Final: 2025/3/10

2025 The Mathematical Society of Japan
ANNUAL MEETING

Dates: March 18th (Tue)–21st (Fri), 2025

Venue: Waseda Campus, Waseda University
1–6–1 Nishi-Waseda, Shinjuku-ku, 169-8050, Tokyo, Japan

Contact to: Department of Mathematics, School of Education, Waseda University
1–6–1 Nishi-Waseda, Shinjuku-ku, 169-8050, Tokyo, Japan
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The Mathematical Society of Japan

	I Bldg. 14 14-101	II Bldg. 14 14-102	III Bldg. 15 15-03	IV Bldg. 15 15-04	V Bldg. 15 15-101	VI Bldg. 15 15-102	VII Bldg. 15 15-201	VIII Bldg. 15 15-202	IX Bldg. 15 15-203
18th (Tue)	Geometry 9:30–11:45 14:15–16:15	Topology 9:30–11:40 15:40–17:30	Found. of Math. & Hist. of Math. 9:00–10:45 14:45–17:00	Complex Analysis 9:30–11:40 15:40–16:30	Functional Equations 9:00–12:00 14:15–16:45	Algebra 9:00–12:00 14:15–18:00	Functional Analysis 9:30–10:55	Statistics and Probability 9:30–11:20	Applied Mathematics 9:30–11:50 14:15–15:55
	Featured Invited Talks 13:00–14:00								
	Invited Talk 16:30–17:30	Invited Talk 14:20–15:20	Invited Talk 11:00–12:00	Invited Talk 14:20–15:20	Invited Talk 17:00–18:00		Invited Talk 11:00–12:00	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 16:10–17:10
19th (Wed)	Geometry 9:30–11:45	Topology 9:30–11:35	Found. of Math. & Hist. of Math. 9:00–12:00	Complex Analysis 9:30–11:40	Functional Equations 9:00–12:00	Algebra 9:00–12:00	Functional Analysis 9:30–10:50	Statistics and Probability 9:30–11:20	Applied Mathematics 10:00–11:50 13:15–14:00
	Invited Talk 13:00–14:00		Invited Talk 13:00–14:00	Invited Talk 13:00–14:00	Invited Talk 13:00–14:00	Invited Talk 13:00–14:00	Invited Talk 11:00–12:00		
	MSJ Prizes Presentation (Big Auditorium, Okuma Auditorium) ····· (14:30–15:00) Plenary Talks (Big Auditorium, Okuma Auditorium) Spring Prize Winner ····· (15:15–16:15) Toru Ohmoto (Waseda Univ.) ····· (16:30–17:30) Official Party (Morinokaze, Okuma Memorial Tower) ····· (18:00–20:00)								
20th (Thu)	Geometry 9:30–11:30 14:15–17:15	Topology 9:30–11:55 15:40–17:35	Infinite Analysis 10:00–11:40	Real Analysis 9:00–12:00 14:15–15:30	Functional Equations 9:30–12:00 14:15–16:45	Algebra 9:00–12:00	Functional Analysis 9:30–10:55 14:30–17:00	Statistics and Probability 9:30–11:30	Applied Mathematics 9:25–12:00 14:50–16:30
	Featured Invited Talks 13:00–14:00								
		Invited Talk 14:20–15:20	Invited Talk 14:15–15:15	Invited Talks 15:45–16:45 17:00–18:00	Invited Talk 17:00–18:00	Invited Talks 14:40–15:40 16:00–17:00	Invited Talk 11:00–12:00		Invited Talk 16:45–17:45
21st (Fri)	Geometry 9:30–11:45 14:15–15:15		Infinite Analysis 9:30–10:35	Real Analysis 9:00–12:00 14:15–16:45	Functional Equations 9:30–12:00 14:15–16:30	Algebra 9:00–10:45 14:15–18:00		Statistics and Probability 9:30–11:30	Applied Mathematics 9:25–12:00 14:15–15:15
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	Invited Talk 15:30–16:30		Invited Talk 10:50–11:50	Invited Talk 17:00–18:00	Invited Talk 16:45–17:45	Invited Talk 11:00–12:00		Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 15:30–16:30

MSJ Spring Meeting 2025

Organizing Committee
Chair of Organizing Committee Hideo KOZONO (Waseda Univ.)
Chair of Executive Committee Katsuhiko MATSUZAKI (Waseda Univ.)
Vice Chair of Executive Committee Yasushi HOMMA (Waseda Univ.)

Organizer The Mathematical Society of Japan

Co-organizer Faculty of Education and Integrated Arts and Sciences, Waseda University
School of Fundamental Science and Engineering, Waseda University

Acknowledgements We would like to thank Waseda University for their great cooperation in organizing this annual meeting.

Registration for Participation

Visit the following link to register.
`https://www.mathsoc.jp/activity/meeting/waseda25mar/reg.html` (in Japanese)
This survey is conducted in order to grasp the number of participants in advance.
Please register by March 17th (Mon) if possible. (You can register during this annual meeting.)

Plenary Talks

March 19th (Wed) Big Auditorium, Okuma Auditorium

Award Lecture for the 2025 MSJ Spring Prize

Spring Prize Winner ..... (15:15–16:15)

Toru Ohmoto (Waseda Univ.) Thom polynomials —Singularity theory and enumerative geometry ..... (16:30–17:30)

Featured Invited Talks

March 18th (Tue)

Conference Room I

Tsukane Ogawa (Yokkaichi Univ.)♭ The actual image of Seki Takakazu —His life, mathematics, and mathematical thought ····· (13:00–14:00)

Conference Room II

Norio Iwase (Kyushu Univ.*) A_∞-structure and its applications to homotopy invariants, and to Differential Homotopy Theory ····· (13:00–14:00)

March 20th (Thu)

Conference Room V

Guest Talk from the Japan Society for Industrial and Applied Mathematics

Ichiro Kataoka (Hitachi, Ltd.) Digitalized design support technology utilizing CAE and machine learning ····· (13:00–14:00)

Conference Room VI

Yoshinori Mishiba (Tohoku Univ.) Multiple zeta values over function fields ····· (13:00–14:00)

Conference Room IX

Takuya Tsuchiya (Osaka Univ.) Mathematical theory of the finite element methods ····· (13:00–14:00)

March 21st (Fri)

Conference Room I

Yousuke Ohyama (Tokushima Univ.) Algebraic analysis on the Painlevé equations ····· (13:00–14:00)

Conference Room II

Tokio Matsuyama (Chuo Univ.) On the Kirchhoff equation ····· (13:00–14:00)

Talks Invited by Research Sections and Special Session

March 18th (Tue)

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

Tomoaki Kawano (Kanagawa Univ.) — About quantum logic in mathematical logic ····· (11:00–12:00)

Geometry (Conference Room I)

Eiji Inoue (Kyoto Univ.) — On Perelman entropy in Kähler geometry ····· (16:30–17:30)

Complex Analysis (Conference Room IV)

Shun Kumagai (Hachinohe Inst. of Tech.) — Galois action on Teichmüller curves and related combinatorial objects ····· (14:20–15:20)

Functional Equations (Conference Room V)

Michiaki Inaba (Nara Women's Univ.) — Moduli space of rational connections and the geometry of Painlevé equations ····· (17:00–18:00)

Functional Analysis (Conference Room Ⅶ)

Yukihide Tadano (Univ. of Hyogo) — Long-range scattering theory of discrete quantum systems · (11:00–12:00)

Statistics and Probability (Conference Room Ⅷ)

Award Lecture for the 2024 MSJ Analysis Prize

Ryoki Fukushima (Univ. of Tsukuba) — Random walk among random obstacles ····· (14:15–15:15)

Takahiro Mori (Kyoto Inst. Tech.) — L^p-extension of Kato class measures and its application to the analysis of multiple points of the trajectories of Markov processes ····· (15:30–16:30)

Applied Mathematics (Conference Room Ⅸ)

Ayaka Ishikawa (Yamagata Univ.) — The Ihara expression of the graph zeta function ····· (16:10–17:10)

Topology (Conference Room Ⅱ)

Kokoro Tanaka (Tokyo Gakugei Univ.) — Surface knot theory and quandle theory ····· (14:20–15:20)

March 19th (Wed)

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

Yoshihiro Maruyama (Nagoya Univ.) — Universal topos theory and applications to quantum physics and machine learning ····· (13:00–14:00)

Algebra (Conference Room VI)

Yugen Takegahara (Muroran Inst. of Tech.) — On the generalization of Burnside rings ····· (13:00–14:00)

Geometry (Conference Room I)

Kenji Fukaya (Tsinghua Univ.)♭ — A infinity functor and its geometric application ····· (13:00–14:00)

Complex Analysis (Conference Room IV)

Masataka Iwai (Osaka Univ.)♭ — On the inequalities of Chern classes and the structure theorem ····· (13:00–14:00)

Functional Equations (Conference Room V)

Award Lecture for the 2024 MSJ Analysis Prize

Yūki Naito (Hiroshima Univ.) Structure of radially symmetric solutions to nonlinear elliptic equations ····· (13:00–14:00)

Functional Analysis (Conference Room VII)

Takuma Hayashi (Osaka Metro. Univ.) Rationality problems in representation theory ····· (11:00–12:00)

March 20th (Thu)

Algebra (Conference Room VI)

Award Lecture for the 2025 MSJ Algebra Prize

Noriyuki Abe (Univ. of Tokyo)♭ On Hecke categories ····· (14:40–15:40)

Award Lecture for the 2025 MSJ Algebra Prize

Hiromu Tanaka (Univ. of Tokyo)♭ On Fano threefolds in positive characteristic ····· (16:00–17:00)

Functional Equations (Conference Room V)

Tatsuya Miura (Kyoto Univ.)♭ Escher–Ito's problem for area-preserving curvature flows ·· (17:00–18:00)

Real Analysis (Conference Room IV)

Award Lecture for the 2024 MSJ Analysis Prize

Hitoshi Tanaka (Tsukuba Univ. of Tech.) Rectangular fractional integral operator, Carleson-type embedding theorems, Fefferman–Phong-type condition ····· (15:45–16:45)

Yoshihiro Sawano (Tokyo Metro. Univ.) Morrey spaces ····· (17:00–18:00)

Functional Analysis (Conference Room VII)

Kouhei Izuchi (Yamaguchi Univ.) Invariant subspaces in Hardy space on the bidisk ····· (11:00–12:00)

Applied Mathematics (Conference Room IX)

Kazuyuki Yagasaki (Kyoto Univ.) On the development of the theory of nonintegrability of dynamical systems after Poincaré ····· (16:45–17:45)

Topology (Conference Room II)

Yuji Terashima (Tohoku Univ.) Quiver mutation and topology ····· (14:20–15:20)

Infinite Analysis (Conference Room III)

Hiroshi Kawakami (Aoyama Gakuin Univ.) Toward a comprehensive theory of Painlevé-type equations with a focus on spectral types ····· (14:15–15:15)

March 21st (Fri)

Algebra (Conference Room VI)

Kenta Sato (Chiba Univ.) Singularities on hyperplane sections ····· (11:00–12:00)

Geometry (Conference Room I)

Masato Mimura (Tohoku Univ.)♭ Invariant quasimorphisms and geometry ····· (15:30–16:30)

Functional Equations (Conference Room V)

Erika Ushikoshi (Yokohama Nat. Univ.) Helmholtz–Weyl decomposition on a time dependent domain with an application to time periodic Navier–Stokes flows with large flux ····· (16:45–17:45)

Real Analysis (Conference Room IV)

Chiharu Kosugi (Yamaguchi Univ.) Mathematical analysis of models representing motions for the elastic curve with the compressible stress function ···· (17:00–18:00)

Statistics and Probability (Conference Room VIII)

Ryoya Oda (Hiroshima Univ.) Selection consistency of KOO method in high-dimensional and large-sample multivariate linear regression models ···· (14:15–15:15)

Sumito Kurata (Kyushu Univ.) Model evaluation criteria with robustness in selection based on statistical divergence measures ····· (15:30–16:30)

Applied Mathematics (Conference Room IX)

Takaharu Yaguchi (Kobe Univ.) Geometric deep scientific computing ····· (15:30–16:30)

Infinite Analysis (Conference Room III)

Masato Okado (Osaka Metro. Univ.) On the fermionic formula conjecture for branching functions of affine Lie algebras ····· (10:50–11:50)

Open Lectures for Citizens

Date: March 21st (Fri) 14:00–16:30
Venue: 14-201, 2nd Floor, Building 14
Organizer: The Mathematical Society of Japan
Co-organizer: Waseda University
Program: Opening Speech ..... (14:00–14:05)
Seiichi Kamada (President of MSJ / Osaka Univ.)

