Final: 2024/2/9

2024 The Mathematical Society of Japan
ANNUAL MEETING

Dates: March 17th (Sun)–20th (Wed), 2024

Venue: Osaka Metropolitan University
3–3–138 Sugimoto, Sumiyoshi-ku
Osaka-shi, 558-8585, Japan

Contact to: Graduate School of Science, Osaka Metropolitan University
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Osaka-shi, 558-8585, Japan
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The Mathematical Society of Japan

	I General Edu. Bldg. 810	II General Edu. Bldg. 811	III General Edu. Bldg. 812	IV General Edu. Bldg. 813	V General Edu. Bldg. 814	VI General Edu. Bldg. 815	VII General Edu. Bldg. 820	VIII General Edu. Bldg. 821	IX General Edu. Bldg. 822
17th (Sun)	Algebra 9:00–10:30 14:15–18:00	Functional Equations 9:30–12:00 14:15–16:15	Statistics and Probability 9:30–11:40	Geometry 9:30–11:45 14:15–16:10	Topology 9:30–11:10 15:40–17:30	Complex Analysis 9:50–11:20 15:35–16:30	Functional Analysis 9:30–11:00	Found. of Math. & Hist. of Math. 9:30–11:30 14:30–17:00	Applied Mathematics 9:00–12:00 14:15–16:50
	Featured Invited Talks 13:00–14:00								
	Invited Talk 10:45–11:45	Invited Talk 16:30–17:30	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 16:25–17:25	Invited Talk 14:20–15:20	Invited Talk 14:15–15:15	Invited Talk 14:15–15:15		Invited Talk 17:00–18:00
18th (Mon)	Algebra 9:30–12:00	Functional Equations 9:30–12:00	Statistics and Probability 9:30–11:40	Geometry 13:00–14:00	Topology 9:30–10:00 13:00–14:00	Complex Analysis 9:50–11:20	Functional Analysis 9:30–11:00	Found. of Math. & Hist. of Math. 9:15–12:00	Applied Mathematics 9:00–12:00 13:00–14:00
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	MSJ Prizes Presentation (Auditorium, 1F, Basic Experiment Edu. Bldg.) ····· (14:30–15:00) Plenary Talks (Auditorium, 1F, Basic Experiment Edu. Bldg.) Spring Prize Winner ····· (15:15–16:15) Ken-ichi Yoshikawa (Kyoto Univ.) ····· (16:30–17:30) Official Party (Nonohana House, 1F, Media Center) ····· (18:00–20:00)								
19th (Tue)	Algebra 9:30–12:00	Functional Equations 9:45–12:00 14:15–16:00	Statistics and Probability 10:00–11:10	Geometry 9:30–11:45 14:15–17:10	Topology 9:30–12:00	Real Analysis 9:30–12:00 14:15–16:15	Functional Analysis 9:30–11:30 14:15–15:45	Infinite Analysis 9:30–11:30	Applied Mathematics 9:50–12:00 14:50–16:30
	Featured Invited Talks 13:00–14:00								
	Invited Talks 14:40–15:40 16:00–17:00	Invited Talk 16:15–17:15			Invited Talk 14:20–15:20	Invited Talk 16:30–17:30	Invited Talk 16:00–17:00	Invited Talk 14:15–15:15	Invited Talk 16:45–17:45
20th (Wed)	Algebra 9:00–12:00 14:15–18:00	Functional Equations 10:00–12:00 14:15–15:15	Statistics and Probability 10:00–11:40	Geometry 9:20–10:15		Real Analysis 9:30–12:00 14:15–15:40		Infinite Analysis 9:30–11:30	Applied Mathematics 9:50–12:00 14:15–15:25
	Featured Invited Talks 13:00–14:00								
		Invited Talk 15:30–16:30	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 10:30–11:30		Invited Talks 15:45–16:45 17:00–18:00		Invited Talk 14:15–15:15	Invited Talk 15:40–16:40

MSJ Spring Meeting 2024

Organizing Committee
Chair of Organizing Committee Atsushi YAMAGUCHI (Osaka Metropolitan Univ.)
Chair of Executive Committee Masato OKADO (Osaka Metropolitan Univ.)
Vice Chair of Executive Committee Hideyuki ISHI (Osaka Metropolitan Univ.)

Organizer The Mathematical Society of Japan

Co-organizer Graduate School of Science, Osaka Metropolitan University
Osaka Central Advanced Mathematical Institute

Acknowledgements We would like to thank Osaka Metropolitan University for their great co-operation in organizing this annual meeting.

Registration for Participation

Visit the following link to register.
`https://www.mathsoc.jp/activity/meeting/omu24mar/reg.html` (in Japanese)
This survey is conducted in order to grasp the number of participants in advance.
Please register by March 16th (Sat) if possible. (You can register during this annual meeting.)

Plenary Talks

March 18th (Mon) Auditorium, 1F, Basic Experiment Education Building

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

Ken-ichi Yoshikawa (Kyoto Univ.) Holomorphic analytic torsion for manifolds of Calabi–Yau type ..... (16:30–17:30)

Featured Invited Talks

March 17th (Sun)

Conference Room I

Guest Talk from the Japan Society for Industrial and Applied Mathematics

Hiroshi Sekigawa (Tokyo Univ. of Sci.) Symbolic-numeric computation ····· (13:00–14:00)

Conference Room II

Akihiro Munemasa (Tohoku Univ.) Combinatorics of equiangular lines ····· (13:00–14:00)

Conference Room IV

Junguk Lee (Changwon National Univ.) Survey on a geography of Model Theory ····· (13:00–14:00)

March 19th (Tue)

Conference Room II

Takasi Senba (Fukuoka Univ.) Behavior of solutions to chemotaxis systems with logarithmic sensitivity functions ····· (13:00–14:00)

Conference Room IV

Goo Ishikawa (Hokkaido Univ.*) Singular curves of sub-Riemannian spaces and related topics ····· (13:00–14:00)

March 20th (Wed)

Conference Room I

Masataka Chida (Tokyo Denki Univ.) On generalizations of p-adic Gross–Zagier formula ····· (13:00–14:00)

Conference Room IV

Kenji Kajiwara (Kyushu Univ.) Generation of aesthetic shape by integrable geometry ····· (13:00–14:00)

Talks Invited by Research Sections and Special Session

March 17th (Sun)

Algebra (Conference Room I)

Chikashi Miyazaki (Kumamoto Univ.) Castelnuovo–Mumford regularity of polynomial ideals and syzygy theoretic approach to vector bundles ····· (10:45–11:45)

Geometry (Conference Room IV)

Kazushi Ueda (Univ. of Tokyo) Mirror symmetry and degeneration ····· (16:25–17:25)

Complex Analysis (Conference Room VI)

Takao Ohno (Oita Univ.) Boundedness of maximal operators and Sobolev-type inequalities for Riesz potentials ····· (14:15–15:15)

Functional Equations (Conference Room II)

Yoshiaki Goto (Otaru Univ. of Commerce) Hypergeometric integrals —homology and cohomology ···· (16:30–17:30)

Functional Analysis (Conference Room VII)

Artbazar Galtbayar (National Univ. of Mongolia) The L^p-boundedness of the wave operators for bi-Schrödinger operators on $\mathbb{R}^4$ ····· (14:15–15:15)

Statistics and Probability (Conference Room III)

Yushi Hamaguchi (Osaka Univ.) Infinite dimensional Markovian lifts of stochastic Volterra equations ····· (14:15–15:15)

Nobuaki Naganuma (Kumamoto Univ.) Approximation theory of SDEs driven by fractional Brownian motion ····· (15:30–16:30)

Applied Mathematics (Conference Room IX)

Xiao-Nan Lu (Gifu Univ.) Combinatorial structures for group testing and combinatorial testing ····· (17:00–18:00)

Topology (Conference Room V)

Masaaki Ue (Kyoto Univ.*) Constraints on intersection forms of 4-manifolds with given boundary in terms of Gauge theoretical invariants ····· (14:20–15:20)

March 18th (Mon)

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

Hajime Ishihara (Toho Univ.) Reverse mathematics in constructive and predicative set theory ····· (13:00–14:00)

Algebra (Conference Room I)

Teruhisa Koshikawa (Kyoto Univ.)♭ Vanishing theorems for the cohomology of Shimura varieties ····· (13:00–14:00)

Geometry (Conference Room IV)

Award Lecture for the 2023 MSJ Geometry Prize

Kento Fujita (Osaka Univ.)♭ On criteria for the K-stability of Fano varieties ····· (10:30–11:30)

Complex Analysis (Conference Room VI)

Tomoyuki Hisamoto (Tokyo Metro. Univ.) — Optimal degeneration for a Fano manifold ····· (13:00–14:00)

Functional Equations (Conference Room II)

Qing Liu (Okinawa Inst. of Sci. and Tech. Grad. Univ.) — Monge solutions of eikonal equations in metric spaces ····· (13:00–14:00)

Functional Analysis (Conference Room VII)

Taito Tauchi (Aoyama Gakuin Univ.) — Relationship between multiplicities of induced representations and orbit decomposition on real and complex flag varieties ····· (13:00–14:00)

March 19th (Tue)

Algebra (Conference Room I)

Award Lecture for the 2024 MSJ Algebra Prize

Hideto Asashiba (Shizuoka Univ.*/Kyoto Univ./Osaka Metro. Univ.) — Representation theory of finite-dimensional algebras and its applications (with a focus on coverings of derived equivalences and interval approximations) ····· (14:40–15:40)

Award Lecture for the 2024 MSJ Algebra Prize

Kentaro Nakamura (Saga Univ.) — Iwasawa theory for rank two p-adic Galois representations ····· (16:00–17:00)

Functional Equations (Conference Room II)

Award Lecture for the 2023 MSJ Analysis Prize

Masahito Ohta (Tokyo Univ. of Sci.) ♭ — Strong instability analysis of standing waves for nonlinear Schrödinger equations ····· (16:15–17:15)

Real Analysis (Conference Room VI)

Shin-ya Matsushita (Akita Pref. Univ.) — Fixed point algorithms and their applications ····· (16:30–17:30)

Functional Analysis (Conference Room VII)

Takuya Takeishi (Kyoto Inst. Tech.) — C*-algebras constructed from number fields and related complete invariants of number fields ····· (16:00–17:00)

Applied Mathematics (Conference Room IX)

Yoshitaro Tanaka (Future Univ.-Hakodate) — Nonlocal evolution equations and approximations by system of partial differential equations ····· (16:45–17:45)

Topology (Conference Room V)

Mayuko Yamashita (Kyoto Univ.) ♭ — Topological Modular Forms and supersymmetric quantum field theories ····· (14:20–15:20)

Infinite Analysis (Conference Room VIII)

Ryo Okawa (Osaka Metro. Univ./Kyoto Univ.) — Non-stationary difference equation and affine Laumon space ····· (14:15–15:15)

March 20th (Wed)

Geometry (Conference Room IV)

Hisashi Kasuya (Osaka Univ.) — Vector bundles and Higgs bundles over Sasakian manifolds, present and future ····· (10:30–11:30)

Functional Equations (Conference Room II)

Itsuko Hashimoto (Kanazawa Univ./Osaka Metro. Univ.) — Inflow and outflow problem on radially symmetric solution for fluid equation ····· (15:30–16:30)

Real Analysis (Conference Room VI)

Award Lecture for the 2023 MSJ Analysis Prize

Naoki Tanaka (Shizuoka Univ.) — Abstract theory for evolution equations ····· (15:45–16:45)

Hirotoshi Kuroda (Hokkaido Univ.) — On the behaviour of solutions to the fourth order total variation flow equation ····· (17:00–18:00)

Statistics and Probability (Conference Room III)

Award Lecture for the 2023 MSJ Analysis Prize

Yasunori Fujikoshi (Hiroshima Univ.*) — Model selection based on information criteria in high-dimensional statistical analysis ····· (14:15–15:15)

Tomoyuki Nakagawa (Meisei Univ.) — Robust Bayesian inference using the divergences and its applications ····· (15:30–16:30)

Applied Mathematics (Conference Room IX)

Yikan Liu (Kyoto Univ.) — On solution dynamics of coupled systems and semilinear problems of time-fractional diffusion equations ····· (15:40–16:40)

Infinite Analysis (Conference Room VIII)

Katsushi Ito (Tokyo Tech) — ODE/IM correspondence and exact WKB analysis in quantum mechanics ····· (14:15–15:15)

Open Lectures for Citizens

Date: March 16th (Sat) 14:00–16:30

Venue: 810, 1F, General Education Building

Organizer: The Mathematical Society of Japan

Co-organizer: Graduate School of Science, Osaka Metropolitan University
Osaka Central Advanced Mathematical Institute

Program: Opening Speech ····· (14:00–14:05)
Seiichi Kamada (President of MSJ / Osaka Univ.)

Lecture 1: "Living creatures associated by Euler's formula —lamprey, scale worm, frog, butterfly, ·····—" ····· (14:10–15:10)
Junichi Matsuzawa (Nara Women's Univ.)

Lecture 2: "Patterns in nature and math" ····· (15:30–16:30)
Harunori Monobe (Osaka Metropolitan Univ.)

Web Page: `https://www.mathsoc.jp/en/meeting/omu24mar/`
Please register from the above webpage. The registration deadline is March 6th (Wed).

Foundation of Mathematics and History of Mathematics

March 17th (Sun) Conference Room VIII

9:30–11:30

1 Souji Shizuma (Osaka Pref. Univ.) General theorem for nonsimultaneous hat puzzles ····· 15

2 Kenta Tsukuura (Hosei Univ.) On semiproperness of Namba forcings in Prikry extensions ····· 15

3 Teruyuki Yorioka (Shizuoka Univ.) Some preservation theorems for forcing notions with models as side conditions ····· 15

4 Toshimichi Usuba (Waseda Univ.) Uniform ultrafilters in a choiceless context ····· 15

5 Yasuo Yoshinobu (Nagoya Univ.) Convex sets and the axiom of choice ····· 15

6 Akito Tsuboi (Univ. of Tsukuba*) Dividing and forking in random structures ····· 15

7 Hirotaka Kikyo (Kobe Univ.)
Akito Tsuboi (Univ. of Tsukuba*) On random hypergraphs and automorphisms with a single orbit ····· 15

11:45–12:00 Research Section Assembly

14:30–17:00

8 Koichiro Ikeda (Hosei Univ.) A note on ω-categorical stable theories ····· 15

9 Wataru Komine (Univ. of Tsukuba) On prime models of definably complete locally o-minimal theories ···· 15

10 Koki Okura (Univ. of Tsukuba) On rationality of Poincaré series in expansions of the p-adic fields ···· 15

11 Ikuo Yoneda (Tokuyama Coll. of Tech.) Weak one-basedness in the eq-structure and the existences of weak canonical bases in rosy theories ····· 15

12 Noriaki Kamiya (Univ. of Aizu*) On the title "Lie algebra" of books published in Japan ····· 15

13 Koichi Hirata
(Matsuyama Univ./Ehime Univ.*) Geometric foundations of inversive coordinates of circles ····· 15

14 Noriko Tanaka (Naragakuen Univ.)
Tsukane Ogawa (Yokkaichi Univ.) A study on the relationship of Takuma school's book Shouyaku-jutsu and a mathematical plate dedicated to the Zenkouji temple ····· 15

15 Tsukane Ogawa (Yokkaichi Univ.)
Noriko Tanaka (Naragakuen Univ.) Treatment of polynomials in Oka Yukitada's "*Kijutsu Kairohou* (*A method to solve the path to create a formula*)" in the Takuma School (2) ····· 15

17:15–17:30 Mathematics History Team Meeting

March 18th (Mon) Conference Room VIII

9:15–12:00

16 Masaaki Kumazawa
(Mino-Jiyu Gakuen High School) On De Morgan algebras in BCK-algebras ····· 15

17 Haruka Kogure (Kanazawa Univ.)
Taishi Kurahashi (Kobe Univ.) On the conservation results for local reflection principles ····· 15

18 Yuta Sato (Kobe Univ.)
Taishi Kurahashi (Kobe Univ.) The finite frame property of some extensions of the pure logic of necessitation ····· 15

19 Rihito Takase (Kobe Univ.)
Taishi Kurahashi (Kobe Univ.)
The modal logic of provability and forcing ····· 15

20 Taishi Kurahashi (Kobe Univ.)
Albert Visser (Utrecht Univ.)
Incompleteness, undecidability, and inseparability of theories ····· 15

21 Leonardo Pacheco (TU Wien)
A constructive variation of GL ····· 15

22 Leonardo Pacheco (TU Wien)
Higher-order feedback computation ····· 15

23 Toshio Suzuki (Tokyo Metro. Univ.)
Equilibria of AND-OR trees without assumptions on tree shapes (2) ····· 15

24 Akitoshi Kawamura (Kyoto Univ.)
Keita Hiroshima (Kyoto Univ.)
Elementarily traceable numbers ····· 10

25 Kohtaro Tadaki (Chubu Univ.)
A refinement of quantum information theory by algorithmic randomness VIII ····· 15

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

Hajime Ishihara (Toho Univ.)
Reverse mathematics in constructive and predicative set theory

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Algebra

March 17th (Sun) Conference Room I

9:00–10:30

1 Shinichi Tajima (Niigata Univ.*)
Katsuyoshi Ohara (Kanazawa Univ.)
Akira Terui (Univ. of Tsukuba)
Efficient symbolic computation of the structure of Jordan chains ····· 10

2 Shuhei Tsujie (Hokkaido Univ. of Edu.)
Daisuke Suyama (Nippon Bunri Univ.)
Michele Torielli (Northern Arizona Univ.)
On the coincidence of freeness of two types of hyperplane arrangements determined from gain graphs ····· 10

3 Norihiro Nakashima (Nagoya Inst. of Tech.)
Yusuke Mori
Characteristic quasi-polynomials for deformations of Weyl arrangements ····· 10

4 Takumi Ogasawara (Yokohama Nat. Univ.)
Shushi Harashita (Yokohama Nat. Univ.)
Ryo Ohashi (Univ. of Tokyo)
Kosuke Sakata (Univ. of Tokyo)
Superspecial genus-4 double covers of elliptic curves ····· 15

5 Yuya Yamamoto (Yokohama Nat. Univ.)
Shushi Harashita (Yokohama Nat. Univ.)
The multiplicity-one theorem for the superspeciality of curves of genus two ····· 15

6 Ryo Ohashi (Univ. of Tokyo)
On the Rosenhain forms of superspecial genus-2 curves ····· 15

10:45–11:45 Talk Invited by Algebra Section

Chikashi Miyazaki (Kumamoto Univ.) Castelnuovo–Mumford regularity of polynomial ideals and syzygy theoretic approach to vector bundles

14:15–18:00

March 18th (Mon) Conference Room I

9:30–12:00

24 Keita Nakai (Nagoya Univ.) Discrete universality theorem for Matsumoto zeta-functions and non-trivial zeros of the Riemann zeta-function · · · · · 15

25 Masatoshi Suzuki (Tokyo Tech) On the Hermitian form attached to the Weil distribution · · · · · 15

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

Teruhisa Koshikawa (Kyoto Univ.) ♭ Vanishing theorems for the cohomology of Shimura varieties

March 19th (Tue) Conference Room I

9:30–12:00

26 Akinari Hoshi (Niigata Univ.), Aiichi Yamasaki (Kyoto Univ.) Birational classification for algebraic tori (II) · · · · · 10

27 Akinari Hoshi (Niigata Univ.), Hidetaka Kitayama (Wakayama Univ.) Rationality problem of two-dimensional quasi-monomial group actions · · · · · 10

28 Akinari Hoshi (Niigata Univ.), Aiichi Yamasaki (Kyoto Univ.) Rationality problem for norm one tori for dihedral extensions · · · · · 7

29 Akinari Hoshi (Niigata Univ.), Aiichi Yamasaki (Kyoto Univ.) Rationality problem for norm one tori for A_5 and $\mathrm{PSL}_2(\mathbb{F}_8)$ extensions · · · · · 8

