とその発展, 京都大学, 京都府京都市, 2018 年 12 月.
[9] Arnol'd's type theorem on a neighborhood of a cycle of rational curves,
葉層構造の幾何学とその応用, 京都教育大学, 京都府京都市, 2018 年 12 月.
[10] Gluing construction of non-projective K3 surfaces and holomorphic tubular neighborhoods of elliptic curves, 多変数関数論冬セミナー,
大阪市立大学, 大阪府大阪市, 2018 年 12 月.
[11] Complex analysis on a neighborhood of a complex submanifold and its applications, 淡路島幾何学研究集会 2019,
南あわじ市阿那賀地区公民館, 兵庫県南あわじ市, 2019 年 1 月.
[12] Minimal singular metrics on effective nef line bundles and neighborhoods of the stable base loci, Singular Metrics in Complex Kahler Geometry, CIRM - Luminy,
マルセイユ, フランス, 2019 年 2 月.
[13] Complex analysis on a neighborhood of a complex submanifold and its applications, Sinica-NCTS Geometry Seminar, 中央研究院, 台北, 台湾, 2019 年 2 月.
[14] Complex analysis on a neighborhood of a complex submanifold and its applications, Some topics in several complex variables, Academy of Mathematics and Systems Science, 北京, 中国, 2019 年 3 月
.

(佐野 昂迪)

・論文

[1] D. Burns, M. Kurihara, T. Sano, On Stark elements of arbitrary weight and their p-adic families, submitted.
[2] D. Burns, T. Sano, On the theory of higher rank Euler, Kolyvagin and Stark systems, to appear in Int. Math. Res. Not.
[3] D. Burns, T. Sano, On non-abelian zeta elements for G_m, preprint.
[4] D. Burns, R. Sakamoto, T. Sano, On the theory of higher rank Euler, Kolyvagin and Stark systems, II, submitted, arXiv:1805.08448.
[5] D. Burns, T. Sano, K.-W. Tsoi, On higher special elements of p-adic representations, submitted, arXiv:1809.03830.
[6] D. Burns, R. Sakamoto, T. Sano, On the theory of higher rank Euler, Kolyvagin and Stark systems, III, preprint, arXiv:1902.07002.
[7] D. Burns, R. Sakamoto, T. Sano, On the theory of higher rank Euler, Kolyvagin and Stark systems, IV, preprint, arXiv:1903.09509.
[8] D. Burns, A. Daoud, T. Sano, S. Seo, On Euler systems for the multiplicative group over general number fields, preprint.

(高橋 太)

・論文

[1] On a weighted Trudinger-Moser type inequality on the whole space and related maximizing problem,
(with Van Hoang Nguyen)
Differential Integral Equations, 31, no.11-12, (2018), 785--806.

[2] Finsler Hardy-Kato's inequality,
(with A. Alvino, A. Ferone, A. Mercaldo, R. Volpicelli)
J. Math. Anal. Appl., 470, no.1, (2019), 360--374.

・セミナー・学会発表

[1] AMS Sectional Meeting Special Session (Vanderbilt University, Nashville)
〝Partial Differential Equations and New Perspective of Variational Methods〞 講演
「Hardy's inequality in a limiting case on general bounded domains」
（2018 年 4 月 14 日）

[2] UK-Japan Workshop on ``Analysis of Nonlinear Partial Differential Equations〞
(Swansea University, Wales, UK) 講演
「Hardy's inequality in a limiting case on general bounded domains」
（2018 年 5 月 17 日）

[3] The 12th AIMS Conference on Dynamical Systems,
Differential Equations and Applications〞（於国立台湾大学、2018 年 7 月 5 日～9 日）
SS60 講演「Critical and subcritical fractional Trudinger-Moser type inequalities on $¥mathbb{R}$」
（2018 年 7 月 6 日）
SS93 講演「Hardy's inequality in a limiting case on general bounded domains」
（2018 年 7 月 7 日）