Lecture 1: "How does heat transfer on disordered media?" ..... (14:10–15:10)
Takashi Kumagai (Waseda Univ.)

Lecture 2: "What is the Mathematics?" ..... (15:30–16:30)
Yoshishige Haraoka (Josai Univ.)

Web Page: `https://www.mathsoc.jp/en/meeting/waseda25mar/`

Foundation of Mathematics and History of Mathematics

March 18th (Tue) Conference Room Ⅲ

9:00–10:45

1 Haruka Kogure (Kobe Univ.) Arithmetical completeness for some extensions of the pure logic of necessitation ····· 15

2 Kaito Ichikura (Tohoku Univ.) The existence of continua of logics around intuitionistic logic, minimal logic and co-minimal logic ····· 15

3 Leonardo Pacheco (Sci. Tokyo) Collapsing constructive and intuitionistic modal logics ····· 15

4 Taishi Kurahashi (Kobe Univ.) Lyndon interpolation property in modal logic and intermediate logic ····· 15

5 Taishi Kurahashi (Kobe Univ.), Kohei Tominaga (Kobe Univ.) Smullyan's truth and provability ····· 15

6 Kohtaro Tadaki (Chubu Univ.) A generation of a Martin-Löf random sequence with respect to a computable Bernoulli measure, relative to a Martin-Löf random sequence ····· 15

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

Tomoaki Kawano (Kanagawa Univ.) About quantum logic in mathematical logic

14:15–14:30 Research Section Assembly

14:45–17:00

7 Masahiro Kumabe (Open Univ. of Japan), Toshio Suzuki (Tokyo Metro. Univ.), Kenshi Miyabe (Meiji Univ.) Quantifier variations in Solovay reducibility ····· 15

8 Kenetsu Fujita (Gunma Univ.), Toshihiko Kurata (Hosei Univ.) On Reynolds–Hurkens–Coquand paradox ····· 15

9 Katsushi Waki (Yamagata Univ.) Progress report on the construction of the Sakuma collection database ····· 15

10 Koichi Hirata (Matsuyama Univ./Ehime Univ.*) Casey's theorem: From the viewpoint of inversive coordinates of circles ····· 15

11 Noriko Tanaka (Naragakuen Univ.), Tsukane Ogawa (Yokkaichi Univ.) On the mathematics of the "Shikiki-jyutsu" written by Yukitada Oka ····· 15

12 Makoto Tamura (Osaka Sangyo Univ.) Area and volume calculations in the Qin dynasty in the mathematical books of Qin bamboo slips housed at Peking University ····· 15

13 Hideyuki Majima (Ochanomizu Univ.*) On the number 3.16 as Pi in the 'Jinkok' by YOSHIDA Mitsuyoshi (continued) ····· 15

14 Michiyo Nakane The Hamilton principle derived by Jacobi ····· 15

17:15–17:30 Mathematics History Team Meeting

March 19th (Wed) Conference Room III

9:00–12:00

15 Takashi Yamazoe (Kobe Univ.) Cichoń's maximum with cardinals of the closed null ideal 15

16 Toshimasa Tanno (Kobe Univ.) Generalized Tukey relation in Solovay model 15

17 Kenta Tsukuura (Nat. Fisheries Univ.) Study of Ramseyness for edge colorings of complete bipartite graphs 15

18 Katsuya Eda (Waseda Univ.) What are multisets? 15

19 Koki Okura (Univ. of Tsukuba) On monotonicity theorems and dp-rank 15

20 Akihiko Arai (Chiba Univ.) On continuous model theory and isomorphism problems for ultraproducts of operator algebras 15

21 Koichiro Ikeda (Hosei Univ.) A note on generic structures with infinite weight 15

22 Hirotaka Kikyo (Kobe Univ.) On Hrushovski's construction and SOP3 15

23 Koitaro Nakaura (Univ. of Tokyo)
Akito Tsuboi (Univ. of Tsukuba*) A simple construction of an indiscernible tree 15

24 Akito Tsuboi (Univ. of Tsukuba*) On the spectrum of finite models 10

13:00–14:00 Talk Invited by Section on Foundation and History of Mathematics

Yoshihiro Maruyama (Nagoya Univ.) Universal topos theory and applications to quantum physics and machine learning

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Algebra

March 18th (Tue) Conference Room VI

9:00–12:00

1 Tomohiro Iwami (Kyushu Inst. of Tech.) Confluent variant of S. Mukai's degenerations of $\mathbb{P}^n \times \mathbb{P}^n$ or $\mathbb{P}^n \times \mathbb{P}^n \times \mathbb{P}^n$ and associated del Pezzo fibrations totally defined over distinct primes 13

2 Kiwamu Watanabe (Chuo Univ.) Fano varieties with large pseudoindex 13

3 John Ashley Navarro Capellan (Nagoya Univ.) The McKay correspondence for dihedral groups: The moduli space and the tautological bundles 13

4 Ken Sato (Sci. Tokyo) On higher Chow cycles on $K3$ surfaces with non-symplectic automorphisms 13

5 Yu Hiraoka (Kochi Univ.) On the dimension of the global sections of generalized adjoint bundles for quasi-polarized surfaces 13

6 Taku Suzuki (Utsunomiya Univ.) Positivity of Chern characters and higher order minimal families of rational curves on Fano manifolds 13

14:15–18:00

March 19th (Wed) Conference Room VI

9:00–12:00

28 Keita Nakai (Nagoya Univ.) Joint universality theorem for the Riemann zeta-function with general shifts · · · · · 13

29 Kenta Endo (Suzuka Nat. Coll. of Tech.) Proof of the hybrid universality theorem based on the probability theory · · · · · 13

30 Yasufumi Hashimoto (Univ. of Ryukyus) Length spectra for maximal arithmetic Fuchsian groups · · · · · 13

31 Yuichi Sakai (Kurume Inst. of Tech.), Kiyokazu Nagatomo On characters of fermionic log-CFT and modular forms · · · · · 13

32 Iwao Kimura (Univ. of Toyama) On a generalization of the Perrin sequence · · · · · 13

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

Yugen Takegahara (Muroran Inst. of Tech.) On the generalization of Burnside rings

March 20th (Thu) Conference Room VI

9:00–12:00

33 Taro Sakurai (Chiba Univ.) Finite groups with very few character values · · · · · 10

34 Taro Sakurai (Chiba Univ.) Some recent progress on the modular isomorphism problem · · · · · 13

35 Yuta Kozakai (Tokyo Univ. of Sci.), Yuta Kimura (Hiroshima Inst. of Tech.), Ryotaro Koshio (Tokyo Univ. of Sci.), Hiroyuki Minamoto (Osaka Metro. Univ.), Yuya Mizuno (Osaka Metro. Univ.) On induction/restriction of support τ-tilting modules over skew group algebras · · · · · 10

36 Sin Yi Tsang (Ochanomizu Univ.) A generalization of Grün's lemma to skew braces · · · · · 13

37 Yuto Nogata (Hirosaki Univ.), Takara Kondo (Hirosaki Univ.) Simple 3-designs of $\mathrm{PSL}(2, 2^n)$ with block size 9 · · · · · 10

38 Takara Kondo (Hirosaki Univ.) Automorphism groups of orbifold VOAs arising from coinvariant lattices of the Leech lattice · · · · · 13

39 Masahiko Miyamoto (Univ. of Tsukuba*) 1-point functions on a VOA of moonshine type · · · · · 10

40 Mamoru Ueda (Univ. of Alberta) Affine Yangians and non-rectangular W-algebras · · · · · 10

41 Kohei Yahiro (Kyoto Univ.), Yasuaki Hiraoka (Kyoto Univ.) A crystal structure on 2-parameter persistence modules · · · · · 13

42 Yoshiteru Kurosawa (Numazu Nat. Coll. of Tech.) Relative invariants of prehomogeneous vector spaces for valued Dynkin quivers · · · · · 13

43 Ryo Uchiumi (Osaka Univ.) Permutation representations of classical Weyl groups on mod q lattices · · · · · 13

44 Haru Negami (Chiba Univ.) Construction of unitary representations of braid groups · · · · · 13

14:15–14:30 Presentation Ceremony for the 2025 MSJ Algebra Prize

14:40–15:40 Award Lecture for the 2025 MSJ Algebra Prize

Noriyuki Abe (Univ. of Tokyo) ♭ On Hecke categories

16:00–17:00 Award Lecture for the 2025 MSJ Algebra Prize

Hiromu Tanaka (Univ. of Tokyo) ♭ On Fano threefolds in positive characteristic

March 21st (Fri) Conference Room VI

9:00–10:45

45 Momonari Kudo (Fukuoka Inst. of Tech.), Kazuhiro Yokoyama (Rikkyo Univ.) — On maximal Gröbner basis degree for semi-regular sequences and a variant of Fröberg's conjecture ····· 13

46 Ryuji Tanimoto (Shizuoka Univ.) — Triangular involutions of the four-dimensional polynomial ring in characteristic two ····· 13

47 Akihiro Higashitani (Osaka Univ.) — On binomial edge rings of complete bipartite graphs ····· 13

48 Akihiro Higashitani (Osaka Univ.), Koji Matsushita (Osaka Univ.), Koichiro Tani (Osaka Univ.) — SAGBI bases of algebras arising from finite distributive lattices ····· 13

49 Yuta Hatasa (Sci. Tokyo), Nobukazu Kowaki (Osaka Univ.), Koji Matsushita (Osaka Univ.) — Pseudo-Gorenstein edge rings ····· 13

50 Sora Miyashita (Osaka Univ.), Matteo Varbaro (Genova Univ.) — The canonical trace of Stanley–Reisner rings that are Gorenstein on the punctured spectrum ····· 13