30 Daisuke Tambara (Hirosaki Univ.*) Intersection of subspaces Av in A^2 for a three-dimensional division algebra A over a finite field · · · · · 15

31 Kenta Ueyama (Shinshu Univ.) On noncommutative graded hypersurfaces of countable Cohen–Macaulay representation type · · · · · 15

32 Masaki Matsuno (Tokyo Univ. of Sci.), Ayako Itaba (Tokyo Univ. of Sci.) Graded Ore extensions of 3-dimensional quadratic Calabi–Yau AS-regular algebras of Type S · · · · · 15

33 Sota Asai (Univ. of Tokyo), Osamu Iyama (Univ. of Tokyo) M-TF equivalence in the real Grothendieck group · · · · · 15

14:15–14:30 Presentation Ceremony for the 2024 MSJ Algebra Prize

14:40–15:40 Award Lecture for the 2024 MSJ Algebra Prize

Hideto Asashiba (Shizuoka Univ.*/Kyoto Univ./Osaka Metro. Univ.) Representation theory of finite-dimensional algebras and its applications (with a focus on coverings of derived equivalences and interval approximations)

16:00–17:00 Award Lecture for the 2024 MSJ Algebra Prize

Kentaro Nakamura (Saga Univ.) Iwasawa theory for rank two p-adic Galois representations

March 20th (Wed) Conference Room I

9:00–12:00

34 Masayuki Sukenaga (Hiroshima Univ.) Smooth tropical complete intersection curves of genus 3 in $\mathbb{R}^3$ · · · · · 15

35 Masatomo Sawahara (Hirosaki Univ.) Cylindricity of Du Val del Pezzo surfaces · · · · · 15

36 Kenta Watanabe (Nihon Univ.) Donagi–Morrison conjecture concerning lifts of line bundles on curves contained in a K3 surface and its applications · · · · · 15

14:15–18:00

Geometry

March 17th (Sun) Conference Room IV

9:30–11:45

1 Ryu Ueno (Hokkaido Univ.)
Hitoshi Furuhata (Hokkaido Univ.)
Statistical biharmonic map ····· 15

2 Atsufumi Honda (Yokohama Nat. Univ.)
Chisa Tanaka (NTT DATA Frontier Corp.)
Yuta Yamauchi (Yokohama Nat. Univ.)
The total absolute curvature of closed curves with singularities ····· 15

3 Isami Koga (Math. Res. Inst. Calc for Industry/Hiroshima Univ.)
Yasuyuki Nagatomo (Meiji Univ.)
Harmonic totally real maps of the 3-sphere into the complex projective spaces ····· 15

4 Riku Kishida (Tokyo Tech)
The volume of conformally flat manifolds as hypersurfaces in the light-cone ····· 15

5 Yuuki Sasaki (Utsunomiya Univ.)
Orbits of the isotropy group action on quaternionic symmetric spaces ····· 15

6 Toru Kajigaya (Tokyo Univ. of Sci.)
Nonexistence of stable discrete maps into some homogeneous spaces of nonnegative curvature ····· 15

7 Yu Ohno (Hokkaido Univ.)
Homogeneous Structures on $\mathbb{S}^2 \times \mathbb{R}$ and $\mathbb{H}^2 \times \mathbb{R}$ ····· 15

14:15–16:10

8 Noriaki Ikeda (Ritsumeikan Univ.)
Hamilton Lie algebroids over Dirac structures ····· 15

9 Yuji Hirota (Azabu Univ.)
Noriaki Ikeda (Ritsumeikan Univ.)
Expansion of momentum maps, and quaternionic Kähler symmetries ····· 15

10 Azuna Nishida (Chiba Univ.)
Homological mirror symmetry for weighted projective spaces via Morse homotopy ····· 15

11 Kentaro Yamaguchi (Tokyo Metro. Univ.)
Torus-equivalently embedded toric manifolds associated to affine subspaces ····· 15

12 Hayato Nakanishi (Chiba Univ.)
SYZ mirror of Hirzebruch surface $\mathbb{F}_k$ and Morse homotopy ····· 15

13 Shuhei Yonehara (Osaka Univ.)
Hamiltonian actions on coKähler manifolds and a reduction theorem ····· 15

16:25–17:25 Talk Invited by Geometry Section

Kazushi Ueda (Univ. of Tokyo) Mirror symmetry and degeneration

March 18th (Mon) Conference Room IV

10:10–10:25 Presentation Ceremony for the 2023 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2023 MSJ Geometry Prize

Kento Fujita (Osaka Univ.)♭ On criteria for the K-stability of Fano varieties

13:00–14:00

14 Yusei Aoki (Nagoya Inst. of Tech.), Toshiaki Adachi (Nagoya Inst. of Tech.) — Estimates on characteristic magnetic focal value on Käher manifold · · · 15

15 Kenzi Satô (Tamagawa Univ.) — Two kinds of new centroids of spherical and hyperbolic triangles · · · 15

16 Víctor Pérez-Valdés (Univ. of Tokyo) — Differential symmetry breaking operators for principal series representations of the pair (SO(4,1), SO(3,1)) · · · 15

March 19th (Tue) Conference Room IV

9:30–11:45

17 Shota Hamanaka (Mitsubishi Electric Corp. Adv. Tech. R&D Center) — Limit theorems for the total scalar curvature · · · 15

18 Tadashi Fujioka (Osaka Univ.) — Upper curvature bound and the curvature integral · · · 15

19 Homare Tadano (Yamaguchi Univ.) — Improved oscillation estimates and the Hitchin–Thorpe inequality on compact Ricci solitons · · · 15

20 Homare Tadano (Yamaguchi Univ.) — Gradient estimates and Harnack inequalities for porous medium and fast diffusion equations via m-Bakry–Émery Ricci curvature with ε-range · · · 15

21 Masato Mimura (Tohoku Univ.), Morimichi Kawasaki (Hokkaido Univ.), Mitsuaki Kimura (Kyoto Univ.), Takahiro Matsushita (Shinshu Univ.), Shuhei Maruyama (Kanazawa Univ.) ♭ — The space of non-extendable invariant quasimorphisms · · · 15

22 Masato Mimura (Tohoku Univ.), Morimichi Kawasaki (Hokkaido Univ.), Mitsuaki Kimura (Kyoto Univ.), Takahiro Matsushita (Shinshu Univ.), Shuhei Maruyama (Kanazawa Univ.) ♭ — scl and coarse groups · · · 15

23 Shun Oshima (Tohoku Univ.) — The observable diameter of metric measure spaces and the existence of points with positive measures. · · · 15

14:15–17:10

24 Yoshito Ishiki (RIKEN) — Strongly rigid metrics in spaces of metrics · · · 15

25 Tomonari Sei (Univ. of Tokyo), Ushio Tanaka (Osaka Metro. Univ.) — Stein identity and Poincaré inequality for a discrete metric measure space · · · 15

26 Kenshiro Tashiro (Tohoku Univ.), Samuël Borza (SISSA) — Measure contraction property of the ℓ^p-Heisenberg group · · · 15

27 Nikita Evseev (Okinawa Inst. of Sci. and Tech. Grad. Univ.) ♭ — Sobolev curves in an arbitrary metric space · · · 15

28 Ye Zhang (Okinawa Inst. of Sci. and Tech. Grad. Univ.) — Semiconcavity results of squared sub-Riemannian distance on ideal Carnot groups · · · 15

29 Kazumasa Narita (Nagoya Univ.) — An extremal eigenvalue problem for the Laplacian on a compact Kähler manifold · · · 15

30 Yuya Takahashi (Nagoya Univ.) Operad structures in geometric quantization of the moduli space of flat $SU(2)$-connections on a Riemann surface · · · · · 15

31 Tatsuki Seto (Meiji Pharm. Univ.), Takashi Maruyama (NEC Laboratories Europe) A Fredholm module on self-similar sets built on n-cubes · · · · · 15

32 Taika Okuda (Tokyo Univ. of Sci.), Akifumi Sako (Tokyo Univ. of Sci.) Star product with separation of variables on $G_{2,4}(\mathbb{C})$ · · · · · 15

March 20th (Wed) Conference Room IV

9:20–10:15

33 Joonhyung Kim (Chungnam Nat. Univ.), Ioannis D. Platis (Univ. of Crete), Li-Jie Sun (Yamaguchi Univ.) On the Kähler cone of the Heisenberg group · · · · · 15

34 Yuya Takeuchi (Univ. of Tsukuba) Kohn–Rossi cohomology of spherical CR manifolds · · · · · 15

35 Natsuo Miyatake (Tohoku Univ.) Extended Hitchin equation for cyclic Higgs bundles associated with a quasi-subharmonic function, and its Dirichlet problem · · · · · 15

10:30–11:30 Talk Invited by Geometry Section

Hisashi Kasuya (Osaka Univ.) Vector bundles and Higgs bundles over Sasakian manifolds, present and future

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Complex Analysis

March 17th (Sun) Conference Room VI

9:50–11:20

1 Kiyoki Tanaka (Meijo Univ.), Satoshi Yamaji (Kobe City Coll. of Tech.) Little Hankel operators on Bloch type spaces · · · · · 15

2 Toshiyuki Sugawa (Tohoku Univ.), Li-Mei Wang (Univ. of Int. Business and Econ.), Chengfa Wu (Shenzhen Univ.) On universal convexity of shifted hypergeometric functions · · · · · 15

3 Yohei Komori (Waseda Univ.) On the convergence of Thurston's hyperbolic circle packing algorithm · · · · · 15

4 Katsuhiko Matsuzaki (Waseda Univ.) On the real-analytic structure of integrable Teichmüller spaces · · · · · 15

5 Hiroaki Aikawa (Chubu Univ.) Intrinsic ultracontractivity for planar domains with wide access property · · · · · 15

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

Takao Ohno (Oita Univ.) Boundedness of maximal operators and Sobolev-type inequalities for Riesz potentials

15:35–16:30

6 Hidetaka Hamada (Kyushu Sangyo Univ.), Shaolin Chen (Hengyang Normal Univ.) — Riesz type inequalities and a Hardy–Littlewood type theorem on bounded symmetric domains · · · 15