[4] ``PDEs and Mathematical Hydrodynamics: A conference in Honor of Vsevolod Alekseevich Solonnikov's 85'th Birthday〞
(Euler International Mathematical Institute in St. Petersburg) 講演
「Sharp Hardy-Leray and Rellich-Leray inequalities for curl-free vector fields」（2018 年 7 月 29 日）

[5] 第 9 回北海道 - 東北コンソーシアムセミナー（於グランドサンピア八戸）講演
「ベクトル場に対する Hardy-Leray 不等式」
（2018 年 9 月 1 日）

[6] 慶熙大学セミナー（Jongmin Han 教授主催）講演
「Hardy's inequality in a limiting case on general bounded domains」
（2018 年 10 月 16 日）

[7] 第 12 回「実解析と函数解析による微分方程式セミナー」（於鳴子ホテル）講演
「monomial weight の付いた対数型 Sobolev 不等式について」
（2018 年 12 月 26 日）

[8] 愛媛大学解析セミナー講演
「monomial weight を持つ対数型 Sobolev 不等式について」
（2019 年 1 月 12 日）

[9] 第 10 回北海道 - 東北コンソーシアムセミナー（於新潟大学）講演
「monomial weight の付いた Shannon 不等式」
（2019 年 1 月 26 日）
[10] AMS Spring Central and Western Joint Sectional Meeting (University of Hawaii at Manoa), SS 44A``New Trends on Variational Calculus and Non-Linear Partial Differential Equations´´ 講演
「Sharp Hardy-Leray inequalities for curl-free vector fields」
（2019 年 3 月 22 日）

(竹内 敦司)

・雑誌・論文発表

[1] A. Kohatsu-Higa and A. Takeuchi: Jump SDE’s and the study of their densities - A self study book -, accepted by Springer.
[2] A. Takeuchi and H. Tsukada: Remark on pathwise uniqueness of stochastic differential equations driven by L¥’evy processes, to appear in Stochastic Analysis and Applications (2019).
[3] A. Takeuchi: Integration by parts formulas for marked Hawkes processes, Statistics and Probability Letters, 145, 229 - 237, (2019).
[4] A. Takeuchi: Remark on convergence rate of generalized extreme value distributions via integration by parts formulas, The Institute of Statistical Mathematics Cooperative Research Report, 402, 112 - 119 (2018).

・セミナー等での口頭発表

[1] Remark on pathwise uniqueness of solutions to stochastic differential equations driven by L¥’evy processes, University of Lille (France), Probability¥’es et Statistique, 2018 年 4 月 18 日.
[2] Sensitivity analysis for jump processes, Universit¥”ate Hamburg (Germany), Kolloquium ¥”über Mathematische Statistik und Stochastische Prozesse, 2018 年 4 月 24 日.
[3] 確率過程の特性関数に関する一つの考察, 大阪市立大学, OCU Monday Seminar on Probability and Statistics, 2018 年 5 月 14 日.
[4] Stein 方程式を経由した極値分布への収束について, 大阪市立大学, OCU Monday Seminar on Probability and Statistics, 2018 年 7 月 9 日.
[5] Remark on pathwise uniqueness of solutions to SDEs driven by L¥’eve processes, 津田塾大学, The tenth meeting on Probability and PDE, 2018 年 7 月 19 日.
[6] Density for the solution to stochastic functional differential equations, 大阪大学, Second Interdisciplinary and Research Alumni Symposium iJaDe2018, 2018 年 9 月 6 日.
[7] Convergence rates of extreme value distributions via the Stein equation, 岡山大学, 日本数学会 2018 年度秋季総合分科会, 2018 年 9 月 24 日.
[8] 身近にある確率モデル ～ランダム現象の考察～, 東京女子大学,

東京女子大学学会主催 数学部会 公開講演会, 2018 年 11 月 1 日.
[9] Rates of convergence of extreme value distributions via the IBP formulas,
岡山大学, Okayama Workshop on Stochastic Analysis 2019, 2019 年 2 月 5 日.
[10] ホークス過程に対する確率解析, 大阪市立大学, 大阪市立大学談話会,
2019 年 2 月 20 日.

(田丸 博士)

・雑誌・論文発表--名前、タイトル、雑誌名、等

[1]Hiroshi Tamaru,
対称空間論の離散化とカンドル代数, Part III.
In: 第 35 回代数的組合せ論シンポジウム記録 (2018), 67--73.
[2]Sadahiro Maeda, Hiroshi Tamaru, Hiromasa Tanabe,
Curvature properties of homogeneous real hypersurfaces in nonflat complex space forms.
Kodai Math. J. 41 (2018), 315--331.
[3]Yuichiro Taketomi, Hiroshi Tamaru,
On the nonexistence of left-invariant Ricci solitons --- a conjecture and examples.
Transf. Groups 23 (2018), 257--270.
[4]Jong Taek Cho, Takahiro Hashinaga, Akira Kubo, Yuichiro Taketomi, Hiroshi Tamaru,
Realizations of some contact metric manifolds as Ricci soliton real hypersurfaces.
J. Geom. Phys. 123 (2018), 221--234.

・セミナー等での口頭発表--タイトル、場所、セミナー(等)名、日程、等

[1]サッカーの幾何学：変分法に基づくゴールキーパーの最適位置,
淡路島幾何学研究集会 2019 (阿那賀地区公民館), 2019/01/25.
[2]カンドルおよび対称空間内のある種の部分集合,
部分多様体論・湯沢 2018 (湯沢グランドホテル), 2018/11/30.
[3]Symmetric spaces, submanifold geometry, and left-invariant metrics
談話会 (大阪市立大学), 2018/10/17.
[4]Discrete symmetric spaces, quandles, and their subsets,
広島大学数学教室談話会 (広島大学), 2018/07/24.
[5]Flat quandles, graphs, and subsets in symmetric spaces,
第 35 回代数的組合せ論シンポジウム (広島工業大学), 2018/06/19.
[6]Examples of weakly reflective submanifolds in noncompact symmetric spaces,
Hiroshima Differential Geometry Day 2018 (Hiroshima University), 2018/04/21.

(西尾 昌治)

・論文

[1] Y. Hishikawa, M. Nishio, M. Yamada,
A system of conjugate functions on parabolic Bloch spaces
JOURNAL OF THE MATHEMATICAL SOCIETY OF JAPAN,

70(2018), 1085--1102. ［査読有り］

・口頭発表

[1] Masaharu Nishio,
Reproducing kernels with respect to function spaces
of polyharmonic and polyparabolic functions,
Analysis and Dynamics on Boundaries of Manifolds and Related Topics,
AIMS 2018, July 5 -- 9, 2018,
National Taiwan University, Taipei, Taiwan.
[2] Masaharu Nishio,
Hilbert spaces and reproducing kernels for parabolic operators of fractional order,
Second Interdisciplinary and Research Alumni Symposium iJaDe2018,
Wednesday 5th and Thursday 6th of September 2018,
Building B, Room B308, Osaka University, Graduate School of Science, Osaka, Japan.
[3] Masaharu Nishio,
Bergman type spaces for iterated parabolic operators of fractional order,
Potential Analysis and its Related Fields 2019 (PARF2019),
Math Building Hokkaido University 4-501, Sapporo, Japan,
February 11--13, 2019.
[4] Masaharu Nishio,
Reproducing property with respect to iterated parabolic operators
of fractional order, Potential Theory Seminar at Meijo University,
Room 11-5-5-3-1, Meijo University, Nagoya, Japan, 7-- 8 December, 2018.
[5] 西尾昌治,
Reproducing property for iterated parabolic operator on the upper half space,
ポテンシャル論研究集会, 2018 年 8 月 31 日(金)~ 9 月 2 日(日),
宮崎大学工学部 B 棟 2 階 B202 教室.

(濱野 佐知子)

・論文

[1] Sachiko Hamano,
Variational formulas for principal functions and applications,
Proc. of Conference on Teichmüller and Grothendieck-Teichmüller theories,
Chern Institute, Nankai, July 24-30, 2016 (ed. L.Ji, A.Papadopoulos and W.Su),
Nankai Series in Pure, Applied Mathematics and Theoretical Physics, World Scientific
(to appear in 2019).
[2] Sachiko Hamano,
Variation of Schiffer and hyperbolic spans under pseudoconvexity,
Springer Nature Singapore Pte Ltd. J. Byun et al. (eds.),
Geometric Complex Analysis, Springer Proceedings in Mathematics & Statistics 246,
171 - 178 (2018).

・口頭発表

[1] Sachiko Hamano,
Variation of the a-span of an open Riemann surface and pseudoconvexity,
Hong Kong Geometry Colloquium (The University of Hong Kong, 香港)
2018 年 5 月 5 日.
[2] 濱野佐知子, 有限種数開リーマン面の a-スパンと擬凸領域,
名城大学・ポテンシャル論セミナー（名城大学）2018 年 6 月 1 日.
[3] Sachiko Hamano,
Variational formulas for hydrodynamic differentials and its application,
The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Special Session 97:Analysis and Dynamics on Boundaries of Manifolds and Related Topics (National Taiwan University, 台湾) 2018 年 7 月 8 日.
[4] 濱野佐知子,
Pseudoconvex domains fibered by open Riemann surfaces of the same topological type, 研究集会「リーマン面に関連する位相幾何学」（東京大学大学院数理科学研究科）
2018 年 8 月 10 日.
[5] Sachiko Hamano,
Pseudoconvex domains fibered by open Riemann surfaces of the same topological type,
New Trends in Teichmüller Theory and Mapping Class Groups, Meetings at Oberwolfach in 2018; Workshop ID: 1836 (Mathematisches Forschungsinstitut Oberwolfach, ドイツ) 2018 年 9 月 3 日.
[6] Sachiko Hamano,
Variational formulas for hydrodynamic differentials and its application,
102e rencontre entre mathématiciens et physiciens théoriciens (Institut de Recherche Mathématique Avancée (University of Strasbourg and CNRS), フランス)
2018 年 9 月 14 日.
[7] 濱野佐知子,
流体力学的微分の変分公式とその応用について,
研究集会「Geometry of Riemann surfaces and related topics」
(金沢大学サテライト・プラザ) 2018 年 10 月 20 日.
[8] 濱野佐知子,
流体力学的微分の変分公式とその応用について,
平成 30 年度 等角写像論・値分布論研究集会（大阪府立大学）2018 年 12 月 9 日.
[9] 濱野佐知子,
種数 1 のある開リーマン面の擬凸変動に対する同時一意化について,
東北複素解析セミナー（東北大学情報科学研究科）2019 年 2 月 20 日.
[10] Sachiko Hamano,
Variation of the a-span of an open Riemann surface and pseudoconvexity,
Complex Analytic Geometry Seminar (Pohang University of Science and Technology, 韓国), 2019 年 3 月 14 日.
.

(古澤 昌秋)

・論文・著書

[1] Masaaki Furusawa and Kazuki Morimoto,
Refined global Gross-Prasad conjecture on special Bessel periods and Boecherer’ s conjecture.
J. Eur. Math. Soc. (JEMS), to appear.

・口頭発表

[1] Refined global Gross-Prasad conjecture on special Bessel periods and Boecherer’ s conjecture,
``Special Values of Automorphic L-functions and Associated p-adic L-Functions” workshop,
Casa Matematica Oaxaca (CMO), Mexico, October 1, 2018.

(枡田 幹也)

・論文 出版

[1] (with H. Abe, M. Harada, and T. Horiguchi) The cohomology rings of regular nilpotent Hessenberg varieties in Lie type A, published online in IMRN.
[2] (with T. Abe, T. Horiguchi, S. Murai, and T. Sato) Hessenberg varieties and hyperplane arrangements, published online in Journal für die reine und angewandte Mathematik.
[3] (with S. Hasui, H. Kuwata, and S. Park) Classification of toric manifolds over an n-cube with one vertex cut, published online in IMRN.
[4] (with H. Abe, T. Horiguchi) The cohomology rings of regular semisimple Hessenberg varieties for $h=(h(1),n,¥ldots,n)$, J. of Combinatorics, 10 (2019), 27-59.

・作成

[1] (with E. Lee) Generic torus orbit closures in Schubert varieties, arXiv:1807.02904
[2] (with M. Harada, T. Horiguchi, and S. Park) The volume polynomial of regular semisimple Hessenberg varieties and the Gelfand-Zetlin polytope, arXiv:1812.10112, to appear in Steklov Institute Math.

・口頭発表

（国外）

[1] Generic torus orbit closures in Schubert varieties, International conference ″Algebraic Topology, Combinatorics, and Mathematical Physics″ on occasion of Victor Buchstaber’s 75th birthday, Moscow, 2018 年 5 月 24 日
[2] Cohomological rigidity problems in toric topology， Glances@Manifolds III, Krakow, 2018 年 7 月 3 日
[3] The cohomology rings of regular semisimple Hessenberg varieties for $h=(h(1),n,¥ldpts,n)$, Hessenberg Varieties in Combinatorics, Geometry and Representation Theory, Banff, 2018 年 10 月 23 日

[4] Topology of Hessneberg varieties and related topics, IBS Center for Geometry and Physics, Pohang, 2019 年 3 月 6～8 日（3 talks)

（国内）

[1] Generic torus orbit closures in Schubert varieties, Hyperplane arrangement, RIMS, 2018 年 6 月 12 日

[2] Generic torus orbit closures in Schubert varieties, 日本数学会一般講演，岡山大学，2018 年 9 月 27 日

[3] Bruhat interval polytope について，大阪組合せ論セミナー，大阪駅前第２ビル，2018 年 12 月 22 日

[4] Generic torus orbit closures in Schubert varieties, 京都大学数学教室談話会，2019 年 1 月 30 日

(宮地 兵衛)

・学術論文

[1] M. Fang and H. Miyachi, Hochschild cohomology and dominant dimension Trans. Amer. Math. Soc.(Article electronically published on 2019/01/04)

[2] T. Kuwabara, H. Miyachi, and K. Wada, On the Mackey formulas for cyclotomic Hecke algebras and categories O of rational Cherednik algebras プレプリント arXiv:1801.03761　Journal 投稿済

・口頭発表

(国内)

[1]宮地 兵衛, Hochschild コホモロジーと支配的次元, RIMS 共同研究「有限群のコホモロジー論とその周辺」, 2019 年 2 月 13 日, 京都大学数理解析研究所

(森山 翔文)

・雑誌論文発表

[1] Tomohiro Furukawa, Sanefumi Moriyama, ″Jacobi-Trudi Identity in Super Chern-Simons Matrix Model″, SIGMA 14 (2018) 049, arXiv: 1711.04893 [hep-th].

[2] Naotaka Kubo, Sanefumi Moriyama, ″Two-Point Functions in ABJM Matrix Model″, JHEP 05 (2018) 181, arXiv: 1803.07161 [hep-th].

[3] Naotaka Kubo, Sanefumi Moriyama, Tomoki Nosaka, ″Symmetry Breaking in Quantum Curves and Super Chern-Simons Matrix Models″, JHEP 01 (2019) 210, arXiv: 1811.06048 [hep-th].

[4] Tomohiro Furukawa, Sanefumi Moriyama, ″ABJM Matrix Model and 2D Toda Lattice Hierarchy″, arXiv: 1901.00541 [hep-th], accepted for publication in JHEP.

[5] 森山翔文，野坂朋生，最近の研究から「M理論の地図が見えてきた」，日本物理学会誌 74 (2019) 34-39.

・口頭発表

″Symmetry Breaking in Quantum Curves & Super Chern-Simons Matrix Models″, 大阪市立大学, Nambu Symposium, 2018/12/12-2018/12/14.

(吉田 雅通)

・口頭発表

[1] タイトル「無理数回転の加算器表現」
筑波大学、数論セミナー、２０１８年７月２６日
[2]タイトル「有限 β 展開と加算器 Ⅰ」
金沢大学サテライトプラザ、数論とエルゴード理論、２０１９年２月１０日

(安本 真士)

・論文

[1] W. Rossman and M. Yasumoto, Discrete linear Weingarten surfaces and their singularities in Riemannian and Lorentzian spaceforms, Advanced Studies in Pure Mathematics, Vol. 78 (2018), 383-410 (査読有).
[2] M. Yasumoto, Weierstrass-type representations for timelike surfaces, Advanced Studies in Pure Mathematics, Vol. 78 (2018), 449-469 (査読有).
[3] W.Y. Lam and M. Yasumoto, Trivalent maximal surfaces in Minkowski space, In: M. Cañadas-Pinedo, J. Flores, F. Palomo (eds) Lorentzian Geometry and Related Topics, Springer Proceedings in Mathematics & Statistics Vol. 211, 169-184 (査読有).
[4] W. Rossman and M. Yasumoto, Semi-discrete linear Weingarten surfaces and their singularities in Riemannian and Lorentzian spaceforms, to appear in Osaka Journal of Mathematics (査読有).
[5] 安本真士, 3 次元ミンコフスキー空間内の離散空間的平均曲率一定曲面, to appear in RIMS Kokyuroku (査読無).
[6] W. Rossman, 安本真士, 4 色定理の証明 -小さな誤りから大きな問題への道-, 数学セミナー (日本評論社), 2018 年 9 月号, 43-47 (査読無).
[7] W. Rossman, 安本真士, 離散曲面の微分幾何, preprint (査読無).

・口頭発表

[1] 安本真士, 3 次元ミンコフスキー空間内の離散空間的平均曲率一定曲面, 京都大学数理解析研究所, 部分多様体の幾何学の深化と展開, 2018 年 6 月 25 日.
[2] M. Yasumoto, Discrete timelike minimal surfaces, TU Munich, 3rd m:iv workshop, 2018 年 8 月 23 日.
[3] M. Yasumoto, Discretization of linear Weingarten surfaces from a viewpoint of integrable systems (4 talks), Kyushu University, Summer School 2018 in Fukuoka ″Geometric shape generation", 2018 年 9 月 13-14 日.
[4] 安本真士, 3 次元ミンコフスキー空間内の離散空間的平均曲率一定曲面の構成法, 広島大学, 広島幾何学研究集会 2018, 2018 年 10 月 5 日.
[5] M. Yasumoto, Semi-discrete maximal surfaces revisit, Kyushu University, The 12th GEOSOCK Seminar ″Geometry of Discrete Surfaces and Applications″, 2018 年 11 月 11 日.
[6] M. Yasumoto, A geometric solution of the discrete sinh-Gordon equation and discrete spacelike constant mean curvature surfaces in Minkowski space (poster), JR Hakata City Conference Rooms, Symmetries and Integrability in Difference Equations

(SIDE 13), 2018 年 11 月 12-16 日.
[7] M. Yasumoto, An invitation to discretization of surfaces from an integrable systems viewpoint (3 talks), Korea University, Introductory workshop on discrete differential geometry, 2019 年 1 月 21 日-22 日.