11:00–12:00 Talk Invited by Algebra Section

Kenta Sato (Chiba Univ.) — Singularities on hyperplane sections

14:15–18:00

51 Davide Dal Martello (Rikkyo Univ.) — A cluster monodromic realization for Okamoto's symmetry of Painlevé VI ····· 13

52 Toshiya Yurikusa (Tohoku Univ.) — Dimension vectors of τ-rigid modules and intersection numbers on triangulated surfaces ····· 13

53 Yasuaki Ogawa (Kansai Univ.), Amit Shah (Aarhus Univ.) — Waldhausen structures arising from algebraic extriangulated categories ····· 13

54 Shuhei Tsujie (Hokkaido Univ. of Edu.), Masamichi Kuroda (Nippon Bunri Univ.), Norihiro Nakashima (Nagoya Inst. of Tech.) — Coboundary quasi-polynomials of hyperplane arrangements over the ring of integers of an algebraic field ····· 10

55 Shigeo Koshitani (Chiba Univ.*), İpek Tuvay (Mimar Sinan Fine Arts Univ.) — Brauer indecomposability of the Scott module for a finite group with a wreath Sylow 2-subgroup ····· 13

Geometry

March 18th (Tue) Conference Room I

9:30–11:45

14:15–16:15

8 Ken Kuwata (Kagawa Nat. Coll. of Tech.), Masao Jinzenji (Okayama Univ.) — Weighted projective spaces and elliptic virtual structure constants · · · · 15

9 Kentaro Yamaguchi (Tokyo Metro. Univ.) — Delzant type theorem for torus-equivariant hypersurfaces in symplectic toric manifolds · · · · 15

10 Masakazu Takakura (Tokyo Metro. Univ.) — Division theorem with sharp L^2 estimate and characterization of plurisubharmonic functions · · · · 15

11 Masakazu Takakura (Tokyo Metro. Univ.) — L^2 division theorem on the Hilbert bundles · · · · 15

12 Shunsuke Saito (Tokyo Univ. of Sci.) — K-instability of hyperplane sections of Segre varieties · · · · 15

13 Tomoyuki Hisamoto (Tokyo Metro. Univ.), Satoshi Nakamura (Sci. Tokyo) — Continuity method for the Mabuchi soliton on the extremal Fano manifolds · · · · 15

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

Eiji Inoue (Kyoto Univ.) — On Perelman entropy in Kähler geometry

March 19th (Wed) Conference Room I

9:30–11:45

14 Homare Tadano (Yamaguchi Univ.) — An improvement of the Myers theorem via m-Bakry–Émery Ricci curvature with ε-range · · · · 15

15 Homare Tadano (Yamaguchi Univ.) — A Calabi-type theorem via m-Bakry–Émery Ricci curvature with ε-range · · · · 15

16 Naoya Ando (Kumamoto Univ.) — The topological holonomy groups in vector bundles on tori · · · · 15

17 Masataka Shibata (Meijo Univ.), Hiroshi Iriyeh (Ibaraki Univ.) — Minimizing problem of the volume product of D_2 or S_4-invariant three dimensional convex bodies · · · · 15

18 Hidemasa Suzuki (Chiba Univ.) — Explicit correspondences between gradient trees in $\mathbb{R}$ and pseudo-holomorphic disks in $T^*\mathbb{R}$ · · · · 10

19 Tomoya Nakatani (Chiba Univ.) — The category of graded matrix factorizations for a deformation of A_μ-sin-gularities associated to universal unfolding · · · · 10

20 Tadashi Udagawa (Waseda Univ.) — Solutions of the tt*-equation constructed from the SU(2)k-fusion ring and its DPW description · · · · 15

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

Kenji Fukaya (Tsinghua Univ.) ♭ — A infinity functor and its geometric application

March 20th (Thu) Conference Room I

9:30–11:30

21 Fumika Mizoguchi (Osaka Metro. Univ.) — Two-step nilpotent Lie algebras obtained by quivers and geometric structures · · · · 15

22 Hiroyuki Tasaki (Tokyo Metro. Univ./Univ. of Tsukuba) — Polars of Pin^c groups and related compact Lie groups ····· 15

23 Yuichiro Sato (Waseda Univ.), Takanao Tsuyuki (Hokkaido Information Univ.) — Ricci-flat left-invariant Lorentzian metrics on almost abelian Lie groups ····· 15

24 Yuta Yamauchi (Yokohama Nat. Univ.) — The total absolute curvature of submanifolds with singularities ····· 15

25 Kurando Baba (Tokyo Univ. of Sci.), Osamu Ikawa (Kyoto Inst. Tech.) — Symmetric triads with multiplicities and double Satake diagrams, II ····· 15

26 Yusuke Sakane (Osaka Univ.*), Andreas Arvanitoyeorgos (Univ. of Patras), Marina Statha (Univ. of Thessaly) — Einstein-like metrics on compact homogeneous spaces ····· 15

14:15–17:15

27 Shin Nayatani (Nagoya Univ.) — Eigenvalue maximization and inflated maps for the Berger spheres ··· 15

28 Takumi Gomyou (Osaka Univ.), Shin Nayatani (Nagoya Univ.) — Divergence of the first eigenvalue of the Laplacian of a graph containing a cycle ····· 15

29 Kazumasa Narita (Nagoya Univ.) — Remark on Laplacians and Riemannian submersions with totally geodesic fibers ····· 15

30 Masaro Takahashi (Kurume Nat. Coll. of Tech.), Yasuyuki Nagatomo (Meiji Univ.), Isami Koga (Kyushu Int. Univ.) — The classification of special unitary group or symplectic group equivariant harmonic maps of spheres to spheres ····· 15

31 Shimpei Kobayashi (Hokkaido Univ.), Yuhei Kogo (Hokkaido Univ.), Nozomu Matsuura (Fukuoka Univ.) — The evolution of a curve induced by the Pohlmeyer–Lund–Regge equation ····· 15

32 Keita Kunikawa (Tokushima Univ.), Toru Kajigaya (Tokyo Univ. of Sci.) — Index estimate by first Betti number of minimal hypersurfaces in compact symmetric spaces ····· 15

33 Akifumi Sako (Tokyo Univ. of Sci.), Jumpei Gohara (Tokyo Univ. of Sci.) — Quantization and matrix regularization of Lie–Poisson algebra ····· 15

34 Tomoki Fujii (Tokyo Univ. of Sci.), Naoyuki Koike (Tokyo Univ. of Sci.) — Graphical solitons for the mean curvature flow invariant under hyperpolar actions ····· 15

35 Naotoshi Fujihara (Tokyo Univ. of Sci.) — Curve shortening flow on surfaces with warped product metrics ····· 15

March 21st (Fri) Conference Room I

9:30–11:45

36 Nikita Evseev (Okinawa Inst. of Sci. and Tech. Grad. Univ.) — Rellich–Kondrachov theorem for mappings in metric spaces ····· 15

37 Yoshito Ishiki (Tokyo Metro. Univ.) — An isometric extensor of metrics ····· 15

38 Katsuhisa Koshino (Kanagawa Univ.), Yoshito Ishiki (Tokyo Metro. Univ.) — Isometric embeddings and universality of spaces of metrics ····· 15

39 Yuya Kodama (Kagoshima Univ.) Divergence functions of higher-dimensional Thompson's groups ····· 15

40 Takumi Matsuka (Tokyo Metro. Univ.)
Tomohiro Fukaya (Tokyo Metro. Univ.)
Ikkei Sato (Tokyo Metro. Univ.)
On geometrically finite groups acting on coarsely convex spaces ····· 15

41 Samuël Borza (Univ. Vienna)
Mattia Magnabosco (Univ. Oxford)
Tommaso Rossi (Sorbonne Univ.)
Kenshiro Tashiro
(Okinawa Inst. of Sci. and Tech. Grad. Univ.)
MCP of the sub-Finsler Heisenberg groups ····· 15

42 Ikkei Sato (Tokyo Metro. Univ.) Horoboundary of coarsely convex space ····· 15

14:15–15:15

43 Tomoshige Yukita (Int. Affairs Ashikaga Univ.) 10-dimensional hyperbolic Coxeter group with the smallest growth rate ····· 15

44 Ryoya Arimoto (Kyoto Univ.) Simplicity of crossed products of actions of totally disconnected locally compact groups on compac spaces ····· 15

45 Tetsu Toyoda (Kogakuin Univ.) Inequalities on six points in a CAT(0) space ····· 15

15:30–16:30 Talk Invited by Geometry Section

Masato Mimura (Tohoku Univ.) ♭ Invariant quasimorphisms and geometry

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Complex Analysis

March 18th (Tue) Conference Room IV

9:30–11:40

1 Toshiyuki Sugawa (Tohoku Univ.)
Li-Mei Wang
(Univ. of Int. Business and Econ.)
Hypergeometric functions and Hausdorff moment sequences ····· 15

2 Keisuke Soma (Waseda Univ.)
Yohei Komori (Waseda Univ.)
On the Dirichlet fundamental domains for n-gon groups ····· 15

3 Ryo Matsuda (Kyoto Univ.) ♭ David maps and Teichmüller theory ····· 15

4 Hideki Miyachi (Kanazawa Univ.) Boounded pluriharmonic functions and holomorphic functions on Teichmüller space and non-ergodicity of the action of the torelli group on the space of projective measured laminations ····· 15

5 Hideki Miyachi (Kanazawa Univ.) Second order infinitesimal spaces on Teichmüller space and duality between the Teichmüller metric and the L^1-norm for holomorphic quadratic differentials ····· 15

6 Katsuhiko Matsuzaki (Waseda Univ.) Teichmüller space of diffeomorphisms on the real line with bi-Lipschitz continuity ····· 15

7 Hiroshige Shiga (Kyoto Sangyo Univ. / Sci. Tokyo*) — On moduli spaces of Cantor sets 10

8 Yoshihiko Mitsumatsu (Chuo Univ.), Teruaki Kitano (Soka Univ.), Shigeyuki Morita (Univ. of Tokyo* / Sci. Tokyo*) — On the structure around fixed points of one dimensional real analytic diffeomorphisms 15

14:20–15:20 Talk Invited by Complex Analysis Section

Shun Kumagai (Hachinohe Inst. of Tech.) — Galois action on Teichmüller curves and related combinatorial objects

15:40–16:30

9 Takanori Ayano (Osaka Metro. Univ.), Victor M. Buchstaber (Steklov Math. Inst.) — A solution of the KP equation in terms of the abelian function of a real hyperelliptic curve 15

10 Tomoki Kawahira (Hitotsubashi Univ.) — Zalcman's lemma in higher dimensions and applications in two-dimensional complex dynamics 15

11 Tatsuhiro Honda (Senshu Univ.), Hidetaka Hamada (Kyushu Sangyo Univ.) — Bohr's phenomena in several complex variables 15

March 19th (Wed) Conference Room IV

9:30–11:40

12 Shaolin Chen (Hengyang Normal Univ.), Hidetaka Hamada (Kyushu Sangyo Univ.), Dou Xie (Hengyang Normal Univ.) — Hardy–Littlewood type theorems for the Dirichlet solution of a differential operator 15

13 Shaolin Chen (Hengyang Normal Univ.), Hidetaka Hamada (Kyushu Sangyo Univ.), Dou Xie (Hengyang Normal Univ.) — A Hopf type lemma for the Dirichlet solution of a differential operator 10

14 Shaolin Chen (Hengyang Normal Univ.), Hidetaka Hamada (Kyushu Sangyo Univ.) — Characterizations of pluriharmonic Bloch functions in bounded symmetric domains 15

15 Ian Graham (Univ. of Toronto), Hidetaka Hamada (Kyushu Sangyo Univ.), Gabriela Kohr (Babeş-Bolyai Univ.), Mirela Kohr (Babeş-Bolyai Univ.) — Subordination chains in infinite dimensions 15

16 Shota Kikuchi (Suzuka Nat. Coll. of Tech.) — On the Ohsawa–Takegoshi L^2-extension theorem by using Azukawa pseudometrics 15

17 Shun Sugiyama (Nat. Inst. of Tech., Kitakyushu Coll.) — q-complete with corners open sets and vanishing cohomology groups 15

18 Takeo Ohsawa (Nagoya Univ.)♭ — Hyperconvex submanifolds have hyperconvex neighborhoods 15

19 Takeo Ohsawa (Nagoya Univ.)♭ — Solving a generalized Levi problem on weakly 1-complete manifolds 15

13:00–14:00 Talk Invited by Complex Analysis Section

Masataka Iwai (Osaka Univ.) ♭ On the inequalities of Chern classes and the structure theorem

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Functional Equations

March 18th (Tue) Conference Room V

9:00–12:00

1 Hiroshi Ogawara (Josai Univ.) Differential transcendence of general solutions to Mahler-type difference Riccati equations ····· 12

2 Toshio Oshima (Josai Univ.) Resolution of singularities and middle convolutions of KZ-type equations ····· 12

3 Kosuke Shibuya (Tohoku Univ.) ♭ Brezis–Van Schaftingen–Yung formula on balls and its applications ··· 12

4 Takashi Suzuki (Osaka Univ.) Hodge decomposition on bounded domains in Euclidean space ····· 5

5 Ryuji Kajikiya (Osaka Electro-Comm. Univ.) Sobolev compact embeddings in unbounded domains ····· 12

6 Ryuji Kajikiya (Osaka Electro-Comm. Univ.) The Poincaré inequality and its applications. ····· 12

7 Aya Ishizeki (Saitama Univ.), Takeyuki Nagasawa (Saitama Univ.) Direct expressions of Möbius energies and their decomposition via the Gauss map ····· 10

8 Aya Ishizeki (Saitama Univ.), Takeyuki Nagasawa (Saitama Univ.) The variational formulas of Möbius energies via the Gauss map ····· 10

9 Taiga Morita (Tohoku Univ.), Satoshi Tanaka (Tohoku Univ.) Existence and multiplicity of positive entire solutions to the scalar field equation on a sphere ····· 12

10 Riku Nagai (Tohoku Univ.), Satoshi Tanaka (Tohoku Univ.) Uniqueness and nonuniqueness of positive solutions to the Emden equation on a sphere ····· 12

11 Keita Suzuki (Tohoku Univ.), Satoshi Tanaka (Tohoku Univ.) Energy estimates for least energy solutions of the generalized Hénon equation ····· 12

12 Daowen Lin (Okinawa Inst. of Sci. and Tech. Grad. Univ.), Xinan Ma (Univ. of Sci. and Tech. of China) Liouville type theorem for a class quasilinear p-Laplace type equation on the sphere ····· 12

14:15–16:45

13 Yoshihito Oshita (Okayama Univ.) Segregation pattern in a four-component reaction-diffusion system with mass conservation ····· 12

14 Kenichiro Umezu (Ibaraki Univ.) Positive solutions of a diffusive logistic equation with a non Lipschitz boundary condition arising in coastal fishery harvesting ····· 12

15 Pablo Álvarez-Caudevilla (Univ. Carlos III de Madrid)
Tatsuya Watanabe (Kyoto Sangyo Univ.)
Existence and characterization of ground states for fourth order nonlinear elliptic systems ····· 12

16 Mathieu Colin (Univ. de Bordeaux)
Tatsuya Watanabe (Kyoto Sangyo Univ.)
Ground state solutions for nonlocal nonlinear elliptic equation with a doping profile ····· 12

17 Alessio Pomponio (Politecnico di Bari)
Tatsuya Watanabe (Kyoto Sangyo Univ.)
Nonlinear scalar field equation with point interaction ····· 12

18 Tomoharu Kinoshita (Waseda Univ.)
Yuki Osada (Saitama Univ.)
Multiplicity of solutions for a nonlinear Schrödinger system with three wave interaction ····· 10

19 Hiroko Sekisaka-Yamamoto (RIKEN)
Ayuki Sekisaka (Meiji Univ.)
Stability problem for modulated traveling wave solutions connecting wave trains in reaction-diffusion systems ····· 12

20 Ayuki Sekisaka (Meiji Univ.)
Existence problem of a modulated traveling wave between two modulated traveling waves ····· 12

21 Tatsuki Mori (Musashino Univ.)
Yasuhito Miyamoto (Univ. of Tokyo)
Tohru Tsujikawa (Univ. of Miyazaki*/Meiji Univ.)
Shoji Yotsutani (Ryukoku Univ.*)
Symmetry breaking bifurcation and the stability of stationary solutions of nonlocal Allen–Cahn equation ····· 12

22 Masaharu Taniguchi (Okayama Univ.)
Polyhedral entire solutions in reaction-diffusion equations ····· 12

17:00–18:00 Talk Invited by Functional Equations Section

Michiaki Inaba (Nara Women's Univ.)
Moduli space of rational connections and the geometry of Painlevé equations

March 19th (Wed) Conference Room V

9:00–12:00

23 Shingo Takeuchi (Shibaura Inst. of Tech.)
Nagi Suzuki (Shibaura Inst. of Tech.)
Generalization of the complete elliptic integrals and the Legendre relation by the eigenfunctions of p-Laplacian ····· 12

24 Hiroshi Wakui (Univ. of Fukui)
Tetsuya Yamada (Fukui Nat. Coll. of Tech.)
Stability of constant steady states of a drift-diffusion equation with an attraction-repulsion drift term ····· 12

25 Shohei Kohatsu (Tokyo Univ. of Sci.)
Takasi Senba (Fukuoka Univ.)
Forward self-similar solutions and stationary solutions to flux-limited Keller–Segel systems ····· 12

26 Shohei Kohatsu (Tokyo Univ. of Sci.)
Takasi Senba (Fukuoka Univ.)
Critical mass and stability of stationary solutions to flux-limited Keller–Segel systems ····· 12

27 Masahiko Shimojo (Tokyo Metro. Univ.)
Jong-Shenq Guo (Tamkang Univ.)
Karen Guo (Providence Univ.)
Convergence to forced waves for the Fisher-KPP equation in a shifting environment ····· 12

28 Mario Fuest (Leibniz Univ. Hannover)
Yuya Tanaka (Kwansei Gakuin Univ.)
Finite-time blow-up for a three-dimensional chemotaxis-May–Nowak model in the supercritical case · · · · · 12

29 Hayato Nakamura (Univ. of Tokyo)
Keisuke Nishigaki (EY Japan)
Yasuhito Miyamoto (Univ. of Tokyo)
Exact periods and exact critical values for Hopf bifurcations from multi-peak solutions of the shadow Gierer–Meinhardt model · · · · · 10

30 Kazuya Hirose (Hokkaido Univ.)
Lower gradient estimates for viscosity solutions to first-order Hamilton–Jacobi equations depending on the unknown function · · · · · 10

31 Tapio Kurkinen
(Okinawa Inst. of Sci. and Tech. Grad. Univ.)
Harnack's inequalities for a nonlinear parabolic equation in non-divergence form · · · · · 10

32 Junichi Harada (Akita Univ.)
Dynamics near the ground states for the Sobolev critical Fujita type heat equation in 6D · · · · · 8

33 Marius Ghergu (UCD)
Yasuhito Miyamoto (Univ. of Tokyo)
The Gel'fand problem on expanding tubular domains in $\mathbb{R}^2$: Existence and the Morse index of solutions · · · · · 10

13:00–14:00 Award Lecture for the 2024 MSJ Analysis Prize

Yūki Naito (Hiroshima Univ.)
Structure of radially symmetric solutions to nonlinear elliptic equations

March 20th (Thu) Conference Room V

9:30–12:00

34 Shota Fukushima (Chiba Inst. of Tech.)
Yong-Gwan Ji
(Korea Inst. for Adv. Stud.)
Hyeonbae Kang (Inha Univ.)
Xiaofei Li (Zhejiang Univ. of Tech.)
Estimate of electric field around perfect conductors with interface resistance · · · · · 12

35 Naoto Kajiwara (Gifu Univ.)
Ken Furukawa (Univ. of Toyama)
Yoshikazu Giga (Univ. of Tokyo)
No formulation of a new phase for a free boundary problem in combustion theory · · · · · 10

36 Shigeru Sakaguchi (Tohoku Univ.)
Temperature and the mean curvature of the interface · · · · · 12

37 Hiroyuki Hirayama (Univ. of Miyazaki)
Shinya Kinoshita (Sci. Tokyo)
Mamoru Okamoto (Osaka Univ.)
Well-posedness for the system of derivative nonlinear Schödinger equations with periodic initial data · · · · · 12

38 Hiroyuki Hirayama (Univ. of Miyazaki)
Shinya Kinoshita (Sci. Tokyo)
Mamoru Okamoto (Osaka Univ.)
Ill-posedness for the system of derivative nonlinear Schrödinger equations with periodic initial data · · · · · 12

39 Jumpei Kawakami (Kyoto Univ.)
Jason Murphy (Univ. of Oregon)
Small and large data scattering for the dispersion-managed NLS · · · · · 12

40 Shun Tsuhara (Kanagawa Univ.)
Takayoshi Ogawa (Waseda Univ.)
On the well-posedness of nonlinear Schrödinger equation on the half space with a nonlinear Neumann boundary condition · · · · · 12

41 Norisuke Ioku (Tohoku Univ.)
Shuji Yoshikawa (Oita Univ.)
The discrete Brezis–Gallouet inequality and finite difference method for 2D nonlinear Schrödinger equation · · · · · 12

42 Ryo Muramatsu (Tokyo Univ. of Sci.)
Well-posedness on modulation spaces for Schrödinger equation with rough magnetic fields · · · · · 12

43 Ryo Muramatsu (Tokyo Univ. of Sci.)
Fumihito Abe (J Institute Co., Ltd.)
Characterization of the wave front set for the solutions of the Schrödinger equations with magnetic fields 12

14:15–16:45

44 Shunya Hashimoto (Saitama Univ.)
Masaru Hamano (Waseda Univ.)
Shuji Machihara (Saitama Univ.)
Global solution for the stochastic nonlinear Schrödinger system in four dimensions 10

45 Mamoru Okamoto (Osaka Univ.)
Toshiki Kondo (Osaka Univ.)
Ill-posedness for a higher-order nonlinear Schrödinger equation with a derivative on the circle 12

46 Koichi Komada (Ritsumeikan Univ.)
Scattering problem for group-symmetric solutions of the nonlinear fourth-order Schrödinger equation 12

47 Haruya Mizutani (Osaka Univ.)
Luca Fanelli (UPV/EHU)
Luz Roncal (BCAM)
Nico Michele Schiavone (TU of Madrid)
Local smoothing effects for the Schrödinger equation with the Heisenberg sub-Laplacian 12

48 Ikki Fukuda (Shinshu Univ.)
Optimal decay estimate and asymptotic profile for solutions to the generalized KP equation with an anisotropic dissipation term 12

49 Kenjiro Ishizuka (Kyoto Univ.)
2-solitary waves of the complex-valued nonlinear damped Klein–Gordon equation 10

50 Shun Takizawa (Tokyo Univ. of Sci.)
Boundedness of propagators for Dirac equations with potentials on Wiener amalgam spaces 12

51 Yuki Kurokawa (Hokkaido Univ. of Edu.)
The effects of two nonlinearities on the critical decay for systems of wave equations 10

52 Kimitoshi Tsutaya (Hirosaki Univ.)
Yuta Wakasugi (Hiroshima Univ.)
Global existence and blow up of solutions of time derivative nonlinear wave equations 12

53 Motohiro Sobajima (Tokyo Univ. of Sci.)
Kimitoshi Tsutaya (Hirosaki Univ.)
Yuta Wakasugi (Hiroshima Univ.)
Appearance of Strauss-type exponent in semilinear wave equations with time-dependent speed of propagation 12

17:00–18:00 Talk Invited by Functional Equations Section

Tatsuya Miura (Kyoto Univ.) ♭ Escher–Ito's problem for area-preserving curvature flows

March 21st (Fri) Conference Room V

9:30–12:00

54 Masahiro Takayama (Keio Univ.)
Tatsuo Iguchi (Keio Univ.)
Well-posedness of the initial boundary value problem for the motion of an inextensible hanging string 12

55 Yoshihiro Ueda (Kobe Univ.)
Linear stability for the scalar viscous conservation laws with delay effect 12

56 Yoshihiro Ueda (Kobe Univ.)
Nonlinear stability for the scalar viscous conservation laws with delay effect 12

57 Ken Furukawa (Univ. of Toyama)
Well-posedness for drift-diffusion equations under the dynamic boundary condition describing filtration 10

58 Ken Furukawa (Univ. of Toyama) Data assimilation to the primitive equations in H^2 ····· 10

59 Morimichi Umehara (Univ. of Miyazaki) A steady and spherically symmetric flow of the viscous heat-conducting and self-gravitating gas ····· 12

60 Yusuke Ishigaki (Osaka Univ.), Takayuki Kobayashi (Osaka Univ.) Local energy decay estimates of solutions to linearized compressible viscoelastic system in three dimensional exterior domain ····· 12

61 Masakazu Yamamoto (Niigata Univ.) Parabolic-scalings on large-time behavior of the incompressible Navier–Stokes flow ····· 12

62 Yuta Koizumi (Waseda Univ.) Gevrey type error estimates of solutions to the Navier–Stokes equations ····· 12

14:15–16:30

63 Hiroyuki Tsurumi (Tokushima Univ.), Mikihiro Fujii (Nagoya City Univ.) Solutions of the 2D stationary Navier–Stokes equations on the whole plane around a uniform flow ····· 12

64 Shozo Ogino (Tohoku Univ.)♭ Strong convergence of the low Mach number limit in the scaling critical space for the compressible Navier–Stokes equations ····· 12

65 Zhongyang Gu (Univ. of Tokyo), Xin Hu (Wuhan Univ.), Pritpal Matharu (KTH Royal Inst. of Tech.), Bartosz Protas (McMaster Univ.), Makiko Sasada (Univ. of Tokyo), Tsuyoshi Yoneda (Hitotsubashi Univ.) The incompressible Navier–Stokes limit from the lattice BGK Boltzmann equation ····· 10

66 Taichi Eguchi (Waseda Univ.) Energy equality and inviscid limit of the fractional Navier–Stokes equations ····· 12

67 Mitsuo Higaki (Kobe Univ.), Yulong Lu (Univ. of Minnesota), Jinping Zhuge (Morningside Center of Math.) Wall laws for viscous flows in 3D randomly rough pipes ····· 10

68 Mikihiro Fujii (Nagoya City Univ.) Stationary Navier–Stokes equations on the half space in the scaling critical framework ····· 12

69 Jou-chun Kuo (Waseda Univ.), Yoshihiro Shibata (Waseda Univ.*) L_1 approach to the compressible viscous fluid flows in general domains ····· 12

70 Yuko Enomoto (Shibaura Inst. of Tech.), Yoshihiro Shibata (Waseda Univ.*) About Stokes equation with free boundary condition ····· 12

71 Yoshihiro Shibata (Waseda Univ.*) Free boundary problem in the half-space ····· 12

16:45–17:45 Talk Invited by Functional Equations Section

Erika Ushikoshi (Yokohama Nat. Univ.) Helmholtz–Weyl decomposition on a time dependent domain with an application to time periodic Navier–Stokes flows with large flux

Real Analysis

March 20th (Thu) Conference Room IV

9:00–12:00

1 Takeshi Iida (Fukushima Nat. Coll. of Tech.) — On commutators generated by BMO-function and the fractional integral operator in Orlicz–Morrey spaces ····· 15

2 Kotaro Inami (Nagoya Univ.) — Randomized Strichartz estimates in modulation spaces ····· 15

3 Naoya Hatano (Chuo Univ.) — Characterization for BMO norm via quasi-Banach lattices ····· 15

4 Satoshi Yamaguchi (Ibaraki Univ.), Eiichi Nakai (Ibaraki Univ.), Katsunori Shimomura (Ibaraki Univ.) — Generalized Campanato spaces with $p = 1$ and the duals of atomic Hardy spaces ····· 15

5 Motofumi Aoki (Kyoto Univ.), Tsukasa Iwabuchi (Tohoku Univ.) — On the fractional Leibnitz rule in bounded domains ····· 15

6 Koji Aoyama (Chiba Univ.), Shigeru Iemoto (Chuo Univ.) — Parallel methods for strongly quasinonexpansive mappings in a Hilbert space ····· 15

7 Sachiko Atsushiba (Tokyo Woman's Christian Univ.) — Weak and strong convergence theorems for monotone nonexpansive mappings and α-nonexpansive mappings ····· 15

8 Takashi Honda (Iwate Univ.) — Convergence theorems of conditional expectations by using contractive projections on a Banach space ····· 15

9 Hiroko Manaka (Nihon Univ.) — Relation between an averaged mapping in a Hilbert space and a nonlinear mapping in Banach spaces ····· 15

10 Shin-ya Matsushita (Akita Pref. Univ.) — On fixed point algorithms using metric projections ····· 15

11 Aqib Saghir (Saitama Univ.), Shunya Hashimoto (Saitama Univ.) — A fixed point result of Kannan-type for multi-valued mapping on fuzzy metric spaces ····· 10

14:15–15:30

12 Yukino Tomizawa (Niigata Inst. of Tech.) — A geometric constant of complete Busemann spaces ····· 15

13 Toshiharu Kawasaki (Tamagawa Univ.) — Some properties of the extended integral, II ····· 15

14 Fukuda Ryoji (Oita Univ.), Honda Aoi (Kyushu Inst. of Tech.), Yoshiaki Okazaki (Fuzzy Logic Systems Inst.) — Linear topological structure of a function space determined by a non-additive measure ····· 15

15 Jun Kawabe (Shinshu Univ.) — Generalized monotone convergence theorems for nonlinear integrals ·· 15

15:45–16:45 Award Lecture for the 2024 MSJ Analysis Prize

Hitoshi Tanaka (Tsukuba Univ. of Tech.) — Rectangular fractional integral operator, Carleson-type embedding theorems, Fefferman–Phong-type condition

17:00–18:00 Talk Invited by Real Analysis Section

Yoshihiro Sawano (Tokyo Metro. Univ.) — Morrey spaces

March 21st (Fri) Conference Room IV

9:00–12:00

16 Naotaka Ukai (Chiba Univ.)
Daiki Mizuno (Chiba Univ.)
Ken Shirakawa (Chiba Univ.)
Harbir Antil (George Mason Univ.)
Coupling system of elliptic and pseudo-parabolic PDEs arising from anisotropic image-denoising · · · · · 14

17 Makoto Okumura (Konan Univ.)
A linear structure-preserving scheme for the two-dimensional Cahn–Hilliard equation with a dynamic boundary condition · · · · · 14

18 Yutaro Chiyo (Tokyo Univ. of Sci.)
Hisashi Terasaki (Tokyo Univ. of Sci.)
Yutaka Tsuzuki (Hiroshima Shudo Univ.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Solvability in a special case of a moisture transport model for porous materials · · · · · 14

19 Akiko Morimura (Japan Women's Univ.)
Toyohiko Aiki (Japan Women's Univ.)
Error estimates of approximate solutions for a nonlinear parabolic equation with a non-monotone boundary condition by the finite volume method · · · · · 14

20 Yusuke Murase (Meijo Univ.)
Numerical simulations for moisture transport model in 1-dimensional spacial domain · · · · · 14

21 Shohei Kohatsu (Tokyo Univ. of Sci.)
Global smooth solutions for measure-valued initial data in a Keller–Segel system with nonlinear diffusion and flux limitation · · · · · 14

22 Yuya Tanaka (Kwansei Gakuin Univ.)
Silvia Frass (Univ. of Cagliari)
Giuseppe Viglialoro (Univ. of Cagliari)
Boundedness in a chemotaxis system involving gradient-dependent source with Robin boundary condition · · · · · 14

23 Mario Fuest (Leibniz Univ. Hannover)
Johannes Lankeit (Leibniz Univ. Hannover)
Masaaki Mizukami (Kyoto Univ. of Edu.)
Global solvability of a model for the formation of granuloma during tuberculosis infections · · · · · 14

24 Hana Kakiuchi (Japan Women's Univ.)
Toyohiko Aiki (Japan Women's Univ.)
On uniqueness of solutions to a free boundary problem representing the baking process · · · · · 14

25 Kota Kumazaki (Kyoto Univ. of Edu.)
Maximum estimates of derivatives for the solution to a one-dimensional free boundary problem · · · · · 14

26 Pierluigi Colli (Univ. of Pavia)
Shunsuke Kurima (Tokyo Univ. of Sci.)
Existence for a phase field system in the case that the equation regarding the order parameter is a hyperbolic Cahn–Hilliard equation · · · · · 14

27 Takeshi Fukao (Ryukoku Univ.)
Pierluigi Colli (Univ. of Pavia)
Second order parabolic equations with higher order dynamic boundary conditions · · · · · 14

14:15–16:45

28 Takuma Yoshizumi (Osaka Univ.)
Makoto Nakamura (Osaka Univ.)
Blowing-up solutions for semi-linear Klein–Gordon equations with the blowing-up space in FLRW spacetimes · · · · · 14

29 Sho Watabe (Niigata Univ.)
Hiroki Ohwa (Niigata Univ.)
L^1 contractive solutions to the Cauchy problem of conservation laws with a discontinuous flux · · · · · 14

30 Takanori Ebata (Niigata Univ.)
Hiroki Ohwa (Niigata Univ.)
A uniqueness condition for weak solutions of conservation laws · · · · · 14

31 Hiroyoshi Mitake (Univ. of Tokyo)
Hiroshi Watanabe (Oita Univ.)
Equivalence of entropy solutions and viscosity solutions to degenerate parabolic equations and its applications ····· 14

32 Daiki Mizuno (Chiba Univ.)
Ken Shirakawa (Chiba Univ.)
A constrained optimal control problem associated with a parabolic KWC system with a relaxation term ····· 14

33 Nobuyuki Kato (Kanazawa Univ.)
Existence of measure-valued solutions in optimal harvesting problems ····· 14

34 Ken Shirakawa (Chiba Univ.)
Hiroshi Watanabe (Oita Univ.)
J. Salvador Moll (Univ. Valencia)
Uniqueness of nonlinear parabolic systems involving regularized 1-harmonic type flows ····· 14

35 Yoshihito Nakajima (Tohoku Univ.)
Solvability of nonlinear evolution equations governed by time-dependent subdifferential operators involving time-fractional derivatives and applications ····· 14

36 Noriaki Yamazaki (Kanagawa Univ.)
Masahiro Kubo (Wakayama Univ.)
Periodic solutions to a class of quasi-variational evolution equations ····· 14

37 Akio Ito
Existence of strong solutions to mass-conserved tumor invasion model with quasi-variational structures ····· 14

17:00–18:00 Talk Invited by Real Analysis Section

Chiharu Kosugi (Yamaguchi Univ.)
Mathematical analysis of models representing motions for the elastic curve with the compressible stress function

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Functional Analysis

March 18th (Tue) Conference Room VII

9:30–10:55

1 Hisashi Morioka (Ehime Univ.)
Kazunori Ando (Ehime Univ.)
Hiroshi Isozaki (Univ. of Tsukuba*)
Unique continuation theorem for discrete Schrödinger operators on lattices ····· 15

2 Hiroki Sako (Niigata Univ.)
existence of a continuous time quantum walk which realizes a given discrete time quantum walk ····· 15

3 Itaru Sasaki (Shinshu Univ.)
Yasumichi Matsuzawa (Shinshu Univ.)
Shinnosuke Izumi (Shinshu Univ.)
Kouta Imura
(Nagano Pref. Fujimi High School)
On the holomorphy of the ground state of the Pauli–Fierz model in the dipole approximation ····· 15

4 Fumio Hiroshima (Kyushu Univ.)
Analysis of ground state and renormalized spectral zeta function of Rabi model ····· 15

11:00–12:00 Talk Invited by Functional Analysis Section

Yukihide Tadano (Univ. of Hyogo)
Long-range scattering theory of discrete quantum systems

March 19th (Wed) Conference Room VII

9:30–10:50

5 Takashi Satomi (RIKEN) Relation of the optimal constant of Young's convolution inequality between locally compact groups and their closed subgroups ····· 15

6 Ryosuke Nakahama (NTT Inst. for Funda. Math.) Holographic operators for the tensor products of holomorphic functions on bounded symmetric domains ····· 15

7 Toshihisa Kubo (Ryukoku Univ.) The branching law of a scalar generalized Verma module for $(\mathfrak{sl}(n+1,\mathbb{C}), \mathfrak{p}_{1,n})$ to $\mathfrak{sl}(n,\mathbb{C})$ ····· 15

8 Víctor Pérez-Valdés (Ryukoku Univ.) On symmetry breaking operators between S^3 and S^2 ····· 15

11:00–12:00 Talk Invited by Functional Analysis Section

Takuma Hayashi (Osaka Metro. Univ.) Rationality problems in representation theory

March 20th (Thu) Conference Room VII

9:30–10:55

9 Yuki Seo (Osaka Kyoiku Univ.) Estimates of the operator geometric mean by the Hadamard product ····· 15

10 Kenta Kojin (Nagoya Univ.) Some relations between Schwarz–Pick inequality and von Neumann's inequality ····· 15

11 Hikaru Awazu (Univ. of Tokyo) Amenability of group actions and Banach algebras ····· 15

12 Boo Rim Choe (Korea Univ.), Xin Guo (Zhongnan Univ. of Econ. and Law), Takuya Hosokawa (Ibaraki Univ.), Hyungwoon Koo (Korea Univ.), Shûichi Ohno, Maofa Wang (Wuhan Univ.) Hilbert–Schmidt double differences of composition operators ····· 15

13 Takeshi Miura (Niigata Univ.), M. G. Cabrera-Padilla (Almería Univ.), Antonio Jimenéz-Vargas (Almería Univ.), Moisés Villegas-Vallecillos (Cádiz Univ.) Function spaces formed by differentiable functions and surjective isometries on them ····· 15

11:00–12:00 Talk Invited by Functional Analysis Section

Kouhei Izuchi (Yamaguchi Univ.) Invariant subspaces in Hardy space on the bidisk

14:30–17:00

14 Takehiko Mori (Chiba Univ.) Application of operator theory for the Collatz conjecture ····· 15

15 Hyuga Ito (Nagoya Univ.) B-valued semi-circular system and free Poincaré inequality ····· 15

16 Hajime Moriya (Kanazawa Univ.) Thermal area law for infinite quantum systems ····· 10

17 Yuhei Suzuki (Hokkaido Univ.) Amenable actions on ill-behaved simple C*-algebras ····· 15

Statistics and Probability

March 18th (Tue) Conference Room VIII

9:30–11:20

14:15–15:15 Award Lecture for the 2024 MSJ Analysis Prize

15:30–16:30 Talk Invited by Statistics and Probability Section

March 19th (Wed) Conference Room VIII

9:30–11:20

8 Toru Sera (Osaka Univ.) Higher order approximations in arcsine laws for subordinators ····· 15

9 Soma Nishino (Tokyo Metro. Univ.), Kensuke Ishitani (Tokyo Metro. Univ.) Construction of diffusion house-moving ····· 15

10 Yuji Hamana (Univ. of Tsukuba), Hiroyuki Matsumoto (Aoyama Gakuin Univ.) Joint distribution of the hitting time and site for Ornstein–Uhlenbeck process ····· 10

11 Yuki Suzuki (Keio Univ.) Diffusion processes with random potentials consisting of three selfsimilar processes ····· 15

12 Rikuki Okamoto (Ritsumeikan Univ.), Jiro Akahori (Ritsumeikan Univ.), Norio Konno (Ritsumeikan Univ./Yokohama Nat. Univ.*), Shohei Koyama (Ritsumeikan Univ.), Iwao Sato (Oyama Nat. Coll. of Tech.) Carr–Nadtochiy's weak reflection principle for quantum walk ····· 15

13 Ryoichi Suzuki (Ritsumeikan Univ.), Noriyoshi Sakuma (Osaka Univ.), Masahiro Handa (Ritsumeikan Univ.) A Clark–Ocone–Haussmann type formula under change of measure for L^1-canonical additive processes and its applications ····· 15

14 Yuji Shinozaki (Musashino Univ.), Kohei Hayashi (RIKEN) Numerical methods for the rough volatility model: High-order discretization using Markovian approximation and KLNV scheme ····· 15

11:20–11:50 Research Section Assembly

March 20th (Thu) Conference Room VIII

9:30–11:30

15 Teruo Tanaka (Hiroshima City Univ.) Bellman equations associated with optimal stopping problems for discrete time N-parameter Markov processes ····· 10

16 Hayato Takahashi (Random Data Lab.) Exact distributions of p-values of Kolmogorov–Smirnov tests and tests of random numbers ····· 15

17 Masatake Hirao (Aichi Pref. Univ.) On Sobolev statistics from the perspective of the quasi-Monte Carlo method on the sphere ····· 15

18 Tomoki Tamaru (Kobe Univ.), Kenji Tanino (Kobe Univ.), Masatake Hirao (Aichi Pref. Univ.), Masanori Sawa (Kobe Univ.) More on the corner-vector construction for spherical designs ····· 15

19 Ayaka Yagi (Tokyo Univ. of Sci.), Hiroto Kozawa (Tokyo Univ. of Sci.), Takashi Seo (Tokyo Univ. of Sci.) The null distribution of simplified T^2-type test statistic for two-sample problem with two-step monotone missing data ····· 15

20 Hitoshi Motoyama (Aoyama Gakuin Univ.) A simple derivation of the asymptotic normality of quantile estimators in unequal probability sampling ····· 15

21 Ken-ichi Koike (Nihon Univ.), Soshi Banno (Dai-ichi Life Techno Cross Co., Ltd.) Attainment conditions of the Bayesian information inequalities for the escort distribution ····· 10

22 Hirai Mukasa (Kyushu Univ.) Research on Bayes linear estimators in a general linear model ····· 15

March 21st (Fri) Conference Room VIII

9:30–11:30

23 Rinka Sagawa (Waseda Univ.)
Kazuki Koizumi (Waseda Univ.)
Yan Liu (Waseda Univ.)
Asymptptic theory for exponential smoothings · · · · · 10

24 Rinka Sagawa (Waseda Univ.)
Prediction error under model misspecification for multivariate harmonic time series regression models · · · · · 15

25 Yosei Yoshida (Waseda Univ.)
Yan Liu (Waseda Univ.)
V-statistic for high-dimensional time series · · · · · 10

26 Xiaofei Xu (Wuhan Univ.)
Yan Liu (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
Second-order robustness for time series inference · · · · · 15

27 Junichi Hirukawa (Niigata Univ.)
Kou Fujimori (Shinshu Univ.)
Innovation algorithm of fractionally integrated ($I(d)$) process and applications on the estimation of parameters · · · · · 15

28 Hiroki Masuda (Univ. of Tokyo / JST CREST)
Alexei Kulik (Wroclaw Univ. of Sci. and Tech.)
Explicit LAD estimator of locally stable nonlinear SDE · · · · · 15

29 Sho Sakai (Univ. of Tsukuba)
Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
Hypothesis testing for PCR coefficients in high-dimensional settings · · · · · 15

30 Kento Egashira (Tokyo Univ. of Sci.)
Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
Asymptotic properties of change-point detection based on Euclidean distance in high-dimensional settings · · · · · 15

14:15–15:15 Talk Invited by Statistics and Probability Section

Ryoya Oda (Hiroshima Univ.)
Selection consistency of KOO method in high-dimensional and large-sample multivariate linear regression models

15:30–16:30 Talk Invited by Statistics and Probability Section

Sumito Kurata (Kyushu Univ.)
Model evaluation criteria with robustness in selection based on statistical divergence measures

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Applied Mathematics

March 18th (Tue) Conference Room IX

9:30–11:50

1 Yusaku Nishimura (Waseda Univ.)
Kneser chromatic function and complete invariants for trees · · · · · 15

2 Yuta Watanabe (Aichi Univ. of Edu.)
Representations of ordered Hamming schemes · · · · · 15

3 Hirotake Kurihara (Yamaguchi Univ.)
Wirtinger inequalities and the Euclidean distortions for association schemes · · · · · 15

4 Tomohiro Kamiyoshi (Matsue Coll. of Tech.), Makoto Nagura (Osaka Electro-Comm. Univ.), Shin-ichi Otani (Kanto Gakuin Univ.) — On the principal part of production matricies for the exponential recursive matrix of unified Stirling numbers · · · 15

5 Diogo Kendy Matsumoto (Teikyo Univ. of Sci.) — 3-self-centered unique eccentric point graphs · · · 15

6 Akihiro Higashitani (Osaka Univ.), Kenta Ueyama (Shinshu Univ.) — Switching equivalence classes of skew-symmetric matrices and modular Eulerian matrices · · · 15

7 Yuho Tanaka (Waseda Univ.) — The directed spanning trees of the directed square cycles · · · 15

8 Xiao-Nan Lu (Gifu Univ.) — Existentially closed critical Cayley graphs · · · 15

14:15–15:55

9 Hirotake Yaguchi (Mie Univ.⋆) — Generation of nonrecursive n-bit pseudorandom numbers based on β-transformation on $[1, 2)$ $(n = 64, 128, 192, ..., 8192)$ · · · 15

10 Yoshinori Kametaka (Osaka Univ.⋆), Kohtaro Watanabe (Nat. Defense Acad. of Japan), Atsushi Nagai (Tsuda Coll.), Kazuo Takemura (Nihon Univ.), Hiroyuki Yamagishi (Tokyo Metropolitan Coll. of Indus. Tech.), Hiroto Sekido (Osaka Seikei Univ.) — The best constant of discrete Sobolev inequality on $C_{20} \sim C_{60}$ fullerene · · · 15

11 Hideaki Morita (Muroran Inst. of Tech.) — On Negami–Sato's lemma for finite digraphs · · · 15

12 Xinmiao Zhang (Ritsumeikan Univ.), Jiro Akahori (Ritsumeikan Univ.), Norio Konno (Ritsumeikan Univ./Yokohama Nat. Univ.⋆), Iwao Sato (Oyama Nat. Coll. of Tech.), Yuma Tamura (Ritsumeikan Univ.) — The exponential expression for Konno–Sato theorem · · · 15

13 Jirô Akahori (Ritsumeikan Univ.), Norio Konno (Ritsumeikan Univ./Yokohama Nat. Univ.⋆), Iwao Sato (Oyama Nat. Coll. of Tech.), Yuma Tamura (Ritsumeikan Univ.), Xinmiao Zhang (Ritsumeikan Univ.) — Absolute zeta functions with respect to bipartite walks on bipartite graphs · · · 15

14 Iwao Sato (Oyama Nat. Coll. of Tech.), Takashi Kmatsu (Univ. of Yamanashi), Norio Konno (Ritsumeikan Univ./Yokohama Nat. Univ.⋆), Sho Kubota (Aichi Univ. of Edu.) — The trace formula with respect to the twisted Grover matrix of a graph · · · 15

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

Ayaka Ishikawa (Yamagata Univ.) — The Ihara expression of the graph zeta function

March 19th (Wed) Conference Room IX

10:00–11:50

15 Toranosuke Omura (Hokkaido Univ.) Constructing an $m \times (n+1)$ trianguloid from an $m \times n$ trianguloid ····· 15

16 Aki Mori (Setsunan Univ.) Triangular faces of the order and chain polytope of a maximal ranked poset ····· 15

17 Masahiro Hachimori (Univ. of Tsukuba) Partitionability of nonpure simplicial complexes and h-triangles ····· 15

18 Shinya Fujita (Yokohama City Univ.) The domination number of a central graph and the vertex cover of a graph ····· 10

19 Tomoki Yamashita (Kindai Univ.), Katsuhiro Ota (Keio Univ.) An Ore-type condition for 2-edge-connected $[2, k]$-factors in 2-connected graphs ····· 15

20 Kuniharu Yokomura (Tokai Univ.) On degree conditions of balanced 3-partite panconnected graphs ····· 15

21 Kazunori Matsuda (Kitami Inst. of Tech.), Yuichi Yoshida (City Office of Kitami) The minimum value of vertices and edges of connected simple graphs with three invariants associated with the matching having specific values ····· 15

13:15–14:00

22 Kohei Tanaka (Shinshu Univ.) Lefschetz calculus in finite spaces and its applications ····· 15

23 Kengo Enami (Tsuda Coll.), Shun-ichi Maezawa (Nihon Univ.), Yusuke Suzuki (Niigata Univ.) 3-Linkedness of optimal 1-planar graphs ····· 15

24 Kenta Noguchi (Tokyo Univ. of Sci.) Embedding of complete graphs so that the dual has a 1-cut II ····· 15

March 20th (Thu) Conference Room IX

9:25–12:00

25 Yoshihito Ogasawara (Waseda Univ./Shibaura Inst. of Tech./Miyoshigokinkogyo Co. Ltd.) Epistemology as applied topology ····· 15

26 Yuuya Yoshida (Nagoya Inst. of Tech.) Mathematical comparison of classical and quantum mechanisms in optimization under local differential privacy ····· 15

27 Matthieu Cadiot (McGill Univ.), Jonathan Jaquette (New Jersey Inst. of Tech.), Jean-Philippe Lessard (McGill Univ.), Akitoshi Takayasu (Univ. of Tsukuba) Computer-assisted proofs using Zernike polynomials: A proof of Banach algebra in a weighted sequence space ····· 15

28 Atsushi Nakayasu (Univ. of Tokyo), Takayuki Yamada (Univ. of Tokyo) Mathematical analysis of a partial differential equation system on the thickness ····· 15

29 Keita Iida (Osaka Univ.) Analyzing a probabilistic generative model for Markov jump process using generalized hypergeometric series ····· 15

30 Kosuke Suzuki (Yamagata Univ.) On median quasi-Monte Carlo integration ····· 15

31 Harunori Monobe (Osaka Metro. Univ.)
Yoshihisa Morita (Ryukoku Univ.*)
Construction of stable non-constant solutions to the bistable reaction-diffusion equation on metric graphs ····· 15

32 Sungrim Seirin Lee (Kyoto Univ./Kyoto Univ.)
Takahiro Hiraga (Kyoto Univ.)
Hiroshi Ishii (Hokkaido Univ.)
Mathematical dermatology: Inference of pathological state from skin eruption shape for personalized treatment in chronic spontaneous urticaria ····· 15

33 Junyong Eom (Hokkaido Univ.)
Nagayama Masaharu (Hokkaido Univ.)
Ueda Yuki (Hokkaido Univ.)
Uchiumi Sinya (Hokkaido Univ.)
Nakaoka Sinji (Hokkaido Univ.)
Kume Sinya (Shiga Univ. of Medical Sci.)
Suito Hiroshi (Tohoku Univ.)
Katagiri Hideki (Tohoku Univ.)
A mathematical model of glucose-insulin dynamics and parameter estimation ····· 15

14:15–14:40 Presentation Ceremony for the 2024 Applied Mathematics Prize

14:50–16:30

34 Kazuyuki Yagasaki (Kyoto Univ.)
Kuramoto model with natural frequencies on a uniform graph and its continuum limit ····· 15

35 Donggeon Kim (Kyoto Univ.)
Kazuyuki Yagasaki (Kyoto Univ.)
Feedback control of the Kuramoto model defined on uniform graphs ····· 15

36 Kazunori Matsui (Tokyo Univ. of Marine Sci. and Tech.)
Yoshiho Akagawa (Gifu Nat. Coll. of Tech.)
A numerical method for an elastoplastic model with nonlinear strain hardening ····· 15

37 Takashi Suzuki (Osaka Univ.)
Mathematical modeling of mixed therapy using radiation and drug ··· 15

38 Kyoko Tomoeda (Setsunan Univ.)
Kaname Matsue (Kyushu Univ./Kyushu Univ.)
Particle-laden flows on non-flat inclines in the settled regime: Mathematical modeling and numerical investigations ····· 15

39 Natsume Motohashi (Hokkaido Univ.)
Reaction-diffusion model of a self-propelled system ····· 15

16:45–17:45 Talk Invited by Applied Mathematics Section

Kazuyuki Yagasaki (Kyoto Univ.)
On the development of the theory of nonintegrability of dynamical systems after Poincaré

March 21st (Fri) Conference Room IX

9:25–12:00

40 Ken Nakashima (Shimane Univ.)
Ippei Obayashi (Okayama Univ./Tohoku Univ.)
On fast algorithm for connected persistence diagrams ····· 15

41 Ippei Obayashi (Okayama Univ./Tohoku Univ.)
Ken Nakashima (Shimane Univ.)
RuCPD: Software for connected persistence diagrams ····· 15

42 Takehiko Kinoshita (Saga Univ.)
Yoshitaka Watanabe (Kyushu Univ.)
Mitsuhiro T. Nakao (Waseda Univ.)
Some quantitative lower bound estimates for the norm of resolvent and its applications ····· 15

43 Shinya Uchiumi (Hokkaido Univ.)
A mixed Galerkin method for the Stokes problem using higher order approximation spaces on coarse meshes for the pressure ····· 15

44 Keiichiro Kagawa (Hokkaido Univ.)
Takeshi Watanabe (Nagano Univ.)
Yasumasa Nishiura (Hokkaido Univ.*)
Global exploration of the free energy landscape of a coupled Cahn–Hilliard system ····· 15

45 Takuya Tsuchiya (Meiji Gakuin Univ.)
Makoto Nakamura (Osaka Univ.)
On convergece and solutions of semi-linear Klein–Gordon equation in de Sitter spacetime ····· 15

46 Takeshi Ohtsuka (Gunma Univ.)
Yen-Hsi Richard Tsai (Univ. Texas at Austin)
A minimizing movement approach for crystalline eikonal-curvature flow of spirals ····· 15

47 Kei Nishi (Kyoto Sangyo Univ.)
Yasuaki Kobayashi (Josai Univ.)
Synchronization of oscillatory pulses in a three-component FitzHugh–Nagumo system ····· 15

48 Kaname Matsue (Kyushu Univ. / Kyushu Univ.)
A simple criterion of the existence of monotonous blow-up solutions in nonautonomous systems of ordinary differential equations ····· 15

14:15–15:15

49 Tetsuya Nagano (Univ. of Nagasaki)
Digital signature system based on Finsler encryption ····· 15

50 Tsuyoshi Yoneda (Hitotsubashi Univ.)
Takuya Jinno (Univ. of Toyama)
Takahito Mitsui (Juntendo Univ.)
Kengo Nakai (Okayama Univ.)
Yoshitaka Saiki (Hitotsubashi Univ.)
Implementation of machine learning based on the mathematical theory of Littlewood–Paley decomposition ····· 15

51 Tsuyoshi Yoneda (Hitotsubashi Univ.)
Chikara Nakayama (Hitotsubashi Univ.)
Explicit construction of recurrent neural networks effectively approximating discrete dynamical systems ····· 15

52 Baige Xu (Kobe Univ.)
Takaharu Yaguchi (Kobe Univ.)
Error analysis of numerical solutions of PINNs for the Navier–Stokes equations ····· 15

15:30–16:30 Talk Invited by Applied Mathematics Section

Takaharu Yaguchi (Kobe Univ.)
Geometric deep scientific computing

Topology

March 18th (Tue) Conference Room II

9:30–11:40

1 Dror Bar-Natan (Univ. of Toronto)
Yusuke Kuno (Tsuda Coll.)
Emergent version of Drinfeld's associator equations ····· 15

2 Sonia Mahmoudi (Tohoku Univ.) — From toroidal pseudo links to pseudo DP tangles ····· 15

3 Sonia Mahmoudi (Tohoku Univ.) — On invariants of pseudo DP tangles ····· 15

4 Noboru Ito (Shinshu Univ.) — Commutator and higher Arnold strangeness ····· 15

5 Kazuhiro Ichihara (Nihon Univ.), Sayo Horigome (Caritas Girls' Junior & Senior High School) — On two-bridge ribbon knots ····· 10

6 Jun Murakami (Waseda Univ.) — On the colored Jones polynomial of double twist knots ····· 10

7 Atsuhiko Mizusawa (Waseda Univ.), Yuka Kotorii (Hiroshima Univ./Hiroshima Univ./RIKEN) — A classification of link-homotopy classes with vanishing short Milnor invariants ····· 15

8 Jun Ueki (Ochanomizu Univ./Ochanomizu Univ.), Honami Sakamoto (Ochanomizu Univ.), Ryoto Tange (Waseda Univ.) — Liminal $SL_2\mathbb{Z}_p$-representations and cyclic covers of twist knots ····· 15

14:20–15:20 Talk Invited by Topology Section

Kokoro Tanaka (Tokyo Gakugei Univ.) — Surface knot theory and quandle theory

15:40–17:30

9 Jumpei Yasuda (Osaka Univ.) — A formula for Alexander polynomials of 2-plat 2-knots ····· 15

10 Mizuki Fukuda (AIST–Tohoku Univ.), Masaharu Ishikawa (Keio Univ.) — Twist spun knots of twist spun knots ····· 10

11 Chihaya Jibiki (Sci. Tokyo) — Understanding quandle orders through quandle actions ····· 15

12 Katsunori Arai (Osaka Univ.) — A construction of multiple group racks ····· 15

13 Atsushi Ishii (Univ. of Tsukuba) — Determinant state sum formulas for Alexander-type invariants ····· 10

14 Takuya Sakasai (Univ. of Tokyo), Yuuki Tadokoro (Kisarazu Nat. Coll. of Tech.), Kokoro Tanaka (Tokyo Gakugei Univ.) — On structures of groups of Kim–Manturov ····· 10

15 Yuta Nozaki (Yokohama Nat. Univ.), Masatoshi Sato (Tokyo Denki Univ.), Masaaki Suzuki (Meiji Univ.) — Torsion elements in the associated graded modules of filtrations over the Torelli group and the homology cylinders ····· 15

March 19th (Wed) Conference Room II

9:30–11:35

16 Ryuichi Nakahara (Okayama Univ.), Naoyuki Monden (Okayama Univ.) — An attempt and report on the collaboration of medical, mathematical and engineering sciences ····· 10

17 Teruaki Kitano (Soka Univ.), Yuta Nozaki (Yokohama Nat. Univ.), Michel Boileau (Aix-Marseille Univ.) — An order on the set of prime knots via π-orbifold groups ····· 10

18 Yuichi Yamada (Univ. of Electro-Comm.), Motoo Tange (Univ. of Tsukuba) — Seifert manifolds that have two Dehn surgery descriptions along torus knots ····· 10

19 Motoo Tange (Univ. of Tsukuba), Yuichi Yamada (Univ. of Electro-Comm.) — L-space embedding in negative definite closed 4-manifold constructed by a pair of Dehn surgeries along knots ····· 15

20 Tatsumasa Suzuki (Meiji Univ.) — On the d-invariants of Brieskorn homology 3-spheres with almost simple linear graphs ····· 15

21 Keisuke Teramoto (Yamaguchi Univ.) — Height functions on generalized cuspidal edges ····· 15

22 Koki Iwakura (Kyushu Univ.) — Non-singular extensions of horizontal stable fold maps from surfaces into the plane ····· 15

23 Kentaro Saji (Kobe Univ.) — Geometry on D_4 singularities of fronts ····· 15

March 20th (Thu) Conference Room II

9:30–11:55

24 Haruka Takeuchi (Nara Women's Univ.) — Minimal self-intersections of filling curve on surfaces ····· 15

25 Takuya Katayama (Osaka Metro. Univ.), Erika Kuno (Osaka Univ.) — Hempel–Lickorish theorem and its applications ····· 10

26 Shuhei Maruyama (Kanazawa Univ.) — McDuff's secondary class and the Euler class of foliated sphere bundles ····· 15

27 Tatsuhiko Yagasaki (Kyoto Inst. Tech.*), Kazuhiko Fukui (Kyoto Sangyo Univ.*) — Boundedness of bundle diffeomorphism groups over a circle ····· 15

28 Yoshihiko Mitsumatsu (Chuo Univ.), Teruaki Kitano (Soka Univ.), Shigeyuki Morita (Univ. of Tokyo*/Sci. Tokyo*) — The Mather–Thurston map for real analytic flat circle bundles ····· 15

29 Yoshikazu Yamagishi (Ryukoku Univ.) — Farthest point map on the 4-cube ····· 15

30 Yoshiyuki Oshima (Shimane Univ.) — A generalization of Markov set-valued functions ····· 10

31 Hiroki Matui (Chiba Univ.) — Classifying Stein's groups ····· 15

32 Kodai Yamamoto (Kyushu Univ.) — Homoclinic tangency of the largest codimension and statistical irregularity ····· 15

14:20–15:20 Talk Invited by Topology Section

Yuji Terashima (Tohoku Univ.) — Quiver mutation and topology

15:40–17:35

33 Kanon Yashiro (Niigata Univ.), Kanta Koeda, Ryuma Orita (Niigata Univ.) — Morse bipersistence modules and rectangle barcodes ····· 15

34 Tomoki Uda (Univ. of Toyama) — Ellipse tangency analysis for anisotropic persistent homology ····· 15

Infinite Analysis

March 20th (Thu) Conference Room Ⅲ

10:00–11:40

1 Nobutaka Nakazono (Tokyo Univ. of Agri. and Tech.) Higher-order Painlevé-type difference equations obtained from a system of partial difference equations having the CAC property ····· 15

2 Chihiro Sato (Ochanomizu Univ.), Kouichi Takemura (Ochanomizu Univ.) Degeneration of q-Heun equations ····· 15

3 Yumi Arai (Ochanomizu Univ.), Kouichi Takemura (Ochanomizu Univ.) On q-convolution and convergence ····· 15

4 Takahiko Nobukawa (Kobe Univ.) Jackson integral representation for Kajihara's q-hypergeometric series $W^{M,2}$ and related q-difference system ····· 15

5 Satoshi Tsuchimi (Kobe Univ.), Genki Shibukawa (Kobe Univ.) A multivariate analogue of the generalized μ-function ····· 15

6 Kazuya Matsugashita (Kindai Univ.), Takao Suzuki (Kindai Univ.) A continuous limit of the q-Garnier system ····· 15

14:15–15:15 Talk Invited by Infinite Analysis Special Session

Hiroshi Kawakami (Aoyama Gakuin Univ.) Toward a comprehensive theory of Painlevé-type equations with a focus on spectral types

March 21st (Fri) Conference Room Ⅲ

9:30–10:35

7 Yosuke Kawamoto (Okayama Univ.), Genki Shibukawa (Kobe Univ.) Integral operators for Jack polynomials and the intertwining property for the β-Laguerre processes ····· 15

8 Ryota Akagi (Nagoya Univ.) Cluster-cyclicity of skew-symmetrizable matrices of rank 3 ····· 15

9 Yusuke Ohkubo (Setsunan Univ.) The quantum toroidal $\mathfrak{gl}_2$ algebra and the $N = 1$ superconformal algebra 15

10 Taichiro Takagi (Nat. Defense Acad. of Japan) A bosonic formula for one-dimensional configuration sums and the minimal excludant in integer partitions 15

10:50–11:50 Talk Invited by Infinite Analysis Special Session

Masato Okado (Osaka Metro. Univ.) On the fermionic formula conjecture for branching functions of affine Lie algebras

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 ♭ marks denote presentations on blackboard. The speakers with ⋆ 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 `program25mar@mathsoc.jp`.

Each conference room is equipped with a blackboard and a projector with VGA interface or HDMI interface for PC presentation. (Conference Room I and Conference Room II in Building 14 are equipped with VGA interface and the other Conference Rooms in Building 15 are equipped with HDMI interface.) You are asked to use your own PC and to bring suitable accessories (for example, USB type C-HDMI adapter) for your presentation. The time for connecting your PC to the projector is a part of the assigned duration of your talk. You are strongly recommended to check beforehand if your slides can be properly displayed in the conference room. We also advise you to bring the PDF file of your presentation on a USB flash drive, just in case the PC connection does not work.

Information for Participants

Smoking is prohibited on campus.
There is no parking area for participants. Please use public transportation.
Waseda University is an eduroam participating institution.
During the conference, the campus cafeteria "Okuma Garden House" will be open for lunch every day from 11:30 a.m. to 1:30 p.m. Please feel free to make use of this facility. The expenses borne by the Mathematical Society of Japan will be determined based on the number of users. Okuma Garden House is located past the pathway between the Auditorium and the Garden, directly across from the main gate.
We do not provide tea or other drinks in the break rooms, but you can use them as lunch areas if you bring your own lunch boxes.

Official Party

Date: March 19th (Wed) 18:00–20:00
Venue: Morinokaze, 15th Floor, Okuma Memorial Tower

Participants are asked to pay 6,000 JPY at the party.

Directions

2025 MSJ ANNUAL MEETING

Dates : March 18th (Tue)–21st (Fri), 2025

Venue : Waseda Campus, Waseda University
1–6–1 Nishi-Waseda, Shinjuku-ku, 169-8050, Tokyo, Japan

Contact to : Department of Mathematics, School of Education,
Waseda University
1–6–1 Nishi-Waseda, Shinjuku-ku, 169-8050, Tokyo, Japan
waseda25mar@mathsoc.jp

Web Site : https://www.mathsoc.jp/en/meeting/waseda25mar/

Conference Rooms

	Place	Research Sections
Conference Room I	14-101, 1st Floor, Building 14	Geometry, Featured Invited Talks
Conference Room II	14-102, 1st Floor, Building 14	Topology, Featured Invited Talks
Conference Room III	15-03, Basement, Building 15	Foundation of Mathematics and History of Mathematics, Infinite Analysis
Conference Room IV	15-04, Basement, Building 15	Complex Analysis, Real Analysis
Conference Room V	15-101, 1st Floor, Building 15	Functional Equations, Featured Invited Talk
Conference Room VI	15-102, 1st Floor, Building 15	Algebra, Featured Invited Talk
Conference Room VII	15-201, 2nd Floor, Building 15	Functional Analysis
Conference Room VIII	15-202, 2nd Floor, Building 15	Statistics and Probability
Conference Room IX	15-203, 2nd Floor, Building 15	Applied Mathematics, Featured Invited Talk
Plenary Talks	Big Auditorium, Okuma Auditorium	
Open Lectures for Citizens	14-201, 2nd Floor, Building 14	

Other Rooms

Membership Fee & Extended Abstracts	14-505, 5th Floor, Building 14
Discussion Areas	14-501, 5th Floor, Building 14 & 15-02, Basement, Building 15
Book Display and Sale	14-514 & 14-515, 5th Floor, Building 14
Executive Committee, MSJ President	14-407, 4th Floor, Building 14
Official Party	Morinokaze, 15th Floor, Okuma Memorial Tower