7 Hidetaka Hamada (Kyushu Sangyo Univ.), Shaolin Chen (Hengyang Normal Univ.) — Harmonic functions with smooth moduli · · · 10

8 Hidetaka Hamada (Kyushu Sangyo Univ.), Shaolin Chen (Hengyang Normal Univ.) — Holomorphic and pluriharmonic functions with smooth moduli and Hardy–Littlewood type theorems · · · 10

9 Hidetaka Hamada (Kyushu Sangyo Univ.), Shaolin Chen (Hengyang Normal Univ.) — Pluriharmonic Lipschitz type spaces and composition operators · · · 15

March 18th (Mon) Conference Room VI

9:50–11:20

10 Takanori Ayano (Osaka Metro. Univ.) — An improvement on the power series expansion of the sigma function associated with the telescopic curves · · · 15

11 Li-Jie Sun (Yamaguchi Univ.) — Geometric structures on the quaternionic Heisenberg group · · · 15

12 Tadashi Tomaru (Gunma Univ.*) — Arnold's 14 exceptional singularities and families of elliptic curves with complex multiplications · · · 15

13 Takayuki Koike (Osaka Metro. Univ.) — $\overline{\partial}$ cohomology of the complement of a semi-positive anticanonical divisor of a compact surface · · · 15

14 Takeo Ohsawa (Nagoya Univ.)♭ — On the Levi problem for locally pseudoconvex bounded domains of regular type with a curvature negativity on the boundary · · · 15

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

Tomoyuki Hisamoto (Tokyo Metro. Univ.) — Optimal degeneration for a Fano manifold

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Functional Equations

March 17th (Sun) Conference Room II

9:30–12:00

1 Kanam Park (Toba Nat. Coll. of Maritime Tech.) — Birational representations of affine Weyl groups related to a 3×3 Lax formalism for the q-Painlevé equation of type $E_6^{(1)}$ · · · 15

2 Kodai Fujimoto (Shimane Univ.) — Minimal set for solutions of ordinary differential equations involving $p(t)$-Laplacian · · · 15

3 Hiroyuki Usami (Gifu Univ.), Takayuki Maeda (Gifu Univ.) — On target shooting problems · · · 15

4 Tetsutaro Shibata (Hiroshima Univ.) The first eigenvalue and eigenfunction of the nonlocal one-dimensional elliptic eigenvalue problem ····· 15

5 Junya Nishiguchi (Tohoku Univ.) On the notion of "mild solutions" to linear delay differential equations ····· 15

6 Junya Nishiguchi (Tohoku Univ.) Fundamental systems of solutions and fundamental matrix solutions to linear delay differential equations ····· 15

7 Naoki Hamamoto (Osaka Metro. Univ.) The Hardy's constant for curl-free vector fields on the half-plane ····· 12

8 Takeshi Suguro (Kumamoto Univ.) ♭ Stability estimates for the logarithmic Sobolev inequality for a generalized entropy and an application to the uncertainty relation inequality ····· 15

14:15–16:15

9 Yukihide Tadano (Tokyo Univ. of Sci.)
Shu Nakamura (Gakushuin Univ.)
Keita Mikami (RIKEN)
Continuum limit for discretized elliptic operators on square lattice ··· 15

10 Takashi Suzuki (Osaka Univ.)
Kazuo Watanabe (Kitasato Univ.)
Interface vanishing of differential forms ····· 5

11 Shimpei Makida (Hokkaido Univ.)
Atsushi Nakayasu (Kyoto Univ.)
Stability of metric viscosity solutions under Hausdorff convergence ··· 15

12 Tatsuya Ueno (Kanagawa Univ.) Existence of positive ground state solution of coupled nonlinear Kirchhoff–Schrödinger system for a subcritical and critical case ····· 10

13 Yasuhito Miyamoto (Univ. of Tokyo) Exact Morse index of radial solutions for semilinear elliptic equations with critical exponent on annuli ····· 10

14 Haruki Takemura (Univ. of Tokyo)
Yasuhito Miyamoto (Univ. of Tokyo)
Tohru Wakasa (Kyushu Inst. of Tech.)
Asymptotic formulas of the eigenvalues for the linearization of the scalar field equation ····· 15

15 Kenta Nakamura (Kumamoto Univ.) Local properties of fractional parabolic De Giorgi classes ····· 10

16 Kotaro Sato (Tohoku Univ.) Long-time behavior of solutions to some quasistatic evolution equation ····· 15

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

Yoshiaki Goto (Otaru Univ. of Commerce) Hypergeometric integrals —homology and cohomology

March 18th (Mon) Conference Room II

9:30–12:00

17 Ryunosuke Kusaba (Waseda Univ.)
Tohru Ozawa (Waseda Univ.)
Higher order asymptotic expansions for the complex Ginzburg–Landau type equation in the supercritical case ····· 15

18 Shohei Kohatsu (Tokyo Univ. of Sci.) Immediate smoothing of measure-valued population densities in a Keller–Segel system with flux limitation ····· 15

19 Sachiko Ishida (Chiba Univ.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Global solvability for N-dimensional tumor invasion models via the maximum Sobolev regularity ····· 10

20 Tatsuya Hosono (Tohoku Univ.) ♭
Philippe Laurençot (CNRS / Univ. Savoie Mont Blanc)
Global existence and boundedness of solutions to the 4D fully parabolic chemotaxis system with indirect signal production ····· 15

21 Masahiko Shimojo (Tokyo Metro. Univ.)
Jong-Shenq Guo (Tamkang Univ.)
Convergence to traveling waves of predator-prey type reaction-diffusion systems with equal diffusivity by utilizing a relative entropy ····· 15

22 Masahiko Shimojo (Tokyo Metro. Univ.)
Jong-Shenq Guo (Tamkang Univ.)
Karen Guo (Providence Univ.)
Stability of monostable traveling waves in diffusive three-species competition systems ····· 15

23 Masaharu Taniguchi (Okayama Univ.)
Hirokazu Ninomiya (Meiji Univ.)
Traveling front solutions of dimension n generate entire solutions of dimension $(n-1)$ in reaction-diffusion equations ····· 15

24 Masaharu Taniguchi (Okayama Univ.)
Entire solutions with and without radial symmetry in balanced bistable reaction-diffusion equations ····· 15

13:00–14:00 Talk Invited by Functional Equations Section

Qing Liu (Okinawa Inst. of Sci. and Tech. Grad. Univ.)
Monge solutions of eikonal equations in metric spaces

March 19th (Tue) Conference Room II

9:45–12:00

25 Kaito Kokubu (Tokyo Univ. of Sci.)
On solitary wave solutions to dispersive equations with double power nonlinearities ····· 10

26 Wataru Nakahashi (Tokyo Univ. of Sci.)
Keiichi Kato (Tokyo Univ. of Sci.)
Yukihide Tadano (Tokyo Univ. of Sci.)
Non-smoothness of the fundamental solutions for Schrödinger equations with super-quadratic and spherically symmetric potentials ····· 15

27 Shun Takizawa (Tokyo Univ. of Sci.)
Short-time asymptotics of the fundamental solutions for Schrödinger equations with non-smooth potentials ····· 15

28 Sonae Hadama (Kyoto Univ.)
Takuto Yamamoto (Kyoto Univ.)
Almost sure existence of local solutions to the Hartree equation for infinite quantum systems ····· 15

29 Makoto Ikoma (Nagoya Univ.)
Soichiro Suzuki (Chuo Univ.)
Optimal constants of smoothing estimates for the 3D Dirac equation ····· 15

30 Tomoyuki Tanaka (Doshisha Univ.)
Luc Molinet (Univ. Tours)
Improved bilinear Strichartz estimates with application to the well-posedness of periodic generalized KdV type equations ····· 15

31 Takuya Sato (Kumamoto Univ.) ♭
Optimal L^2-decay rate of solutions to dissipative nonlinear Schrödinger equations in the analytic class ····· 15

14:15–16:00

32 Jumpei Kawakami (Kyoto Univ.)
Scattering and blow up for nonlinear Schrödinger equation with the averaged nonlinearity ····· 15

33 Hayato Miyazaki (Kagawa Univ.)
Masaki Kawamoto (Ehime Univ.)
Modified scattering operator for nonlinear Schrödinger equations with a time-decaying harmonic potential ····· 15

34 Shunsuke Kitamura (Tohoku Univ.) ♭
Lifespan of solutions of one dimensional semilinear wave equations with spatial weights and not-compactly supported data ····· 15

35 Kunio Hidano (Mie Univ.)
Kazuyoshi Yokoyama (Hokkaido Univ. of Sci.)
Global existence for a 2-speed and 3-component semilinear system of wave equations in 3D ····· 15

36 Mamoru Okamoto (Osaka Univ.)
Pierre de Roubin (Univ. of Edinburgh)
Ill-posedness of the Cauchy problem for the viscous nonlinear wave equation ····· 15

37 Mohamed Ali Hamza (Imam Abdulrahman Bin Faisal Univ.)
Yuta Wakasugi (Hiroshima Univ.)
Shuji Yoshikawa (Oita Univ.)
Asymptotic profiles for the Cauchy problem of damped beam equation with two variable coefficients and derivative nonlinearity ····· 10

16:15–17:15 Award Lecture for the 2023 MSJ Analysis Prize

Masahito Ohta (Tokyo Univ. of Sci.) ♭ Strong instability analysis of standing waves for nonlinear Schrödinger equations

March 20th (Wed) Conference Room II

10:00–12:00

38 Masahiro Takayama (Keio Univ.)
Tatsuo Iguchi (Keio Univ.)
A priori estimates for solutions to the motion of an inextensible hanging string ····· 15

39 Taichi Eguchi (Waseda Univ.)
The energy equality of the magnetohydrodynamic system in the framework of Lorentz–Besov spaces ····· 15

40 Tim Binz (TU Darmstadt)
Yoshiki Iida (Waseda Univ.)
Uniqueness of weak solutions to the primitive equations in some anisotropic spaces ····· 15

41 Zhongyang Gu (Univ. of Tokyo)
Xin Hu (Univ. of Tokyo)
Tsuyoshi Yoneda (Hitotsubashi Univ.)
Anomalous smoothing effect on the incompressible Navier–Stokes–Fourier limit from Boltzmann with periodic velocity ····· 10

42 Yuta Koizumi (Waseda Univ.)
Convergence of approximating solutions of the Navier–Stokes equations in higher ordered Sobolev norms ····· 15

43 Tomoyuki Nakatsuka (Matsuyama Univ.)
Existence of time-periodic strong solutions to the Navier–Stokes equation in the whole space ····· 15

14:15–15:15

44 Erika Ushikoshi (Yokohama Nat. Univ./Osaka Univ.)
Takahiro Okabe (Osaka Univ.)
Haru Kanno (Yokohama Nat. Univ.)
Helmholtz–Weyl decomposition on a time dependent domain for time periodic Navier–Stokes flow ····· 12

45 Yoshiaki Teramoto
Takaaki Nishida (Kyoto Univ.)
Decay of solutions to the initial boundary value problem of the Stokes system in the halfspace ····· 15

46 Jou-chun Kuo (Waseda Univ.)
Yoshihiro Shibata (Waseda Univ.*)
L_1 approach to the compressible viscous fluid flows in the half-space ····· 15

15:30–16:30 Talk Invited by Functional Equations Section

Itsuko Hashimoto (Kanazawa Univ./Osaka Metro. Univ.)
Inflow and outflow problem on radially symmetric solution for fluid equation

Real Analysis

March 19th (Tue) Conference Room VI

9:30–12:00

1 Yoshifumi Ito — Definition and existence theorem of the axiomatic set theory I ····· 15

2 Yoshifumi Ito — Definition and existence theorem of Euclidean geometry ····· 10

3 Toshiharu Kawasaki (Tamagawa Univ./Chiba Univ./Chiba Univ.) — On the structure of space of all extended integrable functions, II ····· 15

4 Ryoji Fukuda (Oita Univ.), Aoi Honda (Kyushu Inst. of Tech.), Yoshiaki Okazaki (Fuzzy Logic Systems Inst.) — Uniform topogies on $\mathcal{L}_0$ with respect to a non-additive measure ····· 15

5 Satoshi Yamaguchi (Ibaraki Univ.) — Bi-preduals of generalized Morrey spaces with variable growth condition ····· 15

6 Ryota Kawasumi, Masahiro Ikeda (RIKEN), Isao Ishikawa (Ehime Univ.) — A characterization of boundedness of composition operators on Orlicz–Morrey spaces ····· 15

7 Hiroyasu Mizuguchi (Kansai Univ.) — generalized relation of Pythagorean orthogonality by two-dimensional norms ····· 15

8 Sachiko Atsushiba (Tokyo Woman's Christian Univ.) — Approximation of fixed points of monotone nonexpansive-type mappings ····· 15

14:15–16:15

9 Tsuyoshi Yoneda (Hitotsubashi Univ.) — Fourier uncertainty principle and mathemetial analysis on machine learning ····· 15

10 Emu Kondo (Nara Women's Univ.), Shinya Moritoh (Nara Women's Univ.) — Weighted Hardy's inequality for nonincreasing functions and the doubling condition for weights ····· 15

11 Mai Harada (Kanagawa Univ.), Noriaki Yamazaki (Kanagawa Univ.) — On the existence of time periodic solutions for the SIRS model with the seasonally-dependent transmission rate ····· 15

12 Naotaka Ukai (Chiba Univ.), Daiki Mizuno (Chiba Univ.), Ken Shirakawa (Chiba Univ.), Harbir Antil (George Mason Univ.) — Anisotropic energy gradient system associated with image denoising process with orientation adjustment ····· 15

13 Daiki Mizuno (Chiba Univ.), Ken Shirakawa (Chiba Univ.) — Pseudo-parabolic phase-field model of grain boundary motion with solidification effect ····· 15

14 Noriaki Yamazaki (Kanagawa Univ.), Pierluigi Colli (Univ. of Pavia), M. Hassan Farshbaf-Shaker (WIAS), Ken Shirakawa (Chiba Univ.) — Approximate methods for optimal control problems of the Frémond model for shape memory alloys ····· 15

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

Shin-ya Matsushita (Akita Pref. Univ.) — Fixed point algorithms and their applications

March 20th (Wed) Conference Room VI

9:30–12:00

15 Yoshiho Akagawa (Gifu Nat. Coll. of Tech.)
Kazunori Matsui (Seikei Univ.)
Nonnegativity of the threshold function in an elastoplasticity model based on quasi-variational inequality 10

16 Hana Kakiuchi (Japan Women's Univ.)
Toyohiko Aiki (Japan Women's Univ.)
Solvability of free boundary problems for the parabolic equation system 15

17 Akiko Morimura (Japan Women's Univ.)
Toyohiko Aiki (Japan Women's Univ.)
Convergence of approximation solutions obtained by the finite volume method in moisture transport model 15

18 Chiharu Kosugi (Yamaguchi Univ.)
Toyohiko Aiki (Japan Women's Univ.)
Existence of strong solutions for the energy conservation system representing motions of incompressible elastic curve on the plane 15

19 Yuya Sugawara (Tokyo Univ. of Sci.)
Yuya Tanaka (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Regularizing property of a Keller–Segel system with density-dependent sensitivity 15

20 Shohei Kohatsu (Tokyo Univ. of Sci.)
Boundedness and blow-up of weak solutions to a chemotaxis system with flux limitation 15

21 Yutaro Chiyo (Tokyo Univ. of Sci.)
Fatma Gamze Düzgün (Hecettepe Univ.)
Silvia Frassu (Cagliari Univ.)
Giuseppe Viglialoro (Cagliari Univ.)
Global existence and boundedness in a fully parabolic chemotaxis system with nonlocal source 15

22 Pierluigi Colli (Univ. of Pavia)
Shunsuke Kurima (Tokyo Univ. of Sci.)
Luca Scarpa (Politecnico di Milano)
Convergence of a nonlocal phase field system with inertial term 15

23 Akio Ito
Quasi-variational structural evolution inclusion with perturbation on a real Hilbert space 15

14:15–15:40

24 Ken Shirakawa (Chiba Univ.)
Daiki Mizuno (Chiba Univ.)
Harbir Antil (George Mason Univ.)
Optimal control problems governed by pseudo-parabolic gradient systems for KWC type energies 15

25 Masahiro Ikeda (RIKEN/Keio Univ.)
Shun Uchida (Oita Univ.)
Takeshi Fukao (Ryukoku Univ.)
An approximation of evolution equation with clique expansion of hypergraph Laplacian 15

26 Takanori Ebata (Niigata Univ.)
Hiroki Ohwa (Niigata Univ.)
Continuous dependence on the initial and flux functions for entropy solutions of general balance laws 15

27 Kota Kumazaki (Kyoto Univ. of Edu.)
Adrian Muntean (Karlstad Univ.)
Large-time behavior of a solution to a multiscale model 15

28 Takeshi Fukao (Ryukoku Univ.)
Pierluigi Colli (Univ. of Pavia)
Allen–Cahn equations with dynamic boundary conditions of fourth-order 15

15:45–16:45 Award Lecture for the 2023 MSJ Analysis Prize

Naoki Tanaka (Shizuoka Univ.) Abstract theory for evolution equations

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

Hirotoshi Kuroda (Hokkaido Univ.) On the behaviour of solutions to the fourth order total variation flow equation

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Functional Analysis

March 17th (Sun) Conference Room VII

9:30–11:00

1 Shuji Watanabe (Gunma Univ.) The Bogoliubov transformation and the gap equation in the BCS model of superconductivity with external magnetic field ····· 15

2 Itaru Sasaki (Shinshu Univ.), Yasumichi Matsuzawa (Shinshu Univ.), Shinnosuke Izumi (Shinshu Univ.), Kouta Imura (Nagano Pref. Fujimi High School) On the radius of convergence of the ground state in a pair interaction model ····· 15

3 Yukihide Tadano (Tokyo Univ. of Sci.), Shu Nakamura (Gakushuin Univ.), Keita Mikami (RIKEN) Continuum limit for Laplace operators on lattices ····· 15

4 Fumio Hiroshima (Kyushu Univ.) Positivity improving for the Nelson model with nonzero total momenta ····· 15

5 Kazuyuki Wada (Hokkaido Univ. of Edu.) Exponential decay for eigenfunctions associated with discrete spectra of quantum walks ····· 15

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

Artbazar Galtbayar (National Univ. of Mongolia) The L^p-boundedness of the wave operators for bi-Schrödinger operators on $\mathbb{R}^4$

March 18th (Mon) Conference Room VII

9:30–11:00

6 Temma Aoyama (Univ. of Tokyo) Deformation of heat kernels and Wiener measures from the viewpoint of BenSaïd–Kobayashi–Ørsted's Laguerre semigroup theory ····· 15

7 Toshihisa Kubo (Ryukoku Univ.), Bent Ørsted (Aarhus Univ.) The classification and construction of projectively covariant differential operators on $\mathbb{RP}^2$ ····· 15

8 Kazuki Kannaka (RIKEN) Proper actions of semisimple Lie groups and the Hurwitz–Radon number I ····· 15

9 Koichi Tojo (RIKEN) Proper actions of semisimple Lie groups and the Hurwitz–Radon number II ····· 15

10 Atsumu Sasaki (Tokai Univ.) Weyl group of pseudo-Riemannian symmetric space ····· 15

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

Taito Tauchi (Aoyama Gakuin Univ.) Relationship between multiplicities of induced representations and orbit decomposition on real and complex flag varieties

March 19th (Tue) Conference Room Ⅶ

9:30–11:30

11	Keiichi Watanabe (Niigata Univ.)	On gyro operations in open balls of complex inner product spaces	15
12	Osamu Hatori (Niigata Univ.*) Toshikazu Abe (Ibaraki Univ.)	A Mazur–Ulam theorem on a GGV and its application	15
13	Michiya Mori (Univ. of Tokyo)	On the Scottish Book Problem 155 by Mazur and Sternbach	15
14	Yuki Seo (Osaka Kyoiku Univ.)	On numerical radius inequalities related to geometric means	15
15	Masatoshi Ito (Maebashi Inst. of Tech.)	Inequalities among the weighted Heinz mean and related ones	15
16	Hiroyuki Osaka (Ritsumeikan Univ.) Mohsen Kian (Univ. of Bojnord) Mohammad Sal Moslehian (Ferdowsi Univ. of Mashhad)	On characterization of matrix monotone decreasing functions	15
17	Takeaki Yamazaki (Toyo Univ.) Hiroyuki Osaka (Ritsumeikan Univ.)	The induced Aluthge sequence of compact operators	15

14:15–15:45

18	Yusuke Isono (Kyoto Univ.)	Haagerup and Størmer's conjecture for pointwise inner automorphisms	15
19	Satoshi Goto (Sophia Univ.)	A generalization of Ocneanu's ADE inter-Dynkin connection systems	15
20	Taro Sogabe (Kyoto Univ.) ♭	A duality of KK-theory and its application to the extensions of C*-algebras	15
21	Norio Nawata (Osaka Univ.)	$\mathcal{W}$-absorbing actions of finite abelian groups	15
22	Narutaka Ozawa (Kyoto Univ.)	Quasi-local operators and finite-propagation operators	15

16:00–17:00 Talk Invited by Functional Analysis Section

Takuya Takeishi (Kyoto Inst. Tech.) C*-algebras constructed from number fields and related complete invariants of number fields

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Statistics and Probability

March 17th (Sun) Conference Room Ⅲ

9:30–11:40

1	Kiyoiki Hoshino (Osaka Metro. Univ.)	Characterization of the stochastic integral by the Riemann sum	15
2	Kosuke Yamato (Univ. of Tsukuba) Kei Noba (Inst. of Stat. Math.)	Existence of quasi-stationary distributions of standard processes with no negative jumps	15
3	Hirotaka Kai (Kyoto Univ.)	Long time behavior of Lévy processes on manifolds	15

4 Yasuhito Nishimori (Nat. Inst. of Tech., Anan Coll.) — Limiting distributions for particles near the frontier of spatially inhomogeneous branching symmetric stable processes ····· 15

5 Yuji Hamana (Univ. of Tsukuba) — Asymptotic expansion for the tail probability of the hitting time and site of Brownian motion ····· 10

6 Shun Yanashima (Tokyo Metro. Univ.), Kensuke Ishitani (Tokyo Metro. Univ.) — An invariance principle for random walk bridges conditioned to stay between two curves ····· 15

7 Soma Nishino (Tokyo Metro. Univ.), Kensuke Ishitani (Tokyo Metro. Univ.) — Higher order integration by parts formulae for Wiener measures on a path space between two curves ····· 15

8 Masato Hoshino (Osaka Univ.), Ismaël Bailleul (Univ. Bretagne Occidentale) — Random models on regularity-integrability structures ····· 15

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

Yushi Hamaguchi (Osaka Univ.) — Infinite dimensional Markovian lifts of stochastic Volterra equations

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

Nobuaki Naganuma (Kumamoto Univ.) — Approximation theory of SDEs driven by fractional Brownian motion

March 18th (Mon) Conference Room Ⅲ

9:30–11:40

9 Misaki Tabata (Ritsumeikan Univ.) — An infinite-dimensional Hawkes process ····· 15

10 Makoto Nakashima (Nagoya Univ.) — Feynman–Kac representation for three-dimensional heat equation with one-center point interaction ····· 15

11 Makoto Nakashima (Nagoya Univ.), Seiichiro Kusuoka (Kyoto Univ.), Song Liang (Waseda Univ.), Sergio Albeverio (Univ. of Bonn) — Stochastic quantization of the three-dimensional Edwards measure ····· 15

12 Naomasa Ueki (Kyoto Univ.) — Positivity of small ball probabilities of a Gaussian random field, and its applications to random Schrödinger operators ····· 15

13 Haruyoshi Tanaka (Naruto Univ. of Edu.) — Higher-order asymptotic behaviours of pressure functionals and statistical representations of the coefficients ····· 15

14 Takumu Ooi (Kyoto Univ.), Toshihiro Uemura (Kansai Univ.) — Dynkin games for Markov processes ····· 15

15 Yuji Shinozaki (Bank of Japan / Tokyo Tech), Syoiti Ninomiya (Tokyo Tech) — Error estimation of high-order recombination and its application ····· 15

16 Yuki Ueda (Hokkaido Univ. of Edu.) — Uniform convergence towards extreme value distributions in free probability ····· 15

11:40–12:10 Research Section Assembly

March 19th (Tue) Conference Room III

10:00–11:10

17 Teruo Tanaka (Hiroshima City Univ.) Certain fractional optimal stopping problems —continuous time case— 10

18 Toshiharu Fujita (Kyushu Inst. of Tech.) Stochastic decision process with feedforward loop system —Minimum reward system— 15

19 Kenji Tanino (Kobe Univ.), Masatake Hirao (Aichi Pref. Univ.), Masanori Sawa (Kobe Univ.) Research on the strength of B_d-invariant weighted spherical design using simplicial characterization and Hilbert's identity 15

20 Hisaya Okahara (Tokyo Univ. of Sci.), Kengo Fujisawa (Tokyo Univ. of Sci., Yamaguchi), Kouji Tahata (Tokyo Univ. of Sci.) Separable models related to symmetry for multi-way contingency tables 15

March 20th (Wed) Conference Room III

10:00–11:40

21 Eri Kurita (Tokyo Univ. of Sci.), Takashi Seo (Tokyo Univ. of Sci.) A test statistic for Mardia's multivariate skewness 15

22 Koji Tsukuda (Kyushu Univ.), Shun Matsuura (Keio Univ.) Estimation of the leading principal component in the multivariate allometric regression model 15

23 Kou Fujimori (Shinshu Univ.), Koji Tsukuda (Kyushu Univ.) Two step estimations via the Dantzig selector for ergodic time series models 15

24 Kento Egashira (Tokyo Univ. of Sci.), Kazuyoshi Yata (Univ. of Tsukuba), Makoto Aoshima (Univ. of Tsukuba) Asymptotic properties of kernel k-means for high-dimension, low-sample-size data 15

25 Kazuyoshi Yata (Univ. of Tsukuba), Makoto Aoshima (Univ. of Tsukuba) Reconstruction of a low-rank matrix by singular value decompositions 15

26 Yoshihide Kakizawa (Hokkaido Univ.) Density estimation for cylinder data 15

14:15–15:15 Award Lecture for the 2023 MSJ Analysis Prize

Yasunori Fujikoshi (Hiroshima Univ.*) Model selection based on information criteria in high-dimensional statistical analysis

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

Tomoyuki Nakagawa (Meisei Univ.) Robust Bayesian inference using the divergences and its applications

Applied Mathematics

March 17th (Sun) Conference Room IX

9:00–12:00

1 Jiro Akahori (Ritsumeikan Univ.)
Norio Konno (Ritsumeikan Univ.*)
Rikuki Okamoto (Ritsumeikan Univ.)
Iwao Sato (Oyama Nat. Coll. of Tech.)
Yuma Tamura (Ritsumeikan Univ.)
Absolute zeta functions and periodicity of quantum walks on cycles 15

2 Rikuki Okamoto (Ritsumeikan Univ.)
Konno Norio (Ritsumeikan Univ.*)
Sato Iwao (Oyama Nat. Coll. of Tech.)
Akahori Jiro (Ritsumeikan Univ.)
Absolute zeta functions of zeta functions of quantum walks 15

3 Taisuke Hosaka (Yokohama Nat. Univ.)
Etsuo Segawa (Yokohama Nat. Univ.)
Norio Konno (Ritsumeikan Univ.*)
QW-search/Zeta correspondence 10

4 Iwao Sato (Oyama Nat. Coll. of Tech.)
Takako Endo (Tohoku Univ.)
Takashi Komatsu (Univ. of Yamanashi)
Norio Konno (Ritsumeikan Univ.*)
Weighted alternating Walk/Zeta correspondence 15

5 Hiroyuki Yamagishi
(Tokyo Metropolitan Coll. of Indus. Tech.)
Kohtaro Watanabe
(Nat. Defense Acad. of Japan)
Atsushi Nagai (Tsuda Coll.)
The best constants of two types of discrete ℓ^p Sobolev inequalities on a complete graph 15

6 Sho Fujimura (Fukuoka Univ.)
Shuji SHIRAISHI (Fukuoka Univ.)
On the generation of all Euler trails in an Eulerian graph 10

7 Bill Jackson
(Queen Mary Univ. of London)
Kiyoshi Yoshimoto (Nihon Univ.)
Spanning even trees of graphs 15

8 Shun-ichi Maezawa
(Tokyo Univ. of Sci.)
Akira Saito (Nihon Univ.)
On a preorder induced by rainbow forbidden subgraphs 15

9 Makoto Ozawa (Komazawa Univ.)
Mario Eudave-Muñoz
(Univ. Nacional Autónoma de México)
Characterization of critical complexes which have a form $(G \times S^1) \cup H$ 10

10 Makoto Ozawa (Komazawa Univ.)
Mario Eudave-Muñoz
(Univ. Nacional Autónoma de México)
Partially ordered set of complexes by embeddings and the existence of critical subcomplexes 10

11 Kohei Tanaka (Shinshu Univ.)
Directed topological complexity for CW complexes 15

12 Akihiro Higashitani (Osaka Univ.)
Reflexive polytopes arising from regular matroids and γ-nonnegativity 15

14:15–16:50

13 Kengo Enami (Seikei Univ.)
Yumiko Ohno (Yokohama Nat. Univ.)
Difference of facial achromatic numbers between two triangular embeddings of a graph ····· 15

14 Daiki Takahashi (Yokohama Nat. Univ.)
Atsuhiro Nakamoto (Yokohama Nat. Univ.)
Quadrangulations of a polygon with outer Steiner points ····· 15

15 Kenta Noguchi (Tokyo Univ. of Sci.)
Gunnar Brinkmann (Ghent Univ.)
Heidi Van den Camp (Ghent Univ.)
Embedding of complete graphs so that the dual has a 1-cut ····· 15

16 Hideki Matsumura (Keio Univ.)
Masanori Sawa (Kobe Univ.)
On a complex analogue of central symmetry of weighted designs ····· 15

17 Teruyuki Mishima (Kobe Univ.)
Masanori Sawa (Kobe Univ.)
Yukihiro Uchida (Tokyo Metro. Univ.)
Xiao-Nan Lu (Gifu Univ.)
Explicit construction of rational interval design and Hilbert–Kamke problem ····· 15

18 Eiichi Bannai (Kyushu Univ.*)
Hirotake Kurihara (Yamaguchi Univ.)
Da Zhao (Kyoto Univ.)
Yan Zhu (Univ. of Shanghai for Sci. Tech.)
On the bivariate Q-polynomiality of certain association schemes. ····· 15

19 Madoka Awada (Waseda Univ.)
3-designs constructed by using quadratic residue codes ····· 15

20 Reina Ishikawa (Waseda Univ.)
Exceptional designs in some extended quadratic residue codes ····· 15

21 Hiroaki Taniguchi (Yamato Univ./Kagawa Nat. Coll. of Tech.*)
On quadratic APN functions $F(x) + Tr(x)L(x)$ ····· 15

17:00–18:00 Talk Invited by Applied Mathematics Section

Xiao-Nan Lu (Gifu Univ.)
Combinatorial structures for group testing and combinatorial testing

March 18th (Mon) Conference Room IX

9:00–12:00

22 Jun Sato (Tokyo Polytechnic Univ.)
Yuki Ishiguro (Univ. of Tokyo)
Katsuhiro Nishinari (Univ. of Tokyo)
Exact stationary state of the inhomogeneous ASEP ····· 15

23 Shuhei Kamioka (Osaka Seikei Univ.)
An integrable algorithm for randomly sampling plane partitions ····· 15

24 Toshitaka Aoki (Kobe Univ.)
Emerson Gaw Escolar (Kobe Univ.)
Shunsuke Tada (Kobe Univ.)
Computing bipath persistent homology ····· 15

25 Hideaki Morita (Muroran Inst. of Tech.)
On the regular covering of a finite digraph ····· 15

26 Ayaka Ishikawa (Yamagata Univ.)
A graph zeta function of periodic paths and its determinant expression ····· 15

27 Tatsuya Tsurii (Tokyo Univ. of Information Sci.), Naoharu Ito (Nara Univ. of Edu.), Toyoki Matsuyama (Nara Univ. of Edu.) — A study on periodicity of Grover walk using group structures obtained from its evolution matrix ····· 15

28 Daiju Funakawa (Hokkai-Gakuen Univ.), Kei Saito (Kanagawa Univ.) — The existence of eigenvalues in one-dimensional two-state open quantum walks ····· 15

29 Masahiro Sanka (Keio Univ.), Katsuhiro Ota (Keio Univ.) — Toughness, forbidden induced paths and hamiltonicity of graphs ····· 15

30 Kuniharu Yokomura (Tokai Univ.) — On degree conditions of balanced 3-partite Hamiltonian-connected graphs ····· 15

31 Shinya Fujita (Yokohama City Univ.) — On monochromatic connectivity in edge-colored graphs ····· 10

32 Kiyoshi Ando (Nat. Inst. of Informatics) — A constructive characterization of 5-edge-connected 5-regular multigraphs ····· 15

13:00–14:00

33 Satoru Fukasawa (Yamagata Univ.), Tsuyoshi Miezaki (Waseda Univ.) — Galois points for a graph ····· 15

34 Tsuyoshi Miezaki (Waseda Univ.), Yuusaku Nishimura (Waseda Univ.), Akihiro Munemasa (Tohoku Univ.), Tadashi Sakuma (Yamagata Univ.), Shuhei Tsujie (Hokkaido Univ. of Edu.) — A generalization of the chromatic symmetric function ····· 15

35 Yusaku Nishimura (Waseda Univ.) — A simple random walk and equitable partition ····· 15

36 Yuho Tanaka (Waseda Univ.) — On the average hitting times of directed Cayley graphs ····· 15

March 19th (Tue) Conference Room IX

9:50–12:00

37 Koji Nuida (Kyushu Univ.) — A proof of Zorn's Lemma from elementary properties of partially ordered sets ····· 10

38 Tetsuya Nagano (Univ. of Nagasaki) — Finsler encryption ····· 15

39 Ryoko Tomiyasu (Kyushu Univ.) — Packing theory derived from phyllotaxis and products of linear forms ····· 15

40 Tomoharu Suda (RIKEN) — A categorical perspective on the relationship between discrete and continuous time dynamical systems ····· 15

41 Tomoyuki Miyaji (Kyoto Univ.), Kazuya Okamoto (Waseda Univ.), Akiyasu Tomoeda (Kansai Univ.) — Neimark–Sacker bifurcation with discrete rotational symmetry and traveling waves ····· 15

42 Mikio Murata (Tokyo Univ. of Agri. and Tech.) — Turing patterns appearing in Gray–Scott cellular automaton ····· 15

43 Itsuki Watanabe (Waseda Univ.) — High density limit for nonlocal cross-diffusion model with self-diffusion ····· 15

44 Ken Furukawa (RIKEN), Hiroyuki Kitahata (Chiba Univ.) — Drift-diffusion equations under dynamic boundary conditions for filtration phenomena ····· 15

14:15–14:40 Presentation Ceremony for the 2023 Applied Mathematics Prize

14:50–16:30

45 Yoshihisa Morita (Ryukoku Univ.*)
Shuichi Jimbo (Hokkaido Univ.)
Front propagation and blocking for the bistable reaction-diffusion equation on tree-like metric graphs ····· 15

46 Koichi Anada
(Waseda Univ. Senior High School)
Tetsuya Ishiwata
(Shibaura Inst. of Tech.)
Takeo Ushijima (Tokyo Univ. of Sci.)
A Remark on the blow-up rates of curvatures in the area-preserving curvature flow in the plane ····· 15

47 Masato Kimura (Kanazawa Univ.)
Jingtong Li (Kanazawa Univ.)
Yikan Liu (Kyoto Univ.)
Gen Nakamura
(Hokkaido Univ./Hokkaido Univ.)
Hirofumi Notsu (Kanazawa Univ.)
Yoshihiro Ueda (Kobe Univ.)
Unique existence of weak solution and asymptotic behavior of Zener-type viscoelastic wave equation ····· 15

48 Kota Ohno (Chuo Univ.)
Toshiyuki Ogawa (Meiji Univ.)
Process to reach consensus in Deffuant model ····· 15

49 Keiichiro Kagawa (Hokkaido Univ.)
Makoto Okumura (Konan Univ.)
Yasuaki Kobayashi (Hokkaido Univ.)
Duligengaowa Wuergezhen (RIKEN)
Ritsuko Morita (Osaka Univ.)
Hironobu Fujiwara (RIKEN)
Masaharu Nagayama (Hokkaido Univ.)
Numerical simulation to reproduce morphogenesis of hair follicles ···· 15

50 Sungrim Seirin Lee
(Kyoto Univ./Kyoto Univ.)
Mathematical dermatology linking eruption morphology and in vivo pathology ····· 15

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

Yoshitaro Tanaka
(Future Univ.-Hakodate)
Nonlocal evolution equations and approximations by system of partial differential equations

March 20th (Wed) Conference Room IX

9:50–12:00

51 Takashi Furuya (Shimane Univ.)
Globally injective and bijective neural operators ····· 10

52 Jumpei Nagase
(Univ. of Electro-Comm.)
ReLU function representability by piecewise nonlinear functions ····· 15

53 Takeshi Gotoda (Tokyo Tech)
Numerical study of enstrophy variation on filtered-Euler flows ····· 15

54 Yuuki Shimizu (Univ. of Tokyo)
Impact of curvature on a point vortex ····· 15

55 Takehiko Kinoshita (Saga Univ.)
Yoshitaka Watanabe (Kyushu Univ.)
Mitsuhiro T. Nakao (Waseda Univ.)
Regarding the matrix 2-norm of real 2×2 matrices and improved convergence order of norm for approximate inverse operetors ····· 15

56 Takeshi Terao (Kyushu Univ.)
Yoshitaka Watanabe (Kyushu Univ.)
Katsuhisa Ozaki (Shibaura Inst. of Tech.)
Numerical verification method of the approximate inverse operator norm for infinite-dimensional linear operators · · · · · 15

57 Makoto Okumura (Konan Univ.)
On the regularity of a matrix appearing in the proof of the solvability of a structure-preserving scheme under dynamic boundary conditions · · · · · 15

58 Tetsuya Ishiwata (Shibaura Inst. of Tech.)
Daisuke Ito (Shibaura Inst. of Tech.)
Taichi Shiga
Monotonicity-preserving numerical scheme for fractional advection equation · · · · · 15

14:15–15:25

59 Fumio Kikuchi (Univ. of Tokyo*)
Xuefeng Liu (Tokyo Woman's Christian Univ.)
Techniques for hypercircle-based error estimation of finite element solutions · · · · · 15

60 Aufa Numan Fadhilah Rudiawan (Kanazawa Univ.)
Alexandr Žák (Czech Tech. Univ. in Prague)
Michal Beneš (Czech Tech. Univ. in Prague)
Masato Kimura (Kanazawa Univ.)
Hirofumi Notsu (Kanazawa Univ.)
A finite element scheme for a multiphase flow model · · · · · 15

61 Tokuhiro Eto (Univ. of Tokyo)
Harald Garcke (Univ. of Regensburg)
Robert Nürnberg (Univ. of Trento)
A structure-preserving parametric finite element method for the multiphase Mullins–Sekerka problem with triple junctions · · · · · 15

62 Karel Svadlenka (Tokyo Metro. Univ.)
On an approximation scheme for anisotropic interfacial motion on obstacle · · · · · 15

15:40–16:40 Talk Invited by Applied Mathematics Section

Yikan Liu (Kyoto Univ.)
On solution dynamics of coupled systems and semilinear problems of time-fractional diffusion equations

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Topology

March 17th (Sun) Conference Room V

9:30–11:10

1 Takahiro Oba (Osaka Univ.)
Myeonggi Kwon (Jeonbuk National Univ.)
Symplectic fillings of unit cotangent bundles of spheres · · · · · 15

2 Naoyuki Monden (Okayama Univ.)
Anar Akhmedov (Univ. of Minnesota)
Geography of symplectic 4-manifolds admitting Lefschetz fibrations · · 15

3 Naoyuki Monden (Okayama Univ.), Anar Akhmedov (Univ. of Minnesota) — Ruled surfaces and indecomposable Lefschetz fibrations ····· 15

4 Tatsumasa Suzuki (Tokyo Tech), Motoo Tange (Univ. of Tsukuba) — $P_{a,b}$-surgery on 4-manifolds ····· 15

5 Tsukasa Isoshima (Tokyo Tech) — Trisections of the doubles of some Mazur type 4-manifolds ····· 15

6 Masaki Ogawa (Tohoku Univ.) — Weinstein trisections of trivial surface bundles ····· 10

11:20–12:00 Research Section Assembly

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

Masaaki Ue (Kyoto Univ.*) — Constraints on intersection forms of 4-manifolds with given boundary in terms of Gauge theoretical invariants

15:40–17:30

7 Atsuhide Mori (Osaka Dent. Univ.) — A model of linguistic minimalism ····· 15

8 Teruaki Kitano (Soka Univ.), Marina Shibata (Soka Univ.) — On linear representations of a surface group of genus 2 into $SL(2;\mathbb{Z}[1/2])$ with a nontrivial real Euler class ····· 10

9 Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.) — Generating sets for the level d mapping class group of a compact non-orientable surface ····· 15

10 So Yamagata (Fukuoka Univ.) — Presentation of the pure braid group and section of the braid arrangement ····· 15

11 Xiaobing Sheng (Okinawa Inst. of Sci. and Tech. Grad. Univ.) — Some experimental results on knots and links constructed from Thompson's group F a la Jones ····· 15

12 Haru Negami (Chiba Univ.) — Generalization of the twisted Long–Moody construction ····· 15

March 18th (Mon) Conference Room V

9:30–10:00

13 Toshiyuki Akita (Hokkaido Univ.), Sota Takase (Hokkaido Univ.) — Groups having Wirtinger presentations and the second group homology ····· 10

14 Masahiko Yoshinaga (Osaka Univ.), Yu Tajima (Hokkaido Univ.) — Causal order complex and magnitude homotopy type ····· 15

March 18th (Mon) Conference Room IV

10:10–10:25 Presentation Ceremony for the 2023 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2023 MSJ Geometry Prize

Kento Fujita (Osaka Univ.)♭ — On criteria for the K-stability of Fano varieties

March 18th (Mon) Conference Room V

13:00–14:00

15 Naotsugu Chinen (Nat. Defense Acad. of Japan), Takamitsu Yamauchi (Ehime Univ.) — Equivariant asymptotic dimension, asymptotic dimension and covering dimension ····· 15

16 Yasushi Hirata (Kanagawa Univ.), Yukinobu Yajima (Kanagawa Univ.*) — Weak D-space properties on products with metric spaces ····· 15

17 Yasushi Hirata (Kanagawa Univ.), Yukinobu Yajima (Kanagawa Univ.*) — Weak D-space properties on infinite products ····· 15

March 19th (Tue) Conference Room V

9:30–12:00

18 Katsumi Ishikawa (Kyoto Univ.), Takayuki Morifuji (Keio Univ.), Masaaki Suzuki (Meiji Univ.) — Twisted Alexander vanishing order of knots ····· 10

19 Hiroshi Goda (Tokyo Univ. of Agri. and Tech.), Takayuki Morifuji (Keio Univ.) — Chirality of hyperbolic knots and twisted Alexander polynomials ····· 10

20 Shun Sawabe (Waseda Univ.) — On the annihilating polynomial of the colored Jones polynomial for the Whitehead link ····· 10

21 Kokoro Tanaka (Tokyo Gakugei Univ.), Yuta Taniguchi (Osaka Univ.) — The second quandle homology group of the knot n-quandle ····· 10

22 Keisuke Himeno (Hiroshima Univ.) — Hyperbolic knots whose knot Floer complex is stably equivalent to that of a $(3, q)$-torus knot ····· 10

23 Han Yoshida (Gunma Nat. Coll. of Tech.) — Commensurators of Löbell polyhedra ····· 15

24 Kengo Kawamura (Osaka Sangyo Univ.) — Solvability of an integral region choice problem for a link projection ····· 15

25 Mahito Kobayashi (Akita Univ.), Takashi Sano (Hokkai-Gakuen Univ.), Minoru Yamamoto (Hirosaki Univ.) — Panorama views of closed piecewise linear curves in $\mathbf{R}^2$ for shape study ····· 15

26 Sachiko Saito (Hokkaido Univ. of Edu.) — Strongly mixed weighted homogeneous polynomials of type J_{10}^{-} ····· 10

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

Mayuko Yamashita (Kyoto Univ.) ♭ — Topological Modular Forms and supersymmetric quantum field theories

Infinite Analysis

March 19th (Tue) Conference Room VIII

9:30–11:30

1 Mizuki Mori (Ochanomizu Univ.)
Kouichi Takemura (Ochanomizu Univ.)
Three-term recurrence relations and Heun equations · · · · · 15

2 Yumi Arai (Ochanomizu Univ.)
Solutions to q-hypergeometric equations associated with q-middle convolution · · · · · 15

3 Takahiko Nobukawa (Kobe Univ.)
Taikei Fujii (Kobe Univ.)
Connection problem for the variant of q-hypergeometric equation of degree three · · · · · 15

4 Sanefumi Moriyama (Osaka Metro. Univ.)
ABJM matrix models and q-Painlevé equations · · · · · 15

5 Yousuke Ohyama (Tokushima Univ.)
Mano's decomposition and q-Painlevé equations · · · · · 15

6 Tetsu Masuda (Aoyama Gakuin Univ.)
An explicit formula for the discriminants of the Umemura polynomials of the Painlevé V equation · · · · · 15

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

Ryo Okawa (Osaka Metro. Univ./Kyoto Univ.)
Non-stationary difference equation and affine Laumon space

March 20th (Wed) Conference Room VIII

9:30–11:30

7 Masahiko Yoshinaga (Osaka Univ.)
Misha Feigin (Univ. of Glasgow)
Zixuan Wang (Hokkaido Univ.)
Integral expressions of logarithmic vector fields for multiarrangements · · · · · 15

8 Saburo Kakei (Rikkyo Univ.)
Solutions to the KP hierarchy with an elliptic background · · · · · 15

9 Genki Shibukawa (Kobe Univ.)
Masatoshi Noumi (Rikkyo Univ.)
Ruijsenaars-type identities and their applications · · · · · 15

10 Ryo Takenaka (Osaka Metro. Univ.)
On exponents associated with Y-systems · · · · · 15

11 Ryota Akagi (Nagoya Univ.)
Ordered product expressions of rank 2 cluster scattering diagrams · · · · 15

12 Rei Inoue (Chiba Univ.)
Atsuo Kuniba (Univ. of Tokyo)
Yuji Terashima (Tohoku Univ.)
Quantum cluster algebras and 3D integrability · · · · · 15

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

Katsushi Ito (Tokyo Tech)
ODE/IM correspondence and exact WKB analysis in quantum mechanics

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 `program24mar@mathsoc.jp`.

Each conference room is equipped with a blackboard and a projector with HDMI and VGA interface for PC presentation. 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.
Osaka Metropolitan University is an eduroam participating institution.
Dining options include University CO-OP South Cafeteria, Nonohana House, and Metasequoia. They open only on March 18th (Monday) and 19th (Tuesday).
We do not prepare tea or other drinks in the break room, but you can use it as a lunch area if you bring your own lunch box.
Regarding restaurants and convenience stores around Sugimoto Campus, please check
`https://www.omu.ac.jp/orp/ocami-en/assets/lunch-map-en.pdf`.
However, North Cafeteria cannot be used as a cafeteria as a housing fair is being held during the conference period.

Official Party

Date: March 18th (Mon) 18:00–20:00
Venue: Nonohana House, 1F, Media Center

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

Directions

2024 MSJ ANNUAL MEETING

Dates : March 17th (Sun)–20th (Wed), 2024

Venue : Sugimoto Campus, Osaka Metropolitan University
3–3–138 Sugimoto, Sumiyoshi-ku
Osaka-shi, 558-8585, Japan

Contact to : Graduate School of Science, Osaka Metropolitan University
3–3–138 Sugimoto, Sumiyoshi-ku
Osaka-shi, 558-8585, Japan
omu24mar@mathsoc.jp

Web Site : https://www.mathsoc.jp/en/meeting/omu24mar/

Conference Rooms

	Place	Research Sections
Conference Room I	810, 1F, General Education Building	Algebra, Featured Invited Talks
Conference Room II	811, 1F, General Education Building	Functional Equations, Featured Invited Talks
Conference Room III	812, 1F, General Education Building	Statistics and Probability
Conference Room IV	813, 1F, General Education Building	Geometry, Featured Invited Talks
Conference Room V	814, 1F, General Education Building	Topology
Conference Room VI	815, 1F, General Education Building	Complex Analysis, Real Analysis
Conference Room VII	820, 2F, General Education Building	Functional Analysis
Conference Room VIII	821, 2F, General Education Building	Foundation of Mathematics and History of Mathematics, Infinite Analysis
Conference Room IX	822, 2F, General Education Building	Applied Mathematics
Plenary Talks	Auditorium, 1F, Basic Experiment Education Building	
Open Lectures for Citizens	810, 1F, General Education Building	

Other Rooms

Membership Fee & Extended Abstracts	81B, 1F, General Education Building
Discussion Areas	816, 1F, General Education Building
Book Display and Sale	834 & 835, 3F, General Education Building
Executive Committee, MSJ President	Meeting Room, 2F, General Education Building
Official Party	Nonohana House, 1F, Media Center