Final: 2022/8/8

2022 The Mathematical Society of Japan
AUTUMN MEETING

Dates: September 13th (Tue)–16th (Fri), 2022

Venue: Institute for the Advancement of Higher Education
Hokkaido University
Kita 17, Nishi 8, Kita-Ku, Sapporo
Hokkaido, 060-0817, Japan

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The Mathematical Society of Japan

	I E208	II E310	III N304	IV N2	V E301	VI N1	VII N302	VIII E214	IX E308
13th (Tue)	Functional Analysis 10:00–11:45	Functional Equations 9:45–12:00 14:15–16:45	Statistics and Probability 9:30–11:50	Algebra 9:30–12:00 14:15–16:45	Applied Mathematics 10:00–11:45 14:15–15:25	Geometry 9:30–11:45 14:15–16:15	Topology 9:30–12:00 14:20–18:00	Complex Analysis 9:30–12:00 14:15–15:15	Infinite Analysis 9:30–12:00
	Featured Invited Talks 13:00–14:00								
	Invited Talk 14:15–15:15	Invited Talk 17:00–18:00	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 17:00–18:00	Invited Talk 15:45–16:45	Invited Talk 16:30–17:30		Invited Talk 15:30–16:30	Invited Talk 14:15–15:15
14th (Wed)	Functional Analysis 9:30–12:00	Functional Equations 9:45–12:00	Statistics and Probability 9:30–11:30	Algebra 9:30–12:00	Applied Mathematics 10:00–11:45 13:00–14:15	Geometry &Topology		Complex Analysis 9:30–12:00	Infinite Analysis 9:30–10:50
	Invited Talk 13:15–14:15	Invited Talk 13:30–14:30		Invited Talk 13:00–14:00		Invited Talks 10:30–11:30 13:15–14:15		Invited Talk 13:30–14:30	Invited Talk 11:00–12:00
	MSJ Prizes Presentation (Daikodo, Inst. for the Adv. of Higher Edu.) ····· (15:00–15:30) Plenary Talks (Daikodo, Inst. for the Adv. of Higher Edu.) Autumn Prize Winner ····· (15:50–16:50) Osamu Saeki (Kyushu Univ.) ····· (17:10–18:10)								
15th (Thu)	Functional Analysis 9:30–12:00 14:15–16:00	Functional Equations 9:45–12:00 14:15–16:45	Statistics and Probability 9:30–12:00	Algebra 9:30–11:30 14:15–17:15	Applied Mathematics 9:30–12:00 14:15–16:45	Geometry 9:30–11:45 14:15–16:15	Topology 9:30–12:00 15:40–18:00	Real Analysis 9:30–11:30 14:15–16:20	Found. of Math. & Hist. of Math. 10:35–12:00 14:45–16:15
	Featured Invited Talks 13:00–14:00								
	Invited Talk 16:15–17:15	Invited Talk 17:00–18:00	Invited Talks 14:25–15:25 15:45–16:45	Invited Talk 17:30–18:30	Invited Talk 17:00–18:00	Invited Talk 16:30–17:30	Invited Talk 14:20–15:20	Invited Talk 16:40–17:40	Invited Talk 16:30–17:30
16th (Fri)		Functional Equations 9:45–12:00 14:15–16:45	Statistics and Probability 9:30–12:00 14:25–16:50	Algebra 9:30–12:00 14:15–17:00	Applied Mathematics 9:30–12:00 14:15–16:10	Geometry 9:30–12:00 14:15–16:30	Topology 9:30–12:00 15:40–17:00	Real Analysis 9:30–11:50 14:15–16:20	Found. of Math. & Hist. of Math. 10:30–12:00 14:15–15:55
	Featured Invited Talks 13:00–14:00								
		Invited Talk 17:00–18:00		Invited Talk 17:15–18:15	Invited Talk 16:25–17:25		Invited Talk 14:20–15:20	Invited Talk 16:40–17:40	Invited Talk 16:25–17:25

Plenary Talks

September 14th (Wed) Daikodo, 1F, Inst. for the Adv. of Higher Edu.

Award Lecture for the 2022 MSJ Autumn Prize

Autumn Prize Winner ..... (15:50–16:50)

Osamu Saeki (Kyushu Univ.) Global singularity theory of generic differentiable maps ... (17:10–18:10)

Featured Invited Talks

September 13th (Tue)

Conference Room IV

Tôru Umeda (Osaka Metro. Univ.)♭ The Capelli identities, past, present, and the future ..... (13:00–14:00)

Conference Room VI

Hiroshi Yanagihara (Yamaguchi Univ.) Loewner theory on analytic universal covering maps ..... (13:00–14:00)

Plenary Talks

Guest Talk from Taiwan Mathematical Society

Jungkai Chen (Nat. Taiwan Univ.) Explicit birational geometry of threefolds, after Mori, Kawamata and Kawakita ..... (13:00–14:00)

September 15th (Thu)

Conference Room IV

Tohru Ozawa (Waseda Univ.)♭ Modified Energy Method for Nonlinear Dispersive Equations ..... (13:00–14:00)

Conference Room VI

Makoto Aoshima (Univ. of Tsukuba) Statistical mathematics for high-dimensional phenomena .. (13:00–14:00)

September 16th (Fri)

Conference Room IV

Hiromu Tanaka (Univ. of Tokyo) On minimal model program ..... (13:00–14:00)

Conference Room VI

Ko Honda (UCLA) Contact structures, convex hypersurfaces, and open book decompositions ..... (13:00–14:00)

Talks Invited by Research Sections and Special Session

September 13th (Tue)

Algebra (Conference Room IV)

Aaron Chan (Nagoya Univ.) Algebras associated to surface dissections and their tilting theory ··· (17:00–18:00)

Geometry (Conference Room VI)

Masatoshi Kokubu (Tokyo Denki Univ.) Flat fronts in hyperbolic three-space and related topics ··· (16:30–17:30)

Complex Analysis (Conference Room VIII)

Kazuya Tohge (Kanazawa Univ.) Revisiting the Stothers–Mason theorem with Nevanlinna ··· (15:30–16:30)

Functional Equations (Conference Room II)

Daisuke Yamakawa (Tokyo Univ. of Sci.) Geometry and symmetry of isomonodromic deformations ··· (17:00–18:00)

Functional Analysis (Conference Room I)

Youko Umeta (Josai Univ.) A unified family of P_{J}-hierarchies (J=I,II,IV,34) with a large parameter ··· (14:15–15:15)

Statistics and Probability (Conference Room III)

Award Lecture for the 2021 MSJ Analysis Prize

Makoto Katori (Chuo Univ.) Multiple Schramm–Loewner evolution and Dyson's Brownian motion model ··· (14:15–15:15)

Takahiro Hasebe (Hokkaido Univ.) Loewner chains, Markov processes and non-commutative stochastic processes ··· (15:30–16:30)

Applied Mathematics (Conference Room V)

Momoko Hayamizu (Waseda Univ.) Combinatorics of phylogenetic trees and networks ··· (15:45–16:45)

Infinite Analysis (Conference Room IX)

Ayumu Hoshino (Hiroshima Inst. of Tech.) Macdonald polynomials of type C with hook-shape diagrams and Pieri type formula ··· (14:15–15:15)

September 14th (Wed)

Algebra (Conference Room IV)

Naoki Genra (Univ. of Tokyo) Feigin–Semikhatov duality ··· (13:00–14:00)

Geometry and Topology (Conference Room VI)

Award Lecture for the 2022 MSJ Geometry Prize

Hiroshi Iriyeh (Ibaraki Univ.), Masataka Shibata (Meijo Univ.) A solution of Mahler's conjecture of three dimensional symmetric convex bodies ··· (10:30–11:30)

Award Lecture for the 2022 MSJ Geometry Prize

Tatsuki Kuwagaki (Kyoto Univ.)♭ Geometry and algebraic analysis of sheaf quantization ··· (13:15–14:15)

Complex Analysis (Conference Room VIII)

Shinichi Tajima (Niigata Univ.*) Complex and algebraic analysis of singularities, and algorithms ··· (13:30–14:30)

Functional Equations (Conference Room II)

Masataka Shibata (Meijo Univ.) Asymptotic behavior of positive solutions for a class of quasi-linear elliptic equations with H^1-critical growth ····· (13:30–14:30)

Functional Analysis (Conference Room I)

Hiraku Atobe (Hokkaido Univ.)♭ Local newforms for unramified odd unitary groups ····· (13:15–14:15)

Infinite Analysis (Conference Room IX)

Taichiro Takagi ♭ (Nat. Defense Acad. of Japan) A geometric lifting of integrable cellular automata and its continuum limits ····· (11:00–12:00)

September 15th (Thu)

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

Tatsuji Kawai (JAIST) Real numbers from a point-free perspective ····· (16:30–17:30)

Algebra (Conference Room IV)

Takashi Kishimoto (Saitama Univ.)♭ Equivariant completions of vector groups into Fano varieties ····· (17:30–18:30)

Geometry (Conference Room VI)

Takefumi Kondo (Kagoshima Univ.) Nonlinear spectral gaps of Coxeter groups with respect to CAT(0) spaces ····· (16:30–17:30)

Functional Equations (Conference Room II)

Hiroaki Kikuchi (Tsuda Coll.) Ground state of double power nonlinear Schrödinger equations in three space dimensions ····· (17:00–18:00)

Real Analysis (Conference Room VIII)

Takeshi Iida (Fukushima Nat. Coll. of Tech.) Orlicz maximal operators on L^p and Morrey spaces ····· (16:40–17:40)

Functional Analysis (Conference Room I)

Yuhei Suzuki (Hokkaido Univ.)♭ Non-commutative amenable actions ····· (16:15–17:15)

Statistics and Probability (Conference Room III)

Shinpei Imori (Hiroshima Univ.) Variable selection in high-dimensional multivariate linear regression models ····· (14:25–15:25)

Yuichi Goto (Kyushu Univ.) Integrated copula spectrum with applications to tests for time-reversibility and tail symmetry ····· (15:45–16:45)

Applied Mathematics (Conference Room V)

Junya Nishiguchi (Tohoku Univ.) Infinite-dimensionality and transcendency brought by time-delay ····· (17:00–18:00)

Topology (Conference Room VII)

Christine Vespa (Univ. of Strasbourg / JSPS) Eilenberg Mac Lane polynomial functors and their applications ····· (14:20–15:20)

September 16th (Fri)

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

Harald Kuemmerle (German Inst. for Japanese Stud.) A re-evaluation of "civil mathematicians" in Ogura Kinnosuke's historiography ····· (16:25–17:25)

Algebra (Conference Room IV)

Makoto Kawashima (Nihon Univ.) On arithmetic properties of the Siegel G-functions ····· (17:15–18:15)

Functional Equations (Conference Room II)

Yutaka Terasawa (Nagoya Univ.)♭ Weak solutions of nonlocal diffuse interface model for two-phase flows and those local asymptotics ····· (17:00–18:00)

Real Analysis (Conference Room VIII)

Masaaki Mizukami (Kyoto Univ. of Edu.) Global existence and asymptotic behavior in some chemotaxis-consumption system ····· (16:40–17:40)

Applied Mathematics (Conference Room V)

Akane Kawaharada (Kyoto Univ. of Edu.) Characterization of fractals generated by cellular automata ····· (16:25–17:25)

Topology (Conference Room VII)

Shin Satoh (Kobe Univ.) Toward tabulation of 2-knots ····· (14:20–15:20)

Open Lectures for Citizens

Date: September 17th (Sat) 14:00–16:30

Venue: Large Auditorium, School of Science

Sponsored by: The Mathematical Society of Japan

Co-sponsored by: School of Science, Hokkaido University

Program: Opening Speech ····· (14:00–14:10)
Senjou Shimizu (President of MSJ / Kyoto Univ.)

Lecture 1: "A New Way to Walk in the Quantum World —Quantum Walk, Zeta Correspondence, and Riemann Hypothesis—" ····· (14:10–15:10)
Norio Konno (Yokohama National Univ.)

Lecture 2: "The Wonder of the Absolute Galois Groups" ····· (15:30–16:30)
Seidai Yasuda (Hokkaido Univ.)

Web Page: `https://www.mathsoc.jp/en/meeting/hokudai22sept/`

Foundation of Mathematics and History of Mathematics

September 15th (Thu) Conference Room IX

10:35–12:00

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

2 Kenshi Miyabe (Meiji Univ.) Subclasses of weakly computable reals that form real closed fields ···· 15

3 Koichiro Ikeda (Hosei Univ.) On regular generic structures ····· 15

4 Hirotaka Kikyo (Kobe Univ.) On generic structures defined by log-like functions ····· 15

5 Akito Tsuboi (Univ. of Tsukuba*) Some comments on the difference between forking and dividing ····· 10

14:15–14:30 Research Section Assembly

14:45–16:15

6 Kenta Tsukuura (Univ. of Tsukuba) Huge cardinal and Prikry forcing ····· 15

7 Tatsuya Goto (Kobe Univ.) Goldstern's principle about unions of measure 0 sets ····· 15

8 Diego A. Mejía (Shizuoka Univ.) Cardinal characteristics associated with the ideal of strong measure zero sets ····· 15

9 Rin Miyauchi (Waseda Univ.)
Toshimichi Usuba (Waseda Univ.)
The continuum function on the countable unions of countable sets ··· 15

10 Daisuke Ikegami (Shibaura Inst. of Tech.) Preservation of AD via forcings ····· 15

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

Tatsuji Kawai (JAIST) Real numbers from a point-free perspective

September 16th (Fri) Conference Room IX

10:30–12:00

11 Takahiro Seki (Niigata Univ.) Commutativity of non-associative substructural logics with restricted weakening and contraction ····· 15

12 Yutaka Katō (Tokyo Tech)
Ryo Kashima (Tokyo Tech)
Semantics and cut-elimination for the provability modal logic GLS ··· 15

13 Yuya Okawa (Chiba Univ.) Simplified Veltman frames for sublogics of the interpretability logic **IL** ····· 15

14 Nobu-Yuki Suzuki (Shizuoka Univ.) Remarks on intermediate predicate logics enjoying prenex normal form theorem ····· 15

15 Hiromasa Hori (Nagoya Univ.)
Koji Nakazawa (Nagoya Univ.)
Makoto Tatsuta (Nat. Inst. of Informatics)
Equivalence of infinite and cyclic proof systems for propositional logics ····· 15

14:15–15:55

16 Noriko Tanaka (Aichi Prefectural Asahigaoka High School) — The Experimental Class for Science Education in Kyoto in the near end of the World War II ····· 15

17 Katsushi Waki (Yamagata Univ.) — Extraction of graphic regions within WASAN books ····· 10

18 Hideyuki Majima (Ochanomizu Univ.*) — Theoretical meaning of the calculation of Pi used by Seki Takakazu and Takebe Katahiro ····· 15

19 Mitsuo Morimoto (Yokkaichi Univ. / Sophia Univ.*) — On the *Sekisan Shidensho* (2) ····· 15

20 Tsukane Ogawa (Yokkaichi Univ.) — Inductive methodology in the 'Myouku Shu' written by Oka Yukitada ····· 15

21 Makoto Tamura (Osaka Sangyo Univ.) — On the solution of cubic equations in China ····· 15

16:00–16:15 Mathematics History Team Meeting

16:25–17:25 Talk Invited by Section on Foundation and History of Mathematics

Harald Kuemmerle (German Inst. for Japanese Stud.) — A re-evaluation of "civil mathematicians" in Ogura Kinnosuke's historiography

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Algebra

September 13th (Tue) Conference Room IV

9:30–12:00

1 Shinichi Tajima (Niigata Univ.*), Katsuyoshi Ohara (Kanazawa Univ.), Akira Terui (Univ. of Tsukuba) — Efficient symbolic computation of Jordan chains and generalized eigenspaces (1) ····· 10

2 Shinichi Tajima (Niigata Univ.*), Katsuyoshi Ohara (Kanazawa Univ.), Akira Terui (Univ. of Tsukuba) — Efficient symbolic computation of Jordan chains and generalized eigenspaces (2) ····· 10

3 Koji Matsushita (Osaka Univ.) — Torsionfreeness for divisor class groups of toric rings of integral polytopes ····· 13

4 Sora Miyashita (Osaka Univ.) ♭ — Levelness versus nearly Gorensteinness of homogeneous domains ····· 13

5 Mitsuhiro Miyazaki (Kyoto Univ. of Edu.) — Almost Gorenstein property of the Ehrhart ring of the stable set polytope of a cycle graph and Hibi–Tsuchiya's conjecture ····· 13

6 Kohsuke Shibata (Yonago Nat. Coll. of Tech.), Kohji Yanagawa (Kansai Univ.) — Minimal free resolutions of Specht ideals for $(n-d, d)$ ····· 13

7 Ken-ichi Yoshida (Nihon Univ.), Tomohiro Okuma (Yamagata Univ.), Kei-ichi Watanabe (Nihon Univ.) — Gorensteinness for normal tangent cones of elliptic ideals ····· 13

8 Naoki Endo (Meiji Univ.), Shiro Goto (Meiji Univ.) — Reflexive modules over the endomorphism algebras of reflexive trace ideals · · · 13

9 Shinya Kumashiro (Oyama Nat. Coll. of Tech.) — Upper bound on the colength of the trace of the canonical module · · · 13

14:15–16:45

10 Toshiya Yurikusa (Tohoku Univ.) — Acyclic cluster algebras with dense g-vector fans · · · 10

11 Yuichiro Goto (Osaka Univ.) — Connectedness of quasi-hereditary structures · · · 13

12 Satoshi Usui (Tokyo Univ. of Sci.) — Characterization of eventually periodic modules in the singularity categories, and its application · · · 13

13 Hideto Asashiba (Shizuoka Univ./Kyoto Univ./Osaka Metro. Univ.), Emerson Gaw Escolar (Kobe Univ.), Ken Nakashima (Okayama Univ.), Michio Yoshiwaki (Osaka Metro. Univ.) — Approximation by interval-decomposables and interval resolutions of 2D persistence modules · · · 13

14 Kazuho Ozeki (Yamaguchi Univ.) — The first Hilbert coefficient of stretched ideals · · · 13

15 Takahide Adachi (Yamaguchi Univ.), Haruhisa Enomoto (Osaka Metro. Univ.), Mayu Tsukamoto (Yamaguchi Univ.) — Generalization of HRS-tilt · · · 13

16 Masaki Matsuno (Shizuoka Univ.) — The classification of twisted algebras of 3-dimensional Sklyanin algebras · · · 13

17 Haigang Hu (Shizuoka Univ.), Izuru Mori (Shizuoka Univ.) — Quantum quadratic complete intersections · · · 13

18 Mayu Tsukamoto (Yamaguchi Univ.), Takahide Adachi (Yamaguchi Univ.) — Cotorsion pairs and silting subcategories in extriangulated categories · · · 13

17:00–18:00 Talk Invited by Algebra Section

Aaron Chan (Nagoya Univ.) — Algebras associated to surface dissections and their tilting theory

September 14th (Wed) Conference Room IV

9:30–12:00

19 Cid Reyes-Bustos (NTT Inst. for Funda. Math.) — Spectra and Ihara zeta function of group-subgroup pair graphs · · · 10

20 Kiyoto Yoshino (Tohoku Univ.) — Equiangular lines with common angle arccos(1/3) · · · 13

21 Liron Speyer (Okinawa Inst. of Sci. and Tech. Grad. Univ.) — Schurian-infinite blocks of type A Hecke algebras · · · 13

22 Yuta Kozakai (Tokyo Univ. of Sci.) — On tilting complexes over blocks covering cyclic blocks · · · 10

23 Naoki Fujita (Kumamoto Univ.) — Essential bases of irreducible representations and Newton–Okounkov bodies · · · 13

24 Taiki Shibata (Okayama Univ. of Sci.), Ryota Wakao (Okayama Univ. of Sci.) — On classification of pointed Hopf superalgebras of low dimension · · · 10

25 Hirotake Kurihara (Yamaguchi Univ.), Akihiro Higashitani (Osaka Univ.) — New invariants for finite generalized Alexander quandles and their application · · · 13

26 Kenichi Shimizu (Shibaura Inst. of Tech.) — A formula of the Nakayama functor of the dual tensor category · · · 13

27 Katsusuke Nabeshima (Tokyo Univ. of Sci.), Shinichi Tajima (Niigata Univ.*) — On Noetherian operators of zero-dimensional ideals · · · 13

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

Naoki Genra (Univ. of Tokyo) — Feigin–Semikhatov duality

September 15th (Thu) Conference Room IV

9:30–11:30

28 Tomohiro Iwami (Kyushu Inst. of Tech.) ♭ — Strong approximation property related to three-dimensional Miyaoka–Yau type inequality with the associated third Chern classes · · · 13

29 Ryo Ohashi (Yokohama Nat. Univ.) — Fast enumeration of superspecial hyperelliptic curves of genus 4 with automorphism group V_4 · · · 13

30 Hirokazu Nasu (Tokai Univ.) — On the primary obstructions to deforming curves on a threefold · · · 13

31 Hirokazu Nasu (Tokai Univ.) — Obstructions to deforming space curves lying on a smooth cubic surface · · · 13

32 Akihiro Higashitani (Osaka Univ.) — Combinatorial mutation equivalence of two toric degenerations of Grassmannians arising from matching fields · · · 13

33 Ryo Kawaguchi (Nara Medical Univ.) — A lower bound for the ith sectional geometric genus of polarized toric varieties · · · 13

34 Shou Yoshikawa (RIKEN) — Quasi-F-splitting · · · 13

11:30–12:00 Research Section Assembly

14:15–17:15

35 Atsuhira Nagano (Kanazawa Univ.) — A family of lattice polarized K3 surfaces which contains the family of Kummer surfaces · · · 13

36 Naoki Mikoshiba (Tokyo Denki Univ.) — Hodge cycles on abelian varieties of D_n-type · · · 13

37 Makoto Miura (Kyoto Univ.) — Geometric transitions for Calabi–Yau hypersurfaces · · · 13

38 Kotaro Kawatani (Osaka Metro. Univ./Yamato Univ.) — Non-existence of stability conditions on linear triangulated categories · · · 13

39 Hiroki Matsui (Tokushima Univ.) — Spectra of derived categories and reconstruction of algebraic varieties · · · 13

40 Shingo Okuyama (Kagawa Nat. Coll. of Tech.) — Partially additive rings and partial group schemes over $\mathbb{F}_1$ · · · 13

41 Norihiro Nakashima (Nagoya Inst. of Tech.), Shuhei Tsujie (Hokkaido Univ. of Edu.) — Conditions for the extended Shi arrangements and the extended Catalan arrangements to be hereditarily free · · · 13

42 Norihiko Minami (Nagoya Inst. of Tech.) — A type 1 local uniformization theorem for arbitrary geometric valuations · · · 13

43 Norihiko Minami (Nagoya Inst. of Tech.) — Two applications of the birational motive to the retract $(-i)$-rationality · · · 13

44 Ryosuke Shimada (Univ. of Tokyo) — On some simple geometric structure of affine Deligne–Lusztig varieties for GL_n · · · 13

17:30–18:30 Talk Invited by Algebra Section

Takashi Kishimoto (Saitama Univ.) ♭ — Equivariant completions of vector groups into Fano varieties

September 16th (Fri) Conference Room IV

9:30–12:00

45 Shin Nakano (Gakushuin Univ.), Kotaro Kato — On ideal class groups of quintic cyclic fields · · · 10

46 Aiki Kimura (Tohoku Univ.) — The duality relations derived from the derivation relations for multiple zeta values · · · 13

47 Wataru Takeda (Tokyo Univ. of Sci.), Yasuo Ohno (Tohoku Univ.), Maki Nakasuji (Sophia Univ.) — An interpolation of the generalized duality formula for the Schur multiple zeta values to complex functions · · · 13

48 Naho Kawasaki (Tohoku Univ.) — An explicit formula of the relation between multiple zeta functions of Arakawa–Kaneko and Euler–Zagier types · · · 10

49 Masataka Ono (Waseda Univ.), Shuji Yamamoto (Univ. of Tokyo) — Kaneko–Zagier conjecture for general integer indices · · · 13

50 Hirotaka Kobayashi (Nagoya Univ.) — On an entire function derived from higher derivatives of Hardy's Z-function · · · 13

51 Shota Inoue (Tokyo Tech), Junxian Li (Univ. Bonn) — Joint value distribution of L-functions on the critical line · · · 13

52 Masahiro Mine (Sophia Univ.) — Discrepancy estimates for the Hurwitz zeta-functions and Mahler's classification · · · 13

53 Kenta Endo (Nagoya Univ.) — Universality theorem for the iterated integrals of the logarithm of the Riemann zeta-function · · · 13

14:15–17:00

54 Yasuaki Gyoda (Univ. of Tokyo) — Positive integer solutions to $(x+y)^2+(y+z)^2+(z+x)^2=12xyz$ and generalized markov cluster algebra · · · 13

55 Shigeru Iitaka (Gakushuin Univ.*), Yukimasa Saito (Azabu Junior High School) — Generalization of perfect numbers · · · 13

56 Tadaaki Igawa, Debika Banerjee (Indraprastha Inst. of Information Tech. Delhi), Makoto Minamide (Yamaguchi Univ.), Yoshio Tanigawa — On averages of indexes of congruence subgroups in the modular group · · · 10

57 Ryota Tajima (Kyushu Univ.) A p-adic property of mock modular forms whose shadows have complex multiplication ····· 10

58 Yuichi Sakai (Kurume Inst. of Tech.), Kiyokazu Nagatomo, Don Zagier (Max Plank Inst. for Math.) Modular linear differential equations and generalized Rankin–Cohen brackets ····· 13

59 Daniel Duverney (Baggio Eng. School), Takeshi Kurosawa (Tokyo Univ. of Sci.), Iekata Shiokawa (Keio Univ.*) Irrationality exponents of certain series generated by continued fraction with folding lemma ····· 13

60 Shintaro Murakami (Hirosaki Univ.), Yohei Tachiya (Hirosaki Univ.) Linear independence of certain gap series with monomial exponents ····· 10

61 Kota Saito (Univ. of Tsukuba), Wataru Takeda (Tokyo Univ. of Sci.) Topological properties and algebraic independence of sets of prime-representing constants ····· 12

62 Haruki Ide (Keio Univ.), Taka-aki Tanaka (Keio Univ.) Algebraic independence properties of certain entire functions with many variables ····· 10

63 Haruki Ide (Keio Univ.) Algebraic independence results for certain families of analytic functions generated by linear recurrences ····· 10

64 Satoshi Kumabe (Kyushu Univ.) Supercongruences for fourth Appell function ····· 10

17:15–18:15 Talk Invited by Algebra Section

Makoto Kawashima (Nihon Univ.) On arithmetic properties of the Siegel G-functions

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Geometry

September 13th (Tue) Conference Room VI

9:30–11:45

1 Yu Ohno (Hokkaido Univ.♭), Shimpei Kobayashi (Hokkaido Univ.) A characterization of the alpha-connections on the statistical manifold of multivariate normal distributions ····· 15

2 Shinobu Fujii (Chitose Inst. of Sci. and Tech.) Subspace arrangements associated with symmetric Clifford systems ··· 15

3 Masahiro Morimoto (Osaka Metro. Univ.) Geometry of orbits of path group actions induced by Hermann actions ····· 15

4 Kurando Baba (Tokyo Univ. of Sci.), Osamu Ikawa (Kyoto Inst. Tech.) Double Satake diagrams and canonical forms in compact symmetric triads with applications to Hermann actions ····· 15

5 Kyoji Sugimoto (Tokyo Univ. of Sci.) Para-real forms of para-Hermitian symmetric spaces and real forms of pseudo-Hermitian symmetric spaces ····· 15

6 Soma Ohno (Waseda Univ.) Infinitesimal deformations of Killing spinors on nearly parallel G_2 manifolds ····· 15

7 Yusuke Sakane (Osaka Univ.*) On non-naturally reductive Einstein metrics on $\mathrm{SU}(N)$ ····· 15

14:15–16:15

8 Yoshiki Jikumaru (Kyushu Univ.) Geometry of hanging membranes in architectural surface design ····· 15

9 Shin Kaneda (Hiroshima Univ.) Nonorientable maximal surfaces and their singular points ····· 15

10 Rika Akiyama (Tokyo Metro. Univ.), Takashi Sakai (Tokyo Metro. Univ.), Yuichiro Sato (Kogakuin Univ./Tokyo Metro. Univ.) Chern–Federer submanifolds in Riemannian space forms ····· 15

11 Hirotaka Kiyohara (Hokkaido Univ.), Shimpei Kobayashi (Hokkaido Univ.) Characterization of minimality of timelike minimal surfaces in the three-dimensional Heisenberg group ····· 15

12 Shintaro Akamine (Nihon Univ.), Hiroki Fujino (Nagoya Univ.) Extension of Krust theorem and deformations of minimal surfaces ···· 15

13 Pham Hoang Ha (Hanoi National Univ.), Yu Kawakami (Kanazawa Univ.), Mototsugu Watanabe (Takaoka special support school) On the total weight of a number of totally ramified values of the Gauss map of a complete minimal surface with finite total curvature ····· 15

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

Masatoshi Kokubu (Tokyo Denki Univ.) Flat fronts in hyperbolic three-space and related topics

September 14th (Wed) Conference Room VI

10:10–10:25 Presentation Ceremony for the 2022 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2022 MSJ Geometry Prize

Hiroshi Iriyeh (Ibaraki Univ.), Masataka Shibata (Meijo Univ.) A solution of Mahler's conjecture of three dimensional symmetric convex bodies

13:15–14:15 Award Lecture for the 2022 MSJ Geometry Prize

Tatsuki Kuwagaki (Kyoto Univ.)♭ Geometry and algebraic analysis of sheaf quantization

September 15th (Thu) Conference Room VI

9:30–11:45

14 Takumi Gomyou (Nagoya Univ.), Shin Nayatani (Nagoya Univ.) Maximization of the first eigenvalue of a finite graph and Nadirashvili-type theorem ····· 15

15 Tetsuya Nagano (Univ. of Nagasaki) The study to quantify of the estrangement for non-reversible geodesics in Finsler space ····· 15

16 Hiroshi Tsuji (Osaka Univ.) Blaschke–Santaló inequality and inverse Santaló inequality via heat semigroup ····· 15

17 Takeru Asaka (Univ. of Tokyo), Shunsuke Kano (Tohoku Univ.), Tsukasa Ishibashi (Tohoku Univ.) Earthquake theorem for cluster algebras of finite type ····· 15

18 Shunsuke Kano (Tohoku Univ.), Takeru Asaka (Univ. of Tokyo), Tsukasa Ishibashi (Tohoku Univ.) Asymptotic behavior of earthquake maps for cluster algebras of finite type ····· 15

19 Ramón Barral Lijó (Ritsumeikan Univ.)
Hiraku Nozawa (Ritsumeikan Univ.)
Jesús Antonio Álvarez López (Univ. of Santiago de Compostela)
Carlos Meniño (Univ. de Vigo)
Leaves of chaotic, compact foliated spaces ····· 15

20 Yuya Kodama (Tokyo Metro. Univ.)
A generalization of the Lodha–Moore group ····· 15

14:15–16:15

21 Yoshito Ishiki (RIKEN)
On dense subsets in spaces of metrics ····· 15

22 Yoshito Ishiki (RIKEN)
Branching geodesics of the Gromov–Hausdorff distance ····· 15

23 Yoshito Ishiki (RIKEN)
Fractal dimensions and topological embeddings of the Hilbert cube into the Gromov–Hausdorff space ····· 15

24 Homare Tadano (Yamaguchi Univ.)
Boju–Funar type theorems via m-Bakry–Émery Ricci curvature with $m \leqslant 1$ ····· 15

25 Homare Tadano (Yamaguchi Univ.)
Bonnet–Myers type theorems via m-Bakry–Émery Ricci curvature with ε-range ····· 15

26 Tomohiro Fukaya (Tokyo Metro. Univ.)
A topological product decomposition of Busemann space ····· 15

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

Takefumi Kondo (Kagoshima Univ.)
Nonlinear spectral gaps of Coxeter groups with respect to CAT(0) spaces

September 16th (Fri) Conference Room VI

9:30–12:00

27 Norihiko Minami (Nagoya Inst. of Tech.)
Cohomological characterization of the hierarchical structures interpolating the uniruledness and the rationally connectedness ····· 15

28 Mamoru Doi
Naoto Yotsutani (Kagawa Univ.)
On applications of differential geometric global smoothings of simple normal crossing complex surfaces with trivial canonical bundle ····· 15

29 Naoto Yotsutani (Kagawa Univ.)
Diffeomorphism classes of the doubling Calabi–Yau threefolds ····· 15

30 Koki Matsuzaka (Hokkaido Univ.)
Masao Jinzenji (Okayama Univ.)
Period integrals and intersection numbers of moduli space of quasimaps in the case of Calabi–Yau hypersurface in CP^{N-1} ····· 15

31 Yuta Watanabe (Univ. of Tokyo)
Bogomolov–Sommese type vanishing theorem for holomorphic vector bundles equipped with positive singular Hermitian metrics ····· 15

32 Masaya Kawamura (Kagawa Nat. Coll. of Tech.)
Compact almost Hermitian manifolds with quasi-negative curvature and the almost Hermitian curvature flow ····· 15

33 Taito Tauchi (Kyushu Univ.)
Tsuyoshi Yoneda (Hitotsubashi Univ.)
Leandro A. Lichtenfelz (Wake Forest Univ.)
Existence of a conjugate point in the incompressible Euler flow on a three-dimensional ellipsoid ····· 15

34 Tomohiro Asano (Kanazawa Univ.)
Yuichi Ike (Univ. of Tokyo)
Completeness of derived interleaving distances for sheaves and C^0 symplectic geometry ····· 15

14:15–16:30

Complex Analysis

September 13th (Tue) Conference Room VIII

9:30–12:00

14:15–15:15

10 Shunji Horiguchi — Extended Mandelbrot sets of $f(z) = (z^m + c)^n$ · · · 15

11 Takayuki Watanabe (Kyoto Univ.) — On the stochastic bifurcations regarding random iterations of polynomials of the form $z^2 + c_n$ · · · 15

12 Yûsuke Okuyama (Kyoto Inst. Tech.) — Uniform perfectness in non-archimedean dynamics · · · 15

13 Yûsuke Okuyama (Kyoto Inst. Tech.) — Reduction, quantization, and degeneration in non-archimedean and complex dynamics · · · 15

15:30–16:30 Talk Invited by Complex Analysis Section

Kazuya Tohge (Kanazawa Univ.) — Revisiting the Stothers–Mason theorem with Nevanlinna

September 14th (Wed) Conference Room VIII

9:30–12:00

14 Takumi Yagi (Kyoto Univ.) — Perturbations of quadratic Hénon maps with a semi-parabolic fixed point · · · 15

15 Satoshi Ogawa (Osaka Metro. Univ.) — Linearization along a certain Levi-flat hypersurface with a S^1-bundle structure · · · 15

16 Tatsuhiro Honda (Senshu Univ.), Hidetaka Hamada (Kyushu Sangyo Univ.) — Composition operators from the α-Bloch space into the β-Bloch space in several complex variables · · · 15

17 Junjiro Noguchi (Univ. of Tokyo*/Tokyo Tech*) — On analytic Ax–Schanuel — I · · · 10

18 Junjiro Noguchi (Univ. of Tokyo*/Tokyo Tech*) — On analytic Ax–Schanuel — II · · · 15

19 Yoshihiko Matsumoto (Osaka Univ.) — CR Killing operator and the Bernstein–Gelfand–Gelfand construction · · · 15

20 Kazuko Matsumoto (Tokyo Univ. of Sci.) — Hartogs' analyticity theorem for C^2-mappings and maximum principle for q-convex functions · · · 15

21 Ioannis D. Platis (Univ. of Crete), Lijie Sun (Yamaguchi Univ.) — On the Kähler cone of the Heisenberg group · · · 15

22 Takeo Ohsawa (Nagoya Univ.)♭ — Existence theorems on complex manifolds which are complete at infinity · · · 15

13:30–14:30 Talk Invited by Complex Analysis Section

Shinichi Tajima (Niigata Univ.*) — Complex and algebraic analysis of singularities, and algorithms

Functional Equations

September 13th (Tue) Conference Room II

9:45–12:00

1 Ichiro Tsukamoto (Toyo Univ.) ♭ On asymptotically linear solutions of $x'' = \pm e^{\alpha\lambda t} x^{1+\alpha}$ 10

2 Shunya Adachi (Kumamoto Univ.) Monodromy invariant Hermitian forms for second order Fuchsian differential equations 10

3 Shuhei Mano (Inst. of Stat. Math.), Nobuki Takayama (Kobe Univ.) A sum formula of GKZ-hypergeometric polynomials with matrices associated with chordal graphs at specific values 10

4 Shinji Sasaki (Shibaura Inst. of Tech.) Borel summability of WKB-theoretic transformation near a double turning point 10

5 Takashi Aoki (Kinki Univ.⋆), Takao Suzuki (Kinki Univ.), Shofu Uchida (Kinki Univ.) Exact WKB analysis for the Pearcey system with a large parameter 10

6 Masafumi Yoshino (Hiroshima Univ.) Movable singular point of solution of some Hamiltonian system 10

7 Kazuki Ishibashi (Hiroshima Nat. Coll. of Maritime Tech.) A nonoscillation theorem for damped linear differential equations with a proportional derivative controller 10

8 Hiroshi Ogawara (Kumamoto Univ.) Differential transcendence of solutions for second order linear q difference equations 10

9 Masato Hashizume (Hiroshima Univ.), Norisuke Ioku (Tohoku Univ.) A power type approximation of the Moser–Trudinger inequality 10

10 Hiroyuki Usami (Gifu Univ.), Manabu Naito (Ehime Univ.⋆) On the existence and asymptotic behavior of solutions of perturbed half-linear ordinary differential equations 10

14:15–16:45

11 Tetsutaro Shibata (Hiroshima Univ.) Oscillatory bifurcation problems for ODEs with logarithmic nonlinearity 10

12 Tatsuki Mori (Musashino Univ.), Sohei Tasaki (Hokkaido Univ.), Tohru Tsujikawa (Univ. of Miyazaki⋆), Shoji Yotsutani (Ryukoku Univ.⋆) Secondary bifurcation and the direction of bifurcation of stationary solutions to a phase field model 10

13 Ryuji Kajikiya (Osaka Electro-Comm. Univ.) Bifurcation of solutions for the sublinear Moore–Nehari differential equation 10

14 Yuki Osada (Tokyo Metro. Univ.) A singular perturbation problem for a nonlinear Schrödinger system with three wave interaction 10

15 Satoshi Tanaka (Tohoku Univ.), Kotaro Watanabe (Nat. Defense Acad. of Japan), Naoki Shioji (Yokohama Nat. Univ.) Existence and multiplicity of positive solutions to the scalar-field equation on large annuli in the 3-sphere 10

16 Yuki Naito (Hiroshima Univ.), Yasuhito Miyamoto (Univ. of Tokyo) Singular solutions for semilinear elliptic equations with general supercritical growth 10

17 Jumpei Inoue (Waseda Univ.) — On the optimal habitat profile for the Dirichlet problem of a logistic equation ····· 10

18 Shuhei Kitano (Waseda Univ.) — $W^{\sigma,p}$ a priori estimates for fully nonlinear integral equations ····· 10

19 Shuhei Kitano (Waseda Univ.) — ABP maximum principles for fully nonlinear integral equations with unbounded inhomogeneous terms ····· 10

20 Yasuhiro Fujita (Univ. of Toyama), