Final: 2018/8/1

2018 The Mathematical Society of Japan

AUTUMN MEETING

Dates: September 24th (Mon)–27th (Thu), 2018

Venue: Tsushima Campus, Okayama University
2–1–1 Tsushima-naka, Kita-ku, Okayama-shi,
Okayama 700-8530 Japan

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	I Bldg. Gen. Edu. A21	II Bldg. Gen. Edu. A36	III Bldg. Gen. Edu. A37	IV Bldg. Gen. Edu. A41	V Bldg. Gen. Edu. B11	VI Bldg. Gen. Edu. B32	VII Bldg. Gen. Edu. B33	VIII Bldg. Gen. Edu. B41	IX Bldg. Gen. Edu. E11
24th (Mon)	Functional Equations 9:15–12:00 14:15–16:15	Complex Analysis 9:00–11:50 15:30–16:20	Functional Analysis 10:30–12:00 14:15–16:15	Applied Mathematics 9:00–12:00 14:20–16:30	Infinite Analysis 9:15–10:50 14:15–16:25	Topology 9:20–12:00 14:15–14:55	Geometry 9:40–11:40 14:15–16:15	Algebra 9:15–11:45 15:30–17:10	Statistics and Probability 9:30–12:00 14:15–15:00
	Featured Invited Talks 13:00–14:00								
	Invited Talk 16:30–17:30	Invited Talks 14:15–15:15 16:35–17:35	Invited Talk 16:30–17:30	Invited Talk 16:40–17:40	Invited Talks 11:00–12:00 16:40–17:40	Invited Talk 15:10–16:10	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15	Invited Talks 15:15–16:15 16:30–17:30
25th (Tue)	Functional Equations 9:15–12:00 Invited Talk 13:15–14:15	Complex Analysis 9:00–11:45 13:15–14:20	Functional Analysis 9:15–12:00 Invited Talk 13:15–14:15	Applied Mathematics 9:00–12:00		Topology 13:15–14:15	Geometry &Topology Invited Talks 10:30–11:30 Geometry Invited Talks 13:15–14:15	Algebra 9:30–12:00 Invited Talk 13:00–14:00	Statistics and Probability 9:30–11:30
	MSJ Prizes Presentation (50th Anniv. Hall) ····· (14:50–15:20) Plenary Talks (50th Anniv. Hall) Autumn Prize Winner ····· (15:30–16:30) Yuji Tachikawa (Univ. of Tokyo) ····· (16:45–17:45) Official Party (South Facility "Peach Union") ····· (18:00–20:00)								
26th (Wed)	Functional Equations 9:15–12:00 14:15–16:15	Real Analysis 9:00–12:00 14:15–16:30	Functional Analysis 9:30–12:00 14:15–15:00	Applied Mathematics 14:15–16:20	Found. of Math. and History of Math. 9:30–11:25 14:15–16:15	Topology 10:20–12:00 14:15–14:50	Geometry 10:00–11:40 14:15–16:15	Algebra 9:15–11:25 15:30–17:40	Statistics and Probability 9:40–12:00 14:15–15:05
	Featured Invited Talks 13:00–14:00								
	Invited Talk 16:30–17:30	Invited Talk 16:45–17:45	Invited Talk 15:15–16:15	Invited Talk 16:40–17:40	Invited Talk 16:30–17:30	Invited Talk 15:10–16:10	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15	Invited Talks 15:20–16:20 16:40–17:40
27th (Thu)	Functional Equations 9:15–12:00 14:15–16:15	Real Analysis 9:15–12:00 14:15–16:00		Applied Mathematics 10:00–11:40 14:15–15:50	Found. of Math. and History of Math. 9:00–10:50			Algebra 9:15–12:00 15:30–16:40	Statistics and Probability 9:40–11:30 14:15–15:05
	Featured Invited Talks 13:00–14:00								
	Invited Talk 16:30–17:30	Invited Talk 16:15–17:15		Invited Talk 16:10–17:10	Invited Talk 11:00–12:00			Invited Talk 14:15–15:15	

Plenary Talks

September 25th (Tue) Kanemitsu Hall, 50th Anniversary Hall

Autumn Prize Winner ..... (15:30–16:30)

Yuji Tachikawa (Univ. of Tokyo) Mathematics of the QFT, by the QFT, for the QFT ..... (16:45–17:45)

Featured Invited Talks

September 24th (Mon)

Conference Room I

Hiroshige Shiga (Tokyo Tech) Complex analysis on Kleinian groups ..... (13:00–14:00)

Conference Room VIII

Guest Talk from Taiwan Mathematical Society

Shun-Jen Cheng (Academia Sinica) Representation theory of Lie superalgebras in the BGG category ..... (13:00–14:00)

September 26th (Wed)

Conference Room I

Tatsuo Suwa (Hokkaido Univ.*)♭ Relative Dolbeault cohomology and its application to the Sato hyperfunction theory ..... (13:00–14:00)

Conference Room IV

Shin Nayatani (Nagoya Univ.)♭ Maximization of the first eigenvalue of Laplacian and minimal surface ..... (13:00–14:00)

Conference Room VIII

Yu Yasufuku (Nihon Univ.) Abelian varieties and arithmetic dynamics —Similarities and differences ..... (13:00–14:00)

September 27th (Thu)

Conference Room I

Nakao Hayashi (Osaka Univ.) Inhomogeneous Dirichlet-boundary value problem for one dimensional nonlinear Schrödinger equations ..... (13:00–14:00)

Conference Room IX

Masanobu Taniguchi (Waseda Univ.) Introduction to time series analysis ..... (13:00–14:00)

Talks Invited by Research Sections and Special Session

September 24th (Mon)

Algebra (Conference Room VIII)

Hideto Asashiba (Shizuoka Univ.) 2-categorical covering theory and derived equivalences ···· (14:15–15:15)

Geometry (Conference Room VII)

Yosuke Morita (Kyoto Univ.) On the cohomology of compact quotients of non-Riemannian homogeneous spaces ····· (16:30–17:30)

Complex Analysis (Conference Room II)

Gou Nakamura (Aichi Inst. of Tech.) Closed Riemann surfaces admitting extremal disks ····· (14:15–15:15)

Masataka Tomari (Nihon Univ.)* On recent studies on normal two-dimensional complex singularities via resolution process ····· (16:35–17:35)

Functional Equations (Conference Room I)

Katsuhisa Mimachi (Osaka Univ.) Classical hypergeometric functions and related topics ····· (16:30–17:30)

Functional Analysis (Conference Room III)

Tadahiro Miyao (Hokkaido Univ.) Magnetism and operator inequalities ····· (16:30–17:30)

Statistics and Probability (Conference Room IX)

Kaneharu Tsuchida (Nat. Defense Acad. of Japan) Large deviation principles of additive functionals for symmetric Markov processes ····· (15:15–16:15)

Masato Hoshino (Kyushu Univ.) A relation between regularity structures and paracontrolled calculus ····· (16:30–17:30)

Applied Mathematics (Conference Room IV)

Norio Konno (Yokohama Nat. Univ.) Quantum walk 2.0 ····· (16:40–17:40)

Topology (Conference Room VI)

Tadayuki Watanabe (Shimane Univ.) Characteristic classes for Diff(S^4) and clasper surgery for families ····· (15:10–16:10)

Infinite Analysis (Conference Room V)

Kohei Iwaki (Nagoya Univ.) Exact WKB analysis and topological recursion ····· (11:00–12:00)

Takeshi Ikeda (Okayama Univ. of Sci.) K-theoretic Paterson isomorphism ····· (16:40–17:40)

September 25th (Tue)

Algebra (Conference Room VIII)

Yoshinori Yamasaki (Ehime Univ.) On Schur multiple zeta functions ····· (13:00–14:00)

Geometry and Topology (Conference Room VII)

Award Lecture for the 2018 MSJ Geometry Prize

Shouhei Honda (Tohoku Univ.) Geometric analysis on metric measure spaces with Ricci bounds from below ····· (10:30–11:30)

Geometry (Conference Room VII)

Tomoyuki Hisamoto (Nagoya Univ.) A variational aspect of the Kähler–Einstein problem ····· (13:15–14:15)

Functional Equations (Conference Room I)

Tatsuki Kawakami (Ryukoku Univ.) A semilinear elliptic equation with a dynamical boundary condition ····· (13:15–14:15)

Functional Analysis (Conference Room III)

Akihito Wachi (Hokkaido Univ. of Edu.) Capelli identities and b-functions of prehomogeneous vector spaces ····· (13:15–14:15)

September 26th (Wed)

Foundation of Mathematics and History of Mathematics (Conference Room V)

Kojiro Higuchi (Nihon Univ.) Computable prestructures ····· (16:30–17:30)

Algebra (Conference Room VIII)

Takao Yamazaki (Tohoku Univ.) Motives and mixed Hodge structures with modulus ····· (14:15–15:15)

Geometry (Conference Room VII)

Hajime Fujita (Japan Women's Univ.) Index of Dirac-type operator on symplectic manifolds and its localization ····· (16:30–17:30)

Functional Equations (Conference Room I)

Neal Bez (Saitama Univ.)[♭] Geometric estimates arising in the analysis of Zakharov systems ····· (16:30–17:30)

Real Analysis (Conference Room II)

Jun Kawabe (Shinshu Univ.) A unified approach to convergence theorems of distribution-based nonlinear integrals ····· (16:45–17:45)

Functional Analysis (Conference Room III)

Takeshi Miura (Niigata Univ.) Surjective isometries on function spaces ····· (15:15–16:15)

Statistics and Probability (Conference Room IX)

Shuhei Mano (Inst. of Stat. Math.) Partitions, hypergeometric systems, Dirichlet processes, and their statistical inferences ····· (15:20–16:20)

Yan Liu (Kyoto Univ.) From prediction and interpolation problem to parameter estimation problem of time series ····· (16:40–17:40)

Applied Mathematics (Conference Room IV)

Takeshi Fukao (Kyoto Univ. of Edu.) Abstract approach of evolution equation to partial differential equations with total mass conservation ····· (16:40–17:40)

Topology (Conference Room VI)

Shizuo Kaji (Kyushu Univ.) On equivariant loop product ····· (15:10–16:10)

September 27th (Thu)

Foundation of Mathematics and History of Mathematics (Conference Room V)

Kenichi Sato (Univ. of Electro-Comm.) SEKI Takakazu and his contemporary mathematicians ···· (11:00–12:00)

Algebra (Conference Room VIII)

Takuro Abe (Kyushu Univ.) Logarithmic vector fields and freeness of hyperplane arrangements ····· (14:15–15:15)

Functional Equations (Conference Room I)

Reika Fukuizumi (Tohoku Univ.) Temperature effects in Bose–Einstein condensation ····· (16:30–17:30)

Real Analysis (Conference Room II)

Toshiyuki Suzuki (Kanagawa Univ.) Semilinear Schrödinger evolution equations with inverse-square potentials ····· (16:15–17:15)

Applied Mathematics (Conference Room IV)

Ippei Obayashi (RIKEN / Tohoku Univ.) Persistent homology —Analysis of the shape of data by the combination of mathematics and computer science ····· (16:10–17:10)

Open Lectures for Citizens

Date: September 23rd (Sun) 14:00–16:30

Venue: Large Lecture and Large Conference Room, 2F, Graduate School of Natural Science and Technology, Building No.1

Sponsored by: Mathematical Society of Japan

Program: Opening Speech ..... (14:00–14:10)
Hideo Kozono (President of MSJ / Waseda Univ.)

Lecture 1: "Mathematical modeling of nonlinear phenomena" ..... (14:10–15:10)
Masaharu Nagayama (Hokkaido Univ.)

Lecture 2: "Math for CG" ..... (15:30–16:30)
Hiroyuki Ochiai (Kyushu Univ.)

Web Page: `http://mathsoc.jp/en/meeting/okayama18sept/`

Foundation of Mathematics and History of Mathematics

September 26th (Wed) Conference Room V

9:30–11:25

1 Takashi Oyabu ♭ Continuum hypothesis and constructible set, and other 5 talks ····· 5

2 Teruyuki Yorioka (Shizuoka Univ.) Fragments of Martin's Axiom in the extension with random forcing ····· 15

3 Yukinobu Yajima (Kanagawa Univ.), Yasushi Hirata (Kanagawa Univ.) Undecidability of the cardinality of C^*-embedded discrete subsets in products of natural numbers ····· 15

4 Toshimichi Usuba (Waseda Univ.) Extendible cardinals and the mantle ····· 15

5 Shunsuke Okabe (Kobe Univ.) On width of automorphism groups of countable structures with stationary independence relations ····· 15

6 Masanori Itai (Tokai Univ.) A remark on geometric isomorphism and Morita equivalence ····· 15

7 Hirotaka Kikyo (Kobe Univ.) On Hrushovski's "pseudoplanes" ····· 15

8 Koichiro Ikeda (Hosei Univ.) On strictly stable generic structures ····· 15

14:15–16:15

9 Masaaki Kumazawa (Mino-Jiyu Gakuen High School) On the relationship between the existence of commutative elements and the existence of infimums in BCK-algebras ····· 10

10 Nobu-Yuki Suzuki (Shizuoka Univ.) Remarks on disjunction property and its weak variants in intermediate predicate logics ····· 15

11 Taishi Kurahashi (Nat. Inst. of Tech., Kisarazu Coll.) Arithmetical completeness of the modal logic **KD** ····· 15

12 Makoto Kikuchi (Kobe Univ.) On the Frege–Hilbert controversy over the foundations of geometry ··· 15

13 Kohtaro Tadaki (Chubu Univ.) A refinement of quantum mechanics by algorithmic randomness III: Its consequences ····· 15

14 Kazuyuki Tanaka (Tohoku Univ.), Li Wenjuan (Nanyang Tech. Univ.) Modal μ-calculus and its one-variable hierarchy ····· 15

15 Satoru Kuroda (Gunma Pref. Women's Univ.) Forcing in bounded arithmetic for small complexity classes ····· 15

16 Mika Shigemizu (Tokyo Metro. Univ.), Toshio Suzuki (Tokyo Metro. Univ.), Koki Usami (Tokyo Metro. Univ.) Independent distributions on a multi-branching AND-OR tree of height 2 ····· 15

16:30–17:30 Talk Invited by Section on Foundation and History of Mathematics

Kojiro Higuchi (Nihon Univ.) Computable prestructures

September 27th (Thu) Conference Room V

9:00–10:50

17 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) — Poisson' "sloughs" in his final works in life, "A Study of Mathematical Physics" ····· 15

18 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) — The celestial mechanics in conformity to the mathematical physics by Poisson ····· 15

19 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) — The Poisson's integral owing to Legendre's formulae and his own ····· 15

20 Shotaro Tanaka * — To express fractions into power series by Suida expansion ····· 15

21 Ken Saito (Yokkaichi Univ.) — Syntactic analysis of the whole text of Euclid's Elements (progress report) ····· 15

22 Mitsuo Morimoto ♭ (Yokkaichi Univ. / Sophia Univ.⋆) — Preliminary Volume, and Volumes 1, 2 and 3 of the Taisei Sankei ···· 15

23 Toshio Harikae (Osaka Sangyo Univ.) — On proportionality in "The Sea Island Mathematical Manual" ····· 15

11:00–12:00 Talk Invited by Section on Foundation and History of Mathematics

Kenichi Sato (Univ. of Electro-Comm.) — SEKI Takakazu and his contemporary mathematicians

12:00–12:30 Research Section Assembly

12:30–13:00 Mathematics History Team Meeting

Algebra

September 24th (Mon) Conference Room VIII

9:15–11:45

1 Shinya Kumashiro (Chiba Univ.), Shiro Goto (Meiji Univ.⋆), Ryotaro Isobe (Chiba Univ.) — The Gorenstein property and correspondences between trace ideals and birational finite extensions ····· 10

2 Ryotaro Isobe (Chiba Univ.), Shiro Goto (Meiji Univ.⋆), Shinya Kumashiro (Chiba Univ.) — The structure of chains of Ulrich ideals in Cohen–Macaulay local rings of dimension one ····· 10

3 Hiroki Matsui (Nagoya Univ.) — Remarks on a conjecture of Huneke and Wiegand ····· 10

4 Akiyoshi Tsuchiya (Osaka Univ.), Takayuki Hibi (Osaka Univ.), Kazunori Matsuda (Kitami Inst. of Tech.) — Edge rings with 3-linear resolutions ····· 10

5 Akiyoshi Tsuchiya (Osaka Univ.), Takahiro Nagaoka (Kyoto Univ.) — Reflexive polytopes arising from edge polytopes ····· 10

14:15–15:15 Talk Invited by Algebra Section

15:30–17:10

September 25th (Tue) Conference Room VIII

9:30–12:00

24 Tomoo Matsumura (Okayama Univ. of Sci.) — A tableau formula of the double Grothendieck polynomials associated to 321 avoiding permutations · · · 10

25 Tatsuya Horiguchi (Osaka Univ.) — The cohomology rings of regular nilpotent Hessenberg varieties and Schubert polynomials · · · 10

26 Yoshiteru Kurosawa (Numazu Nat. Coll. of Tech.) — Construction of relative invariants of prehomogeneous vector spaces associated with valued quivers of type $\mathbb{B}$ · · · 10

27 Genki Shibukawa (Kobe Univ.) — The Fibonacci numbers and Kostka numbers · · · 10

28 Taiki Shibata (Okayama Univ. of Sci.) — On centers of Chevalley supergroups · · · 10

29 Yasuyoshi Yonezawa (Nagoya Univ.) — Categorification of Howe representations of $U_q(\mathfrak{gl}_m)$ and the quiver Hecke algebra · · · 10

30 Hiroyuki Nakaoka (Kagoshima Univ.) — On a unification of exact categories and triangulated categories · · · 10

31 Takao Hayami (Hokkai-Gakuen Univ.) — On Hochschild cohomology ring and integral cohomology ring for the semidihedral group · · · 10

32 Masahiro Wakatake (Kindai Univ.) — The unit group of a partial Burnside ring of a reducible Coxeter group of type A · · · 10

33 Hiroki Sasaki (Shinshu Univ.) * — On module structures of source algebras of block ideals · · · 10

34 Masanori Sawa (Kobe Univ.), Yukihiro Uchida (Tokyo Metro. Univ.) — Compact formulas for discriminants of classical quasi-orthogonal polynomials, with their applictaions · · · 10

13:00–14:00 Talk Invited by Algebra Section

Yoshinori Yamasaki (Ehime Univ.) — On Schur multiple zeta functions

September 26th (Wed) Conference Room VIII

9:15–11:25

35 Tabane Yashiro (Tokyo Denki Univ.), Ayane Minami (Tokyo Denki Univ.) — Discrete tomography for the L-shaped window · · · 10

36 Kazuhito Kozuka * (Miyakonojo Nat. Coll. of Tech.) — Reciprocity relations for p-adic Dedekind sums related to modular matrices · · · 10

37 Debika Banerjee (IISER) *, Makoto Minamide (Yamaguchi Univ.), Yoshio Tanigawa — Mean square of the double zeta function · · · 10

38 Shota Inoue (Nagoya Univ.) — A relation between the estimate of $S(t)$ and the zero density estimate in short intervals · · · 10

39 Maki Nakasuji (Sophia Univ.), Naoki Nakamura (Sophia Univ.) — Hook Schur type poly-Bernoulli numbers · · · 10

40 Minoru Hirose (Kyushu Univ.), Hideki Murahara (Nakamura Gakuen Univ.), Shingo Saito (Kyushu Univ.) — Polynomial generalization of the regularization theorem for multiple zeta values · · · 10

41 Ryota Umezawa (Nagoya Univ.) — On multiple zeta values and log-sine integrals · · · 10

11:30–12:00 Research Section Assembly

14:15–15:15 Talk Invited by Algebra Section

Takao Yamazaki (Tohoku Univ.) Motives and mixed Hodge structures with modulus

15:30–17:40

September 27th (Thu) Conference Room VIII

9:15–12:00

57 Takeshi Torii (Okayama Univ.), Kazunori Nakamoto (Univ. of Yamanashi) — On the moduli of subalgebras of the full matrix ring of degree 3 (Part II) ····· 10

58 Takeshi Torii (Okayama Univ.), Kazunori Nakamoto (Univ. of Yamanashi) — An application of Hochschild cohomology to the moduli of subalgebras of the full matrix ring ····· 10

59 Yusuke Sato (Nagoya Univ.) — $\mathrm{Hilb}^G(\mathbb{C}^4)$ and crepant resolutions of certain abelian group in SL(4,$\mathbb{C}$) ····· 10

60 Masataka Tomari (Nihon Univ.) * — A condition for a weighted homogeneous singularity to have a reduced coordinate function ····· 10

61 Takahiro Shibata (Kyoto Univ.) * — Ample canonical heights for endomorphisms on projective varieties ····· 10

62 So Yamagata (Hokkaido Univ.) — Generalization of braid arrangement and its combinatorics ····· 10

63 Riku Kudou (Waseda Univ.) — About counterexamples for Generalized Zariski Cancellation Problem ····· 10

64 Makoto Enokizono (Osaka Univ.) — Slope equality of Eisenbud–Harris special fibrations of genus 4 ····· 10

65 Hiromichi Fujiwara (Waseda Univ.) — On indecomposable vector bundles of rank two on a wighted projective line of type $(2,2,2,2,2;\lambda_1,\lambda_2)$ ····· 10

66 Kimiko Yamada (Okayama Univ. of Sci.) — Obstructed stable sheaves on elliptic surfaces —canonical singularities— ····· 10

67 Kimiko Yamada (Okayama Univ. of Sci.) — Obstructed stable sheaves on elliptic surfaces —not determined by degree-two terms— ····· 10

68 Yusuke Suyama (Osaka Univ.) — Toric Fano varieties associated to building sets ····· 10

69 Yusuke Suyama (Osaka Univ.) — Toric Fano varieties associated to graph cubeahedra ····· 10

14:15–15:15 Talk Invited by Algebra Section

Takuro Abe (Kyushu Univ.) — Logarithmic vector fields and freeness of hyperplane arrangements

15:30–16:40

70 Eunjeong Lee (KAIST / IBS) ♭, Mikiya Masuda (Osaka City Univ.) — Generic torus orbit closures in Schubert varieties ····· 10

71 Ryo Kawaguchi (Nara Medical Univ.) — The properties of toric Castelnuovo varieties ····· 10

72 Norihiko Minami (Nagoya Inst. of Tech.) — Covering Higher Fano varieties by rational varieties ····· 10

73 Taku Suzuki (Utsunomiya Univ.) — Higher order families of lines on Fano manifolds ····· 10

74 Tomohiro Iwami (Kyushu Inst. of Tech.) * — Bogomolov–Miyaoka–Yau type inequality for a coherent system associated to certain 3-fold ····· 10

75 Yoshifumi Tsuchimoto (Kochi Univ.) — Non-commutative Kähler projective varieties ····· 10

Geometry

September 24th (Mon) Conference Room VII

9:40–11:40

1 Saburou Saitoh * (Gunma Univ.*/Inst. of Reproducing Kernels)
Hiroshi Okumura
Division by zero calculus in figures —Our new space since Euclid— (Draft) ····· 10

2 Saburou Saitoh * (Gunma Univ.*/Inst. of Reproducing Kernels)
Hiroshi Okumura
Applications of the division by zero calculus to Wasan geometry ····· 10

3 Hajime Koba (Osaka Univ.)
Mathematical modeling of diffusion system on an evolving double bubble ····· 12

4 Yuichiro Sato (Tokyo Metro. Univ.)
d-minimal surfaces in three-dimensional singular semi-Euclidean space $\mathbb{R}^{0,2,1}$ ····· 15

5 Joseph Cho (Kobe Univ.)
Yuta Ogata (Okinawa Nat. Coll. of Tech.)
Constant mean curvature surfaces and positon-like solutions ····· 15

6 Shintaro Akamine (Nagoya Univ.)
Joseph Cho (Kobe Univ.)
Yuta Ogata (Okinawa Nat. Coll. of Tech.)
Classification of timelike Thomsen surfaces and their deformations ····· 15

7 Kanako Enoyoshi (Ochanomizu Univ.)
Principal curvatures of homogeneous hypersurfaces in a Grassmann manifold $\widetilde{\mathrm{Gr}}_3(\mathrm{Im}\mathbb{O})$ by the G_2-action ····· 15

8 Kazumi Tsukada (Ochanomizu Univ.)
Kanako Enoyoshi (Ochanomizu Univ.)
Examples of transversally complex submanifolds of the associative Grassmann manifold ····· 10

14:15–16:15

9 Yoichi Maeda (Tokai Univ.)
Embedding of $SL(2,\mathbb{R})$ into the three-dimensional sphere and a hyperbolic pattern of symmetric matrices of $SL(2,\mathbb{Z})$ ····· 10

10 Naoya Shimamoto (Univ. of Tokyo)
Description of infinite orbits on multiple flag varieties: projective space case ····· 15

11 Keiichi Maeta (Univ. of Tokyo)
The classification of indecomposable pseudo Riemannian symmetric spaces with signature $(2,2)$ which admit compact Clifford–Klein forms ····· 15

12 Akinori Gondo (Hiroshima Univ.)
Cohomogeneity one actions of disconnected Lie groups on symmetric spaces of noncompact type ····· 10

13 Shinji Ohno (Nihon Univ.)
Homegeneous biharmonic submanifolds in spheres ····· 15

14 Shinji Ohno (Nihon Univ.)
Takashi Sakai (Tokyo Metro. Univ.)
Yasunori Tereuchi
Antipodal sets of generalized s-manifolds ····· 15

15 Makiko Sumi Tanaka (Tokyo Univ. of Sci.)
Hiroyuki Tasaki (Univ. of Tsukuba)
Maximal antipodal sets of classical compact symmetric spaces I ····· 15

16:30–17:30 Talk Invited by Geometry Section

Yosuke Morita (Kyoto Univ.) On the cohomology of compact quotients of non-Riemannian homogeneous spaces

September 25th (Tue) Conference Room VII

10:10–10:25 Presentation Ceremony for the 2018 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2018 MSJ Geometry Prize

Shouhei Honda (Tohoku Univ.) Geometric analysis on metric measure spaces with Ricci bounds from below

13:15–14:15 Talk Invited by Geometry Section

Tomoyuki Hisamoto (Nagoya Univ.) A variational aspect of the Kähler–Einstein problem

September 26th (Wed) Conference Room VII

10:00–11:40

16 Nobuhiko Otoba (Univ. Regensburg) *
Jimmy Petean (CIMAT)
Bifurcation for the constant scalar curvature equation and harmonic Riemannian submersions ····· 15

17 Nobuhiko Otoba (Univ. Regensburg)
Saskia Roos (MPIM)
Scalar curvature and the multiconformal class of a direct product Riemannian manifold ····· 15

18 Kaoru Ikeda (Keio Univ.) ♭
The symplectic structures on the Heisenberg groups and real characteristic classes ····· 15

19 Ryunosuke Ozawa (Osaka Univ.)
Takumi Yokota (Kyoto Univ.)
Stability of Riemannian curvature dimension condition under concentration topology ····· 15

20 Asuka Takatsu (Tokyo Metro. Univ.) ♭
Convergence of combinatorial Ricci flows on tori to degenerated circle patterns ····· 15

14:15–16:15

21 Yoshito Ishiki (Univ. of Tsukuba)
Quasi-symmetric invariant properties of Cantor metric spaces ····· 15

22 Shu Takeuchi (Tohoku Univ.)
Currents in metric spaces and flat distances ····· 15

23 Keita Kunikawa (Tohoku Univ.)
Shunsuke Saito (Tohoku Univ.)
Stability and topology of translating solitons ····· 15

24 Homare Tadano (Tokyo Univ. of Sci.)
Some Cheeger–Gromov–Taylor type theorems for Finsler manifolds ··· 15

25 Hiroshi Sawai (Numazu Nat. Coll. of Tech.)
Vaisman structures and complex structures on LCK solvmanifolds ··· 15

26 Yoshinori Hashimoto (Univ. degli Studi di Firenze)
Twisted constant scalar curvature Kähler metrics with a large twist ····· 15

27 Yasushi Homma (Waseda Univ.)
Uwe Semmelmann (Univ. Stuttgart)
The kernel of the Rarita–Schwinger operator on Riemannian spin manifolds ····· 15

16:30–17:30 Talk Invited by Geometry Section

Hajime Fujita (Japan Women's Univ.) Index of Dirac-type operator on symplectic manifolds and its localization

Complex Analysis

September 24th (Mon) Conference Room II

9:00–11:50

1 Saburou Saitoh * (Gunma Univ.*/Inst. of Reproducing Kernels) — Division by zero calculus ····· 15

2 Saburou Saitoh * (Gunma Univ.*/Inst. of Reproducing Kernels), Hiroshi Okumura — The Descartes circles theorem and division by zero calculus ····· 15

3 Toshiyuki Sugawa (Tohoku Univ.), Tanran Zhang (Soochow Univ.) — On the length of the shortest closed geodesics in a hyperbolic punctured sphere ····· 15

4 Fumio Maitani — Spans of meromorpic differentials restricted by boundary behavior ··· 15

5 Masakazu Shiba (Hiroshima Univ.*) — Closings of an open Riemann surface —Hydrodynamic period matrices, directional moduli and their applications ····· 15

6 Katsuya Ishizaki (Open Univ. of Japan), Naofumi Kimura (Open Univ. of Japan) — Entire and meromorphic solutions of the functional equation $f^n + g^n + h^n = 1$ and differential equations ····· 15

7 Katsuhiko Matsuzaki (Waseda Univ.), Kurt Falk (Christian-Albrechts-Univ. zu Kiel) — Myrberg limit set and horospheric limit set ····· 15

8 Kentaro Hirata (Hiroshima Univ.) — An estimate for positive solutions of a semilinear elliptic problem ···· 15

9 Joe Kamimoto (Kyushu Univ.), Toshihiro Nose (Fukuoka Inst. of Tech.) — Non-polar singularities of local zeta functions in some smooth case ··· 15

10 Toshihiro Nose (Fukuoka Inst. of Tech.), Joe Kamimoto (Kyushu Univ.) — Meromorphy of local zeta functions in smooth model cases ····· 15

14:15–15:15 Talk Invited by Complex Analysis Section

Gou Nakamura (Aichi Inst. of Tech.) — Closed Riemann surfaces admitting extremal disks

15:30–16:20

11 Shizuo Nakane (Tokyo Polytechnic Univ.) — Fiber Julia sets for maps with super-saddle fixed points ····· 15

12 Shigeki Matsutani (Sasebo Nat. Coll. of Tech.), Jiryo Komeda (Kanagawa Inst. of Tech.), Emma Previato (Boston Univ.) — Jacobi inversion formulae for a compact Riemann surface via Weierstrass normal form ····· 15

13 Shigeki Matsutani (Sasebo Nat. Coll. of Tech.), Jiryo Komeda (Kanagawa Inst. of Tech.), Emma Previato (Boston Univ.) — On σ function for the curve, $y^3 = x(x-s)(x-b_1)(x-b_2)$ and its limit of $s \to 0$ ····· 15

16:35–17:35 Talk Invited by Complex Analysis Section

Masataka Tomari (Nihon Univ.) * — On recent studies on normal two-dimensional complex singularities via resolution process

September 25th (Tue) Conference Room II

9:00–11:45

13:15–14:20

Functional Equations

September 24th (Mon) Conference Room I

9:15–12:00

2 Saiei-Jaeyeong Matsubara-Heo (Kobe Univ.) — Residue current approach to Ehrenpreis–Malgrange type theorem for linear partial differential equations with constant coeffiecients and commensurate time lags · · · · · 10

3 Saiei-Jaeyeong Matsubara-Heo (Kobe Univ.) — Euler integral representations of GKZ hypergeometric functions and intersection theory of twisted cycles · · · · · 10

4 Koki Hirota (Ritsumeikan Univ.) ♭ — Real eigenvalues of the semiclassical Zakharov–Shabat operator with $\mathcal{PT}$-like symmetry · · · · · 10

5 Hideaki Matsunaga (Osaka Pref. Univ.), Rina Suzuki — Classification of global behavior of a system of rational difference equations · · · · · 10

6 Hiroyuki Usami (Gifu Univ.) *, Kazuhiro Aoki (Gujo High School) — Inverse problems for generalized cycloids · · · · · 10

7 Megumi Sano (Tokyo Tech) — Minimization problems related to the critical Hardy inequalities with radial potential functions which are not monotone decreasing. · · · · · 10

8 Naoki Hamamoto (Osaka City Univ.), Futoshi Takahashi (Osaka City Univ.) — Hardy–Leray and Rellich–Leray inequalities for curl-free vector fields · · · · · 10

9 Futoshi Takahashi (Osaka City Univ.), Jaeyoung Byeon (KAIST) — Hardy's inequality in a limiting case on general bounded domains · · · · 10

10 Norisuke Ioku (Ehime Univ.) ♭ — Attainability of the best Sobolev constants in a ball · · · · · 10

11 Masataka Shibata (Tokyo Tech), Shinji Adachi (Shizuoka Univ.), Tatsuya Watanabe (Kyoto Sangyo Univ.) — Asymptotic property of ground states for a class of quasilinear Schrödinger equation with H^1-critical growth · · · · · 10

12 Yohei Toyota (Osaka Univ.), Takashi Suzuki (Osaka Univ.) — 2D Trudinger–Moser inequality for Boltzmann–Poisson equation with continuously distributed multi-intensities · · · · · 10

13 Kohji Ohtsuka (Hiroshima Kokusai Gakuin Univ.), Victor A. Kovtunenko (Karl-Franzens-Univ. Graz) — Shape sensitivity analysis via min-max differentiability and Generalized J-integral · · · · · 10

14:15–16:15

14 Junya Nishiguchi (Tohoku Univ.) — Okamura's distance function and a sufficient condition for the uniqueness of solutions for delay differential equations · · · · · 10

15 Yoshihiro Ueda (Kobe Univ.), Yuya Kiri (Azbil Corp.) — Stability analysis for a general system of linear differential equations with discrete delays · · · · · 10

16 Albert Rodríguez Mulet (Hokkaido Univ.) — Asymptotic behavior of eigenfrequencies of a thin elastic rod with non-uniform cross-section · · · · · 10

17 Shingo Takeuchi (Shibaura Inst. of Tech.) — L^q-Lyapunov inequality for the one-dimensional p-Laplacian · · · · · 10

18 Tetsutaro Shibata (Hiroshima Univ.) — Global and local structures of oscillatory bifurcation curves · · · · · 10

19 Shoichi Hasegawa (Tokyo Tech) — Intersection property of solutions to semilinear elliptic equations and its application to a Liouville-type result · · · · · 10

20 Satoshi Tanaka (Okayama Univ. of Sci.)
Ryuji Kajikiya (Saga Univ.)
Inbo Sim (Univ. of Ulsan)
Symmetry-breaking bifurcation of positive solutions to the Moore–Nehari differential equation 10

21 Yūki Naito (Ehime Univ.)
Yasuhito Miyamoto (Univ. of Tokyo)
Singular extremal solutions for supercritical elliptic equations in a ball 10

22 Yuta Ishii (Tokyo Metro. Univ.)
Kazuhiro Kurata (Tokyo Metro. Univ.)
Construction and stability analysis of one-peak symmetric stationary solutions for the Schnackenberg model with heterogeneity 10

16:30–17:30 Talk Invited by Functional Equations Section

Katsuhisa Mimachi (Osaka Univ.)
Classical hypergeometric functions and related topics

September 25th (Tue) Conference Room I

9:15–12:00

23 Patrick van Meurs (Kanazawa Univ.)
Evolutionary convergence of positive and negative dislocations in 2D 10

24 Shota Tateyama (Tohoku Univ.)
Shigeaki Koike (Tohoku Univ.)
On L^p-viscosity solutions of bilateral obstacle problems with unbounded ingredients 10

25 Jumpei Inoue (Univ. of Electro-Comm.)
Kousuke Kuto (Univ. of Electro-Comm.)
Optimal distribution of a species in the stationary logistic equation 10

26 Kousuke Kuto (Univ. of Electro-Comm.)
Yaping Wu (Capital Normal Univ.)
Bifurcation from infinity in a shadow system for the Shigesada–Kawasaki–Teramoto model 10

27 Hiroshi Matsuzawa (Numazu Nat. Coll. of Tech.)
Yuki Kaneko (Waseda Univ.)
Spreading and vanishing in a free boundary problem for nonlinear diffusion equations with a given forced moving boundary 10

28 Yuki Kaneko (Waseda Univ.)
Yoshio Yamada (Waseda Univ.)
Asymptotic profiles and speeds on spreading solutions to a free boundary problem for a reaction-diffusion equation 10

29 Toshikazu Kuniya (Kobe Univ.)
Jinliang Wang (Heilongjiang Univ.)
Asymptotic behavior of an SIR epidemic model with nonlocal diffusion 10

30 Isamu Ohnishi (Hiroshima Univ.)
A mathematical study of the one-dimensional Keller and Rubinow model for Liesegang bands 10

31 Isamu Ohnishi (Hiroshima Univ.)
On mathematical standard structure of a binary digit of memory in a cell and its application to biological or life science phenomena 10

32 Masahiko Shimojyou (Okayama Univ. of Sci.)
Jong Shenq Guo (Tamkang Univ.)
Arnaud Ducrot (Univ. de Bordeaux)
Shadow system of a singular prey-predator system 10

33 Masahiko Shimojyou (Okayama Univ. of Sci.)
Jong Shenq Guo (Tamkang Univ.)
Asymptotic behavior of global solutions to a singular prey-predator model 10

34 Masaharu Taniguchi (Okayama Univ.)
Axially non-symmetric traveling fronts in balanced bistable reaction-diffusion equations 10

13:15–14:15 Talk Invited by Functional Equations Section

Tatsuki Kawakami (Ryukoku Univ.) A semilinear elliptic equation with a dynamical boundary condition

September 26th (Wed) Conference Room I

9:15–12:00

35 Naoto Kajiwara (Univ. of Tokyo) Global solvability of the Cahn–Hilliard equations with dynamic boundary conditions 10

36 Fumihiko Onoue (Univ. of Tokyo), Yoshikazu Giga (Univ. of Tokyo), Keisuke Takasao (Kyoto Univ.) A varifold formulation of mean curvature flow with Dirichlet or dynamic boundary conditions 10

37 Kohei Nakamura (Saitama Univ.), Takeyuki Nagasawa (Saitama Univ.) Interpolation inequalities between the deviation of curvature and the isoperimetric ratio with applications to geometric flows 10

38 Norisuke Ioku (Ehime Univ.)♭, Takayoshi Ogawa (Tohoku Univ.) Critical dissipative estimate for a heat semigroup with the inverse square potential 10

39 Asato Mukai (Univ. of Tokyo) Large time behavior of solutions of the heat equation with inverse square potential 10

40 Kotaro Hisa (Tohoku Univ.), Kazuhiro Ishige (Univ. of Tokyo) Existence of solutions for a fractional semilinear parabolic equation with singular initial data 10

41 Yukihiro Seki (Kyushu Univ.) On type II blow-up mechanisms in a semilinear heat equation with supercritical nonlinearity 10

42 Masakazu Yamamoto (Niigata Univ.), Yuusuke Sugiyama (Univ. of Shiga Pref.) Spatial decay of solutions to the quasi-geostrophic equation 10

43 Tobias Black (Univ. Paderborn), Johannes Lankeit (Univ. Paderborn), Masaaki Mizukami (Tokyo Univ. of Sci.) Global generalized solutions of a Keller–Segel–Stokes system with singular sensitivity 10

44 Fumitaka Wakabayashi (Waseda Univ.) The Keller–Segel system of parabolic-parabolic type in Morrey space 10

45 Akira Okada (Kyoto Univ.) Spatial analyticity of solutions to the drift-diffusion equation with initial data in homogeneous Besov space 10

46 Hiroshi Wakui (Tohoku Univ.) Unboundedness for solutions to a degenerate drift-diffusion equation with the mass supercritical exponent 10

47 Natsumi Yoshida (Ritsumeikan Univ.) Global asymptotic stability of rarefaction waves to the Cauchy problem for the generalized Korteweg–de Vries–Burgers–Kuramoto equation 10

48 Natsumi Yoshida (Ritsumeikan Univ.) Decay structure of solutions toward rarefaction waves to the Cauchy problem for the scalar conservation law with nonlinear viscosity 10

14:15–16:15

49 Fumihiko Hirosawa (Yamaguchi Univ.) On the energy estimate for Klein–Gordon type equations with time dependent singular mass 10

50 Hironori Michihisa (Hiroshima Univ.) Expanding methods for evolution operators of strongly damped wave equations 10

51 Hiroyuki Takamura (Tohoku Univ.) * Ning-An Lai (Lishui Univ.) — Wave-like blow-up and lifespan estimate for solutions of nonlinear wave equations with strong time-decaying damping · · · · · 10

52 Motohiro Sobajima (Tokyo Univ. of Sci.) Masahiro Ikeda (RIKEN/Keio Univ.) — On a test function method for blowup of solutions to semilinear damped wave equations · · · · · 10

53 Motohiro Sobajima (Tokyo Univ. of Sci.) — Sharp lifespan estimates for solutions to two-dimensional semilinear heat equation in exterior domains · · · · · 10

54 Takiko Sasaki (Meiji Univ.) — The blow-up curve for semilinear wave equations with small spatial velocity · · · · · 10

55 Haruya Mizutani (Osaka Univ.) — Strichartz estimates for Schrödinger equations with slowly decaying potentials · · · · · 10

56 Noriyoshi Fukaya (Tokyo Univ. of Sci.) Masahito Ohta (Tokyo Univ. of Sci.) — Strong instability of standing waves for nonlinear Schrödinger equations with attractive inverse power potential · · · · · 10

57 Hiroyuki Hirayama (Univ. of Miyazaki) Masahiro Ikeda (RIKEN/Keio Univ.) — Well-posedness for the nonlinear fourth order Schrödinger equations · · · · · 10

16:30–17:30 Talk Invited by Functional Equations Section

Neal Bez (Saitama Univ.) ♭ — Geometric estimates arising in the analysis of Zakharov systems

September 27th (Thu) Conference Room I

9:15–12:00

58 Masaru Hamano (Saitama Univ.) — Long time behavior of the solutions for the Schrödinger system with quadratic nonlinear terms in 5d · · · · · 10

59 Tomoyuki Tanaka (Nagoya Univ.) — On the local well-posedness of the third order Benjamin–Ono equation · · · · · 10

60 Mamoru Okamoto (Shinshu Univ.) — Asymptotic behavior of solutions to a higher-order KdV-type equation with critical nonlinearity · · · · · 10

61 Felipe Linares (IMPA) Hayato Miyazaki (Tsuyama Nat. Coll. of Tech.) Gustavo Ponce (UCSB) — The initial value problem for the generalized KdV equation with low degree of nonlinearity · · · · · 10

62 Yohei Yamazaki (Hiroshima Univ.) — Center stable manifolds around line solitary waves of Zakharov–Kuznetsov equation · · · · · 10

63 Shinya Kinoshita (Nagoya Univ.) Hiroyuki Hirayama (Univ. of Miyazaki) — Sharp bilinear estimates and its application to a system of quadratic derivative nonlinear Schrödinger equations · · · · · 10

64 Yoshihiro Ueda (Kobe Univ.) Reinhard Racke (Univ. Konstanz) — Dissipative structures for thermoelastic plate equations with Cattneo's law · · · · · 10

65 Yoshihiro Ueda (Kobe Univ.) — Optimal decay estimates of a regularity-loss type system with constraint condition · · · · · 10

66 Yoshihiro Ueda (Kobe Univ.) Renjun Duan (Chinese Univ. of Hong Kong) Shuichi Kawashima (Waseda Univ.) — New structural condition on decay property for symmetric hyperbolic systems with relaxation · · · · · 10

67 Yoshihiro Ueda (Kobe Univ.) New stability criterion for the dissipative linear system ····· 10

68 Ken Furukawa (Univ. of Tokyo), Yoshikazu Giga (Univ. of Tokyo), Amru Hussein (TU Darmstadt), Matthias Hieber (TU Darmstadt), Takahito Kashiwabara (Univ. of Tokyo), Marc Wrona (TU Darmstadt) On justification of hydrostatic approximation on the Primitive equation ····· 10

69 Hajime Koba (Osaka Univ.) Mathematical modeling of diffusion and heat systems on an evolving surface with boundaries ····· 10

70 Hajime Koba (Osaka Univ.) Mathematical modeling of compressible fluid system on an evolving surface with boundaries ····· 10

71 Kazuki Sato (Osaka Univ.), Hajime Koba (Osaka Univ.) Energetic variational approaches for non-Newtonian fluid systems ···· 10

14:15–16:15

72 Ryosuke Nakasato (Tohoku Univ.) A regularity criterion for the density-dependent magnetohydrodynamics system in critical Besov spaces ····· 10

73 Ken Abe (Osaka City Univ.) Vanishing viscosity of axisymmetric flows ····· 10

74 Ryo Kanamaru (Waseda Univ.) Brezis–Gallouet–Wainger type inequalities and a priori estimates of time local strong solutions to Navier–Stokes equations ····· 10

75 Mitsuo Higaki (Kyoto Univ.), Yasunori Maekawa (Kyoto Univ.), Isabelle Gallagher (École Norm. Sup.) On stationary two-dimensional flows around a fast rotating disk ····· 10

76 Hiroyuki Tsurumi (Waseda Univ.) Ill-posedness of the stationary Navier–Stokes equations in scaling invariant homogeneous Besov spaces ····· 10

77 Shuichi Jimbo (Hokkaido Univ.), Erika Ushikoshi (Yokohama Nat. Univ.) Hadamard variational formula for the multiple eigenvalue of the Stokes equations with friction slip boundary conditions ····· 10

78 Hirokazu Saito (Tokyo Univ. of Sci.) Local solvability of the Navier–Stokes–Korteweg equations in the maximal regularity class ····· 10

79 Yoshihiro Shibata (Waseda Univ.), Miho Murata (Kanagawa Univ.) Global well-posedness for the Navier–Stokes–Korteweg system in $\mathbb{R}^N$ ····· 10

80 Ryo Takada (Kyushu Univ.) Strongly stratified limit for the 3D inviscid Boussinesq equations ····· 10

16:30–17:30 Talk Invited by Functional Equations Section

Reika Fukuizumi (Tohoku Univ.) Temperature effects in Bose–Einstein condensation

Real Analysis

September 26th (Wed) Conference Room II

9:00–12:00

1 Yoshifumi Ito (Tokushima Univ.*) Axiomatic method of measure and integration (III). Definition and existence theorem of the Lebesgue measure ····· 15

2 Yoshifumi Ito (Tokushima Univ.*) Axiomatic method of measure and integration (IV). Definition of the Lebesgue integral and its fundamental properties ····· 15

3 Yōhei Yamasaki Non-oriented volume and non-oriented integral in the C^0 class ····· 15

4 Yōhei Yamasaki Minkowski content, the volume that admits the cartesian product property ····· 15

5 Ryoji Fukuda (Oita Univ.)
Aoi Honda (Kyushu Inst. of Tech.)
Yoshiaki Okazaki (Fuzzy Logic Systems Inst.)
Convergence theorems for Pan and Lehrer integrals ····· 15

6 Ryoji Fukuda (Oita Univ.)
Aoi Honda (Kyushu Inst. of Tech.)
Yoshiaki Okazaki (Fuzzy Logic Systems Inst.)
Convergence theorem of algebraic product inclusion-exclusion integral ····· 15

7 Tomonari Suzuki (Kyushu Inst. of Tech.) Contractive conditions on mappings on metric spaces ····· 15

8 Yasunori Kimura (Toho Univ.) Equilibrium problems on geodesic spaces and their resolvents ····· 15

9 Kengo Kasahara (Toho Univ.)
Yasunori Kimura (Toho Univ.)
Mann type iterative sequence for two resolvents in a complete CAT(1) space ····· 15

10 Toshikazu Watanabe (Tokyo Univ. of Information Sci.) Boundary value problems involving a fractional differential equation ····· 15

11 Sachiko Atsushiba (Univ. of Yamanashi) Attractive point, fixed point and convergence theorems for generalized hybrid-type mappings ····· 15

14:15–16:30

12 Kota Saito (Nagoya Univ.) Construction of a one-dimensional set which asymptotically and omni-directionally contains arithmetic progressions ····· 10

13 Takeshi Iida (Fukushima Nat. Coll. of Tech.)
Yoshihiro Sawano (Tokyo Metro. Univ.)
Orlicz-fractional maximal operators on weighted L^p spaces ····· 15

14 Minglei Shi (Ibaraki Univ.)
Ryutaro Arai (Ibaraki Univ.)
Eiichi Nakai (Ibaraki Univ.)
Campanato spaces and commutators of generalized fractional integral operators on Orlicz spaces ····· 15

15 Ryota Kawasumi
Eiichi Nakai (Ibaraki Univ.)
Pointwise multipliers on weak Orlicz spaces ····· 15

16 Ryutaro Arai (Ibaraki Univ.)
Eiichi Nakai (Ibaraki Univ.)
Gaku Sadasue (Osaka Kyoiku Univ.)
Fractional integrals on martingale Orlicz spaces ····· 15

17 Hiroyuki Tsurumi (Waseda Univ.) Counter examples of the bilinear estimates of the Hölder type inequality in homogeneous Besov spaces 10

18 Yukio Kasahara (Hokkaido Univ.)
Nicholas H. Bingham (Imperial Coll. London)
Matricial Baxter's theorem with a Nehari sequence 10

19 Hiroki Saito (Nihon Univ.)
Hitoshi Tanaka (Tsukuba Univ. of Tech.)
Toshikazu Watanabe (Tokyo Univ. of Information Sci.)
Composition of maximal operators with weighted Hausdorff content 15

20 Youhei Tsutsui (Shinshu Univ.) A sparse bound for local smoothing operators 15

16:45–17:45 Talk Invited by Real Analysis Section

Jun Kawabe (Shinshu Univ.) A unified approach to convergence theorems of distribution-based nonlinear integrals

September 27th (Thu) Conference Room II

9:15–12:00

21 Masaaki Mizukami (Tokyo Univ. of Sci.)
Hirohiko Otsuka (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Boundedness in a chemotaxis-haptotaxis system with signal-dependent sensitivity 15

22 Shunsuke Kurima (Tokyo Univ. of Sci.) A nonlocal Cahn–Hilliard equation on an unbounded domain 15

23 Keiichiro Kagawa (Waseda Univ.)
Mitsuharu Ôtani (Waseda Univ.)
Initial boundary value problem of the viscous Cahn–Hilliard equation 15

24 Kosuke Kita (Waseda Univ.)
Mitsuharu Ôtani (Waseda Univ.)
Bounds for global solutions of a reaction diffusion system 15

25 Takanori Kuroda (Waseda Univ.)
Mitsuharu Ôtani (Waseda Univ.)
Periodic solutions for complex Ginzburg–Landau equations in bounded domains 15

26 Miu Takahashi (Japan Women's Univ.)
Toyohiko Aiki (Japan Women's Univ.)
Martijn Anthonissen (Eindhoven Univ. of Tech.)
Numerical method for initial boundary value problem describing a real experiment related to Soret effect. 15

27 Ryota Nakayashiki (Chiba Univ.) Large-time behavior of the solutions to the system of grain boundary motion including dynamic boundary condition 15

28 Yoshimasa Sasaki (Niigata Univ.)
Hiroki Ohwa (Niigata Univ.)
On the existence and uniqueness of solutions to scalar conservation laws with discontinuous flux functions 15

29 Hiroshi Watanabe (Oita Univ.) Well-posedness for nonlocal parabolic-hyperbolic conservation laws with anisotropic diffusion terms 15

30 Tsukasa Iwabuchi (Tohoku Univ.) The semigroup generated by the Dirichlet Laplacian of fractional order 15

14:15–16:00

31 Yutaka Tsuzuki (Hiroshima Shudo Univ.) — Initial-boundary value problems for Vlasov–Poisson equations with angle error in a half-space ····· 15

32 Risei Kano (Kochi Univ.) — The existence of solutions for the non-linear hardening models ····· 15

33 Kota Kumazaki (Nagasaki Univ.), Adrian Muntean (Karlstad Univ.) — Existence of a global solution for a moving boundary problem describing swelling ····· 15

34 Ken Shirakawa (Chiba Univ.), Noriaki Yamazaki (Kanagawa Univ.), Harbir Antil (George Mason Univ.) — A class of optimal control problems for one-dimensional Kobayashi–Warren–Carter type systems ····· 15

35 Noriaki Yamazaki (Kanagawa Univ.), Nobuyuki Kenmochi (Univ. of Warsaw), Ken Shirakawa (Chiba Univ.) — Double quasi-variational evolution equations governed by time-dependent subdifferentials ····· 15

36 Akio Ito — Evolution inclusion on a real Hilbert space with quasi-variational structure for inner product —Existence of global-in-time solutions— ····· 15

16:15–17:15 Talk Invited by Real Analysis Section

Toshiyuki Suzuki (Kanagawa Univ.) — Semilinear Schrödinger evolution equations with inverse-square potentials

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Functional Analysis

September 24th (Mon) Conference Room Ⅲ

10:30–12:00

1 Hiroshi Inoue (Daiichi Univ. of Pharm.) — Non-self-adjoint Hamiltonian based on generalized Riesz systems (1) ····· 10

2 Hiroshi Inoue (Daiichi Univ. of Pharm.) — Non-self-adjoint Hamiltonians based on generalized Riesz systems (2) ····· 10

3 Takeo Kamizawa (Tokyo Univ. of Sci.) — Criteria for the reducibilities of linear systems ····· 10

4 Shuji Watanabe (Gunma Univ.) * — The second-order phase transition in the BCS-Bogoliubov model of superconductivity and its operator-theoretical proof ····· 15

5 Kazuyuki Wada (Nat. Inst. of Tech., Hachinohe Coll.) — Absence of wave operators for quantum walks ····· 15

6 Hisashi Morioka (Doshisha Univ.), Etsuo Segawa (Tohoku Univ.) — Detection of edge defects by embedded eigenvalues of quantum walks ····· 15

14:15–16:15

7 Shu Nakamura (Univ. of Tokyo)
Kouichi Taira (Univ. of Tokyo)
Essential self-adjointness of pseudodifferential operators on Euclidean spaces ····· 15

8 Yukihide Tadano (Univ. of Tokyo)
Long-range scattering theory for discrete Schrödinger operators on hexagonal lattice ····· 15

9 Masaki Kawamoto (Tokyo Univ. of Sci.)
Klein–Gordon equations with homogeneous time-dependent electric fields ····· 15

10 Takuya Watanabe (Ritsumeikan Univ.)
Setsuro Fujiié (Ritsumeikan Univ.)
André Martinez (Univ. Bolongna)
Semiclassical distribution of resonances near an energy-level crossing ····· 15

11 Osanobu Yamada (Ritsumeikan Univ.)
Takashi Okaji (Kyoto Univ.)
Hubert Kalf
(Math. Inst. der LMU München)
A refined trace theorem and its application to uniform resolvent estimates of Dirac operators ····· 15

12 Keisuke Asahara (Hokkaido Univ.)
Daiju Funakawa (Hokkai-Gakuen Univ.)
Spectral analysis of a generalized pair-interaction model ····· 15

13 Takeru Hidaka
Fumio Hiroshima (Kyushu Univ.)
Itaru Sasaki (Shinshu Univ.)
On the existence of the ground state for the semi-relativistic Pauli–Fierz model ····· 15

16:30–17:30 Talk Invited by Functional Analysis Section

Tadahiro Miyao (Hokkaido Univ.)
Magnetism and operator inequalities

September 25th (Tue) Conference Room Ⅲ

9:15–12:00

14 Junichi Fujii (Osaka Kyoiku Univ.)
On PM-property for the representing functions of power difference means ····· 15

15 Yuki Seo (Osaka Kyoiku Univ.)
Quantum Tsallis relative entropy of negative order ····· 10

16 Masatoshi Ito (Maebashi Inst. of Tech.)
Estimations of the weighted power mean by the Heron mean ····· 10

17 Hiroaki Tohyama
(Maebashi Inst. of Tech.)
Hiroshi Isa (Maebashi Inst. of Tech.)
Eizaburo Kamei
Masayuki Watanabe
(Maebashi Inst. of Tech.)
Some relations among the n-th relative operator entropies and the n-th operator divergences II ····· 15

18 Mitsuru Uchiyama
(Shimane Univ.*/Ritsumeikan Univ.)
Lawrence G. Brown (Purdue Univ.)
Strongly operator convex functions ····· 15

19 Kazufumi Kimoto (Univ. of Ryukyus)
Limit behavior of alpha determinants for normalized Laplacian matrices of complete graphs ····· 15

20 Minoru Itoh (Kagoshima Univ.)
A description of an invariant theory using the Cayley–Hamilton theorem of higher order ····· 15

21 Hiroshi Oda (Takushoku Univ.) Separation of variables theorem for vector-valued polynomials on complex reductive Lie algebras ····· 15

22 Hiroyoshi Tamori (Univ. of Tokyo) Realization of minimal representations of real simple Lie groups ····· 15

23 Nobukazu Shimeno (Kwansei Gakuin Univ.) Hobson's formula in Dunkl analysis and its applications ····· 15

13:15–14:15 Talk Invited by Functional Analysis Section

Akihito Wachi (Hokkaido Univ. of Edu.) Capelli identities and b-functions of prehomogeneous vector spaces

September 26th (Wed) Conference Room Ⅲ

9:30–12:00

24 Kengo Matsumoto * (Joetsu Univ. of Edu.) Flow equivalence of topological Markov shifts and extended Ruelle algebras ····· 15

25 Yuhei Suzuki (Nagoya Univ.) Eigenvalue set for etale groupoids and constructions of distinguished minimal actions ····· 15

26 Norio Nawata (Osaka Kyoiku Univ.) Infiniteness of central sequence C*-algebras ····· 15

27 Masatoshi Enomoto * Yasuo Watatani (Kyushu Univ.) A bounded isomorphic invariant of two subspace systems ····· 15

28 Yusuke Sawada (Nagoya Univ.) On the constructions of minimal dilations of CP_0-semigroups ····· 15

29 Michiya Mori (Univ. of Tokyo) Isometries between projection lattices of von Neumann algebras ····· 15

30 Hiroshi Ando (Chiba Univ.) Uffe Haagerup Cyril Houdayer (Univ. Paris-Sud) Amine Marrakchi (Univ. Paris-Sud) Structure of bicentralizer algebras and inclusions of type III factors ····· 15

31 Reiji Tomatsu (Hokkaido Univ.) On minimal actions of compact groups on full factors ····· 15

14:15–15:00

32 Shizuo Miyajima (Tokyo Univ. of Sci.) Isao Saito (Tokyo Univ. of Sci.) Characterization of closed balls via metric projections, II ····· 10

33 Osamu Hatori (Niigata Univ.) Toshikazu Abe (Ibaraki Univ.) A geometric inequality and isometries on the positive cone ····· 15

34 Keiichi Watanabe (Niigata Univ.) Cauchy–Bunyakovsky–Schwarz type inequalities related to the Möbius addition ····· 15

15:15–16:15 Talk Invited by Functional Analysis Section

Takeshi Miura (Niigata Univ.) Surjective isometries on function spaces

Statistics and Probability

September 24th (Mon) Conference Room IX

9:30–12:00

1 Tamio Koyama (Rikkyo Univ.)♭ Parameter space of $\mathcal{A}$-hypergeometric distributions ····· 15

2 Hiroki Takahashi (Keio Univ.) Large Deviation Principle for arithmetic mean of digits in continued fraction expansion ····· 15

3 Hayato Takahashi (Waseda Univ.) Inclusion-exclusion principles on partially ordered sets and the distributions of the number of pattern occurrences in finite samples ····· 15

4 Erina Nasu (Yokohama Nat. Univ.)
Masato Takei (Yokohama Nat. Univ.) On the width of the lowest horizontal crossing in two-dimensional percolation ····· 10

5 Noriyoshi Sakuma (Aichi Univ. of Edu.)
Ryoichi Suzuki (Keio Univ.) A modified logarithmic Sobolev inequality for canonical Lévy processes and its applications ····· 10

6 Naoto Shimaru (Okayama Univ. of Sci.)
Keizo Takashima (Okayama Univ. of Sci.) Partial sum of irrational rotations: mean ····· 15

7 Naoto Shimaru (Okayama Univ. of Sci.)
Keizo Takashima (Okayama Univ. of Sci.) Partial sum of irrational rotations: variance ····· 10

8 Kiyoiki Hoshino (Osaka Pref. Univ.) Identification from the SFCs of random functions Ogawa-integrable with respect to regular basis ····· 15

9 Takuya Murayama (Kyoto Univ.) Chordal Komatu–Loewner equation for a family of continuously growing hulls ····· 15

14:15–15:00

10 Tomoko Takemura (Nara Women's Univ.) Dirichlet forms corresponding to diffusion processes in a tube and the time changed process ····· 15

11 Atsushi Takeuchi (Osaka City Univ.) Convergence rates of extreme value distributions via the Stein equations ····· 15

12 Yuji Hamana (Kumamoto Univ.) On the first hitting time of the radial Ornstein–Uhlenbeck process ··· 10

15:15–16:15 Talk Invited by Statistics and Probability Section

Kaneharu Tsuchida (Nat. Defense Acad. of Japan) Large deviation principles of additive functionals for symmetric Markov processes

16:30–17:30 Talk Invited by Statistics and Probability Section

Masato Hoshino (Kyushu Univ.) A relation between regularity structures and paracontrolled calculus

September 25th (Tue) Conference Room IX

9:30–11:30

13 Yuki Chino (Leiden Univ.) Random walk in cooling random environment ····· 15

14 Takahiro Mori (Kyoto Univ.) Large deviations for intersection measures of some Markov processes ····· 15

15 Yuki Ueda (Hokkaido Univ.), Junki Morishita (Hokkaido Univ.) — Free infinite divisibility for the class of Generalized Power distributions with Free Poisson term 15

16 Toshiyuki Katsuda (Kwansei Gakuin Univ.) — Stability condition for a multiclass single-server queue with abandonment 15

17 Yushi Hamaguchi (Kyoto Univ.) — Finite-dimensional approximation of solutions of infinite-dimensional BSDEs 12

18 Masayuki Kageyama (Nagoya City Univ.) — MDPs with some risk utility functions 15

11:30–12:00 Research Section Assembly

September 26th (Wed) Conference Room IX

9:40–12:00

19 Masanori Sawa (Kobe Univ.), Kazuki Yoshida (Kobe Univ.), Shohei Satake (Kobe Univ.) — A construction of circulant almost orthogonal arrays of strength 3 and its applications in functional MRI experiments 15

20 Shohei Satake (Kobe Univ.), Kazuki Yoshida (Kobe Univ.), Masanori Sawa (Kobe Univ.) — On constructions and existence of circulant almost orthogonal arrays with strength 3 15

21 Kazuki Matsubara (ChuoGakuin Univ.), Sanpei Kageyama (Tokyo Univ. of Sci.) — Cyclically near-resolvable splitting-balanced block designs with block size 2×2 15

22 Shoko Chisaki (Tokyo Univ. of Sci.), Nobuko Miyamoto (Tokyo Univ. of Sci.), Ryoh Fuji-Hara (Univ. of Tsukuba*) — Combinatorial designs for dropout in deep learning 15

23 Kou Fujimori (Waseda Univ.) — The variable selection by the Dantzig selector for Cox's proportional hazards model 10

24 Tomoyuki Nakagawa (Tokyo Univ. of Sci.) — Objective priors for the robust Bayesian inference 15

25 Ayaka Yagi (Tokyo Univ. of Sci.), Takashi Seo (Tokyo Univ. of Sci.), Yasunori Fujikoshi (Hiroshima Univ.*) — Estimation of parameters in the growth curve model with monotone missing data pattern 15

26 Koji Tsukuda (Univ. of Tokyo), Shuhei Mano (Inst. of Stat. Math.) — Fisher information of multiple samples from the Poisson–Dirichlet populations 15

12:15–12:30 Presentation Ceremony for the 2018 MSJ Analysis Prize

14:15–15:05

27 Hirofumi Wakaki (Hiroshima Univ.) — Laplace approximation of the distribution function of the Bartlett–Nanda–Pillai test 15

28 Yoshihide Kakizawa (Hokkaido Univ.), Gaku Igarashi (Univ. of Tsukuba) — Bias correction of asymmetric kernel density estimators revisited 15

29 Yoshihiko Maesono (Kyushu Univ.), Rizky Reza Fauzi (Kyushu Univ.) — Mean residual life function estimators for nonnegative data by logarithmic transformation 10

15:20–16:20 Talk Invited by Statistics and Probability Section

Shuhei Mano (Inst. of Stat. Math.) Partitions, hypergeometric systems, Dirichlet processes, and their statistical inferences

16:40–17:40 Talk Invited by Statistics and Probability Section

Yan Liu (Kyoto Univ.) From prediction and interpolation problem to parameter estimation problem of time series

September 27th (Thu) Conference Room IX

9:40–11:30

30 Yuichi Goto (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
Asymptotic theory and robustness of zero crossings estimator ····· 10

31 Yuichi Goto (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
Discriminant analysis based on binary time series ····· 10

32 Yoshiyuki Tanida (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
Empirical Bayesian estimators for time series ····· 10

33 Yugo Nakayama (Univ. of Tsukuba)
Robust support vector machines for high-dimensional data ····· 15

34 Aki Ishii (Tokyo Univ. of Sci.)
Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
Correlation test for high-dimensional data under the strongly spiked eigenvalue model ····· 15

35 Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
Consistency of high-dimensional mean vectors ····· 15

36 Hirokazu Yanagihara (Hiroshima Univ.)
High-dimensionality adjusted asymptotically loss efficient GC_p in normal multivariate linear models ····· 15

14:15–15:05

37 Fumiya Akashi (Waseda Univ.)
GEL method for tests of rotational symmetry on spheres ····· 15

38 Shogo Kato (Inst. of Stat. Math.)
Arthur Pewsey (Univ. of Extremadura)
M. C. Jones (The Open Univ.)
A class of circulas obtained through a Fourier series based approach ····· 15

39 Eiichiro Funo (Kanto Gakuin Univ.)
Decomposition of the Kullback–Leibler information on pooling incomplete samples ····· 10

Applied Mathematics

September 24th (Mon) Conference Room IV

9:00–12:00

1 Sho Fujimura (Fukuoka Univ.)
Shuji SHIRAISHI (Fukuoka Univ.)
On the number of perfect matchings of line graphs II ····· 10

2 Kohei Tanaka (Shinshu Univ.) Topological and combinatorial methods in motion planning problem ····· 15

3 Shohei Satake (Kobe Univ.) On quadratic residues and circulant almost orthogonal arrays ····· 15

4 Takuya Ikuta (Kobe Gakuin Univ.), Akihiro Munemasa (Tohoku Univ.) Butson-type complex Hadamard matrices and association schemes on Galois rings of characteristic 4 ····· 10

5 Sho Suda (Aichi Univ. of Edu.), Gary Greaves (Nanyang Tech. Univ.) The maximum number of diamonds in tournaments ····· 10

6 Tsuyoshi Miezaki (Univ. of Ryukyus), Manabu Oura (Kanazawa Univ.) On the complete cycle index ····· 10

7 Tsuyoshi Miezaki (Univ. of Ryukyus), Manabu Oura (Kanazawa Univ.), Tadashi Sakuma (Yamagata Univ.), Hidehiro Shinohara (Yamagata Univ.) On the Tutte polynomials in genus g ····· 10

8 Kiyoshi Yoshimoto (Nihon Univ.) Structures of edge-colored complete bipartite graphs ····· 15

9 Kiyoshi Ando (Nat. Inst. of Information / JST ERATO) A local condition for k-contractible edges ····· 15

10 Yumiko Ohno (Yokohama Nat. Univ.), Naoki Matsumoto (Seikei Univ.) Facial achromatic number of even triangulations on the sphere ····· 15

11 Kenta Ozeki (Yokohama Nat. Univ.), Carol Zamfirescu (Ghent Univ.) Hamiltonicity of 4-connected graphs with few crossing number ····· 15

12 Xiao-Nan Lu (Tokyo Univ. of Sci.) On separably existentially closed graphs ····· 15

14:20–16:30

13 Yusuke Yoshie (Tohoku Univ.), Yusuke Higuchi (Showa Univ.), Etsuo Segawa (Tohoku Univ.), Mohamed Fuard Mohamed Sabri (Tohoku Univ.) Stationary state of quantum walks on distance-regular graphs ····· 15

14 Seiken Saito (Nagoya Bunri Univ.) The inequalities of the radii of convergence of Ihara zeta-functions ··· 10

15 Yusuke Higuchi (Showa Univ.), Mohamed Fuard Sabri (Tohoku Univ.), Etsuo Segawa (Tohoku Univ.), Yusuke Yoshie (Tohoku Univ.) A dynamical system induced by discrete-time quantum walk ····· 15

16 Yusuke Ide (JAIST), Choon-Lin Ho (Tamkang Univ.), Norio Konno (Yokohama Nat. Univ.) Spectral analysis of discrete-time quantum walks on cycle and path graphs ····· 15

17 Daiju Funakawa (Hokkai-Gakuen Univ.), Toru Fuda (Kokushikan Univ.), Satoshi Sasayama (Hokkaido Univ.), Akito Suzuki (Shinshu Univ.) About the resonance of a 2-dimensional split-step quantum walk ····· 15

18 Noriaki Teranishi (Hokkaido Univ.)
Itaru Sasaki (Shinshu Univ.)
Akito Suzuki (Shinshu Univ.)
Daiju Funakawa (Hokkai-Gakuen Univ.)
Yasumichi Matsuzawa (Shinshu Univ.)
A note on time operators with respect to a unitary operator ····· 15

19 Sho Kubota (Tohoku Univ.)
Yusuke Yoshie (Tohoku Univ.)
Periodicity of Grover walks on some trees ····· 10

20 Takashi Komatsu (Yokohama Nat. Univ.)
Norio Konno (Yokohama Nat. Univ.)
Stationary measure induced by eigenvalue problem of quantum walk ····· 10

16:40–17:40 Talk Invited by Applied Mathematics Section

Norio Konno (Yokohama Nat. Univ.) Quantum walk 2.0

September 25th (Tue) Conference Room IV

9:00–12:00

21 Chie Nara (Meiji Univ.)
Jin-ichi Itoh (Sugiyama Jogakuen Univ.)
Continuous flatenning of the 2-skeleton of the square faces in a hypercube ····· 15

22 Atsuhiro Nakamoto (Yokohama Nat. Univ.)
Naoki Matsumoto (Seikei Univ.)
Gen Kawatani (Tokyo Univ. of Sci.)
Jorge Urrutia (UNAM)
Geometric quadrangulations of a polygon ····· 15

23 Kenta Noguchi (Tokyo Univ. of Sci.) Connectivity and Hamiltonicity of 1-planar graphs ····· 15

24 Naoki Matsumoto (Seikei Univ.)
Atsuki Nagao (Ochanomizu Univ.)
Feedback game on Eulerian graphs ····· 15

25 Syun Hiranuma (Yokohama Nat. Univ.)
Gen Kawatani (Tokyo Univ. of Sci.)
Naoki Matsumoto (Seikei Univ.)
Domatically full graphs obtained from Cartesian products of graphs ····· 15

26 Shinya Fujita (Yokohama City Univ.)
Tommy Jensen (Aarhus Univ.)
Boram Park (Ajou Univ.)
Tadashi Sakuma (Yamagata Univ.)
On the weighted safe set problem on paths and cycles ····· 10

27 Hideo Mitsuhashi (Hosei Univ.)
Norio Konno (Yokohama Nat. Univ.)
Iwao Sato (Oyama Nat. Coll. of Tech.)
Left eigenvalues of quaternionic quantum walks on graphs ····· 15

28 Kei Saito (Yokohama Nat. Univ.) Periodicity for the Fourier quantum walk on regular graphs ····· 15

29 Kei Saito (Yokohama Nat. Univ.) Analysis of the stationary measure of quantum walk by position-evolution process ····· 15

30 Iwao Sato (Oyama Nat. Coll. of Tech.)
Norio Konno (Yokohama Nat. Univ.)
Yusuke Ide (JAIST)
The spectral analysis of the unitary matrix of a 2-tessellable staggered quantum walk on a graph ····· 15

September 26th (Wed) Conference Room IV

10:00–12:00 Special Session "Mathematical problems in machine learning —focusing on the theory of deep learning"

Sho Sonoda (RIKEN) Recent developments on deep neural network theory · · · · · 45

Taiji Suzuki (Univ. of Tokyo) Generalization error theory of deep learning and its application to model analysis · · · · · 45

14:15–16:20

31 Jun O'Hara (Chiba Univ.) Regularization of the self-inductance · · · · · 15

32 Akane Kawaharada (Kyoto Univ. of Edu.), Takao Namiki (Hokkaido Univ.) Relation between spatio-temporal patterns generated by a nonlinear cellular automaton and a singular function · · · · · 10

33 Tatsuki Mori (Osaka Univ.), Takashi Suzuki (Osaka Univ.), Shoji Yotsutani (Ryukoku Univ.) Numerical approach to existence and stability of stationary solutions to a SKT cross-diffusion equation · · · · · 15

34 Kazunori Matsui (Kanazawa Univ.) A pressure-Poisson problem with mixed boundary conditions · · · · · 15

35 Yuki Chiba (Univ. of Tokyo), Norikazu Saito (Univ. of Tokyo) Nitsche's method for Poisson equations with a Robin boundary condition in a smooth domain · · · · · 15

36 Toru Nakanishi (Univ. of Tokyo), Norikazu Saito (Univ. of Tokyo) Numerical analysis for the radially symmetric solutions of multidimensional semilinear heat equations by finite element method · · · · · 15

37 Akitoshi Takayasu (Univ. of Tsukuba), Kaname Matsue (Kyushu Univ./Kyushu Univ.) Numerical validation of blow-up solutions for differential equations with exponential nonlinearity · · · · · 15

38 Yoshitaka Watanabe (Kyushu Univ.), Takehiko Kinoshita, Mitsuhiro T. Nakao (Waseda Univ.) An improvement for verifying the existence and bounds of the inverse of second-order elliptic operators · · · · · 15

16:40–17:40 Talk Invited by Applied Mathematics Section

Takeshi Fukao (Kyoto Univ. of Edu.) Abstract approach of evolution equation to partial differential equations with total mass conservation

September 27th (Thu) Conference Room IV

10:00–11:40

39 Takeshi Gotoda (Hokkaido Univ.) Convergence of the filtered solutions to the 2D Euler equations with vortex sheet initial data · · · · · 15

40 Yuuki Shimizu (Kyoto Univ.), Koya Sakakibara (Kyoto Univ.) Point vortex dynamics on minimal surfaces: 1. Theoretical analysis · · · · · 15

41 Koya Sakakibara (Kyoto Univ.), Yuuki Shimizu (Kyoto Univ.) Point vortex dynamics on minimal surfaces: Numerical analysis · · · · · 15

42 George Miyake (Ube Nat. Coll. of Tech.), Yuji Katsuta (Ube Nat. Coll. of Tech.) An analysis of four coupled oscillators circuits in a ring by using the symmetry of the circuits · · · · · 10

43 Fuminori Sakaguchi (Univ. of Fukui) — An improvement of integer-type algorithm for eigenvalues of differential operators by means of the elimination of eigenfunctions ····· 15

44 Yukihiko Nakata (Shimane Univ.) — An explicit periodic solution of a delay differential equation ····· 15

14:15–15:50

45 Kazuyuki Yagasaki (Kyoto Univ.) — Chaos in randamly perturbed dynamical systems ····· 15

46 Shoya Motonaga (Kyoto Univ.), Kazuyuki Yagasaki (Kyoto Univ.) — Nonintegrability of parametrically forced nonlinear oscillators ····· 15

47 Yasuhiro Ishitsuka (Kyoto Univ.), Naoto Nakano (Kyoto Univ.) — Understanding of dynamical reconstruction based on delay embedding through Gröbner basis ····· 15

48 Sungrim Seirin Lee (Hiroshima Univ.) — Pattern formation induced by domain deformation ····· 15

49 Takeshi Gotoda (Hokkaido Univ.), Masaaki Uesaka (Hokkaido Univ.), Yusuke Yasugahira (Hokkaido Univ.), Yasuaki Kobayashi (Ochanomizu Univ.), Hiroyuki Kitahata (Chiba Univ.), Mitsuhiro Denda (Shiseido Co., Ltd.), Masaharu Nagayama (Hokkaido Univ.) — Mathematical modeling for epidermal desquamation ····· 15

50 Takashi Suzuki (Osaka Univ.) — Modeling angiogenesis —resolution of chemotactic pardox ····· 5

51 Takashi Suzuki (Osaka Univ.) — Modeling cell deformation —free boudaries and Liouville's theorem ··· 5

16:10–17:10 Talk Invited by Applied Mathematics Section

Ippei Obayashi (RIKEN / Tohoku Univ.) — Persistent homology —Analysis of the shape of data by the combination of mathematics and computer science

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Topology

September 24th (Mon) Conference Room VI

9:20–12:00

1 Haruko Miyazawa (Tsuda Coll.), Kodai Wada (Waseda Univ.), Akira Yasuhara (Waseda Univ.) — Burnside groups and n-moves for links ····· 10

2 Haruko Miyazawa (Tsuda Coll.), Kodai Wada (Waseda Univ.), Akira Yasuhara (Waseda Univ.) — Generalized virtualization on welded links ····· 10

3 Masakazu Teragaito (Hiroshima Univ.) — Weight elements of the knot groups of some 3-strand pretzel knots ····· 10

4 Masaaki Suzuki (Meiji Univ.), Anh T. Tran (Univ. of Texas at Dallas) — Genera of two-bridge knots and epimorphisms of their knot groups ··· 10

5 Toshio Saito (Joetsu Univ. of Edu.) — Tunnel number of knots and generalized tangles ····· 10

6 Hideo Takioka (Osaka City Univ.) — $2n$-moves and the Γ-polynomial for knots 10

7 Yasutaka Nakanishi (Kobe Univ.) — Differences of Alexander polynomials for knots caused by a single crossing change, II 10

8 Keiju Kato (Tokyo Tech) — A mirroring formula for the interior polynomial of a bipartite graph 10

9 Mikhail Khovanov (Columbia Univ.), Aaron D. Lauda (Univ. of Southern California), Joshua Sussan (City Univ. of New York), Yasuyoshi Yonezawa (Nagoya Univ.) — Braid group actions from categorical symmetric Howe duality on deformed Webster algebras 15

10 Yasushi Kasahara (Kochi Univ. of Tech.) — On $2g+1$-dimensional linear representations of mapping class groups of genus g 10

11 Inasa Nakamura (Kanazawa Univ.) — Simplifying branched covering surface-knots with a non-zero number of branch points 10

12 Mizuki Fukuda (Tohoku Univ.) — Gluck twist along branched twist spins 10

13 Motoo Tange (Univ. of Tsukuba) [b] — 4-manifolds with E_8 intersection form and their correction terms 15

14:15–14:55

14 Sukuse Abe (Osaka City Univ.) — Quantum $U_q(\mathfrak{g})$ invariants of genus 2 handlebody-knots 15

15 Wataru Yuasa (Kyoto Univ.) — A_2 colored polynomials of rigid vertex graphs 10

16 Wataru Yuasa (Kyoto Univ.) — A_2 skein representations of pure braid groups 10

15:10–16:10 Talk Invited by Topology Section

Tadayuki Watanabe (Shimane Univ.) — Characteristic classes for $\mathrm{Diff}(S^4)$ and clasper surgery for families

September 25th (Tue) Conference Room VII

10:10–10:25 Presentation Ceremony for the 2018 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2018 MSJ Geometry Prize

Shouhei Honda (Tohoku Univ.) — Geometric analysis on metric measure spaces with Ricci bounds from below

September 25th (Tue) Conference Room VI

13:15–14:15

17 Yoshikazu Yamagishi (Ryukoku Univ.), Takamichi Sushida (Hokkaido Univ.) — Voronoi tilings on Archimedean spiral lattices 10

18 Shunsuke Ichiki (Yokohama Nat. Univ.) — Characterization of generic transversality 15

19 Takahiro Yamamoto (Tokyo Gakugei Univ.) — Apparent contours of stable maps of compact surfaces with boundary into the plane 15

20 Keisuke Teramoto (Kobe Univ.) — On signs of cusps of Gauss maps of cuspidal edges with certain properties 15

September 26th (Wed) Conference Room VI

10:20–12:00

21 Takashi Shimomura (Nagoya Univ. of Economics) — Applications of the Bratteli–Vershik model for zero-dimensional homeomorphisms ····· 10

22 Takashi Shimomura (Nagoya Univ. of Economics) * — Characterization of substitution map for minimal substitution subshifts ····· 10

23 Hiroki Kodama (Univ. of Tokyo), Kazuo Masuda, Yoshihiko Mitsumatsu (Chuo Univ.) — Derivatives of flat functions ····· 15

24 Mariko Ohara (Shinshu Univ.) — On graded E-infinity rings and projective schemes ····· 15

25 Koichi Inoue (Tokyo City Univ.) — Symmetric polynomial and $Q_m(w_n)$ ····· 15

26 Tadayuki Haraguchi (Naragakuen Univ.) — Homotopy structures of smooth CW complexes ····· 15

14:15–14:50

27 Takahiro Matsuyuki (Tokyo Tech) — Characteristic classes of fibrations and graph complexes ····· 15

28 Takefumi Nosaka (Tokyo Tech) — de Rham theory and cocycles of cubical sets from smooth quandles ····· 15

15:10–16:10 Talk Invited by Topology Section

Shizuo Kaji (Kyushu Univ.) — On equivariant loop product

Infinite Analysis

September 24th (Mon) Conference Room V

9:15–10:50

1 Masaki Kato (Kobe Univ.) — An addition type formula for the elliptic digamma function ····· 15

2 Takanori Ayano (Osaka City Univ.), Victor Matveevich Buchstaber (Steklov Math. Inst.) — Solutions of KdV-equation obtained by the degeneration of meromorphic functions on the sigma divisor of hyperelliptic curves of genus 3 ····· 15

3 Takao Suzuki (Kindai Univ.) — A similarity reduction of the Drinfeld–Sokolov hierarchy of type A corresponding to the partition of natural number $(n+1, n+1, n+1)$ ····· 15

4 Kouichi Takemura (Chuo Univ.) — On q-deformations of the Heun equation ····· 15

5 Yousuke Ohyama (Tokushima Univ.) — q-Stokes phenomenon on a difference equation satisfied by q-hypergeometric series ${}_3\phi_2(a_1, a_2, a_3; 0, 0; q, x)$ ····· 15

6 Masahiko Ito (Univ. of Ryukyus), Masatoshi Noumi (Kobe Univ.) — Elliptic extension of Gustafson's q-beta integral of type G_2 and its infinite product expression ····· 15

11:00–12:00 Talk Invited by Infinite Analysis Special Session

Kohei Iwaki (Nagoya Univ.) Exact WKB analysis and topological recursion

14:15–16:25

7 Yuma Mizuno (Tokyo Tech) Jacobian matrices of Y-seed mutations and mutation networks ····· 15

8 Masanori Ando (Naragakuen Univ.) Inferior regular partitions and Glaisher correspondence ····· 15

9 Ayumu Hoshino (Hiroshima Inst. of Tech.)
Jun'ichi Shiraishi (Univ. of Tokyo)
Matrix inversion for Koornwinder polynomials with one-column diagram ····· 15

10 Kazuma Suetake (Nagoya Univ.)
Hidetoshi Awata (Nagoya Univ.)
Hiroaki Kanno (Nagoya Univ.)
The (q,t)-KZ equation associated with the quantum toroidal algebra ····· 15

11 Ryosuke Kodera (Kobe Univ.) On Guay's evaluation map for affine Yangians ····· 15

12 Toshio Nakatsu (Setsunan Univ.)
Kanehisa Takasaki (Kindai Univ.)
Hodge integrals and topological vertex ····· 15

13 Atsuo Kuniba (Univ. of Tokyo)
Vincent Pasquier (Univ. Paris-Saclay)
Matrix product solutions to the reflection equation from three dimensional integrability ····· 15

14 Masato Okado (Osaka City Univ.)
Jae-Hoon Kwon (Seoul Nat. Univ.)
KR crystals of the generalized quantum group of type A ····· 15

16:40–17:40 Talk Invited by Infinite Analysis Special Session

Takeshi Ikeda (Okayama Univ. of Sci.) K-theoretic Paterson isomorphism

Information for Speakers

The Organizing Committee apologizes that it had to cut the duration of contributed talks because of technical reasons. Since the schedule is very tight, we ask the speakers to strictly keep time. A bell will be rung when 2/3 of the assigned time has passed. A second bell will be rung as soon as the time is up, and the speaker has to leave the stage.

Collaborative works are presented by the underlined authors. The talks with $*$ mark are presented through document camera, while $\flat$ marks denote presentations on blackboard or whiteboard. The speakers with $\star$ marks are professors emeriti. If you find anything wrong in the program, do not hesitate to inform the Chair of Organizing Committee by sending e-mail to the address `okayama18sept@mathsoc.jp`.

Each conference room is equipped with a blackboard, a document camera, and a projector with VGA interface for PC presentation. You are asked to use your own PC and necessary accessory (for example, HDMI–VGA adapter) for a PC presentation. The time for connecting your PC to the projector is included in the assigned duration of your talk. You are recommended to check beforehand if your PC can be connected to the projector in the conference room. We strongly advise you to prepare an alternative method to present your talk such as a copy of the PDF file of your sheets on a USB flash drive or printed sheets for the document camera in case your PC does not fit to the projector.

Information for Participants

Smoking is prohibited on campus and there is no parking area for visitors.

Official Party

Date: September 25th (Tue) 18:00–20:00

Venue: Restaurant, 4F, South Facility for Student Welfare "Peach Union"

Participants are asked to pay 5,000 JPY at the party.

Directions

2018 MSJ AUTUMN MEETING

Dates : September 24th (Mon)–27th (Thu), 2018

Venue : Tsushima Campus, Okayama University
2–1–1 Tsushima-naka, Kita-ku, Okayama-shi,
Okayama 700-8530 Japan

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Web Site : http://mathsoc.jp/en/meeting/okayama18sept/

Conference Rooms

	Place	Research Sections
Conference Room I	Bldg. Gen. Edu. A21	Functional Equations, Featured Invited Talks
Conference Room II	Bldg. Gen. Edu. A36	Complex Analysis, Real Analysis
Conference Room III	Bldg. Gen. Edu. A37	Functional Analysis
Conference Room IV	Bldg. Gen. Edu. A41	Applied Mathematics, Featured Invited Talk
Conference Room V	Bldg. Gen. Edu. B11	Infinite Analysis, Foundation of Mathematics and History of Mathematics
Conference Room VI	Bldg. Gen. Edu. B32	Topology
Conference Room VII	Bldg. Gen. Edu. B33	Geometry
Conference Room VIII	Bldg. Gen. Edu. B41	Algebra, Featured Invited Talks
Conference Room IX	Bldg. Gen. Edu. E11	Statistics and Probability, Featured Invited Talk
Plenary Talks	Kanemitsu Hall, 50th Anniversary Hall	
Open Lectures for Citizens	Large Lecture and Large Conference Room, 2F, Graduate School of Natural Science and Technology, Building No.1	

Other Rooms

Membership Fee & Extended Abstracts	Bldg. Gen. Edu. C21
Discussion Rooms	Bldg. Gen. Edu. B21
Book Display and Sale	Bldg. Gen. Edu. C22, C23, C24
Executive Committee, MSJ President	Bldg. Gen. Edu. C25
Official Party	Restaurant, 4F, South Facility for Student Welfare “Peach Union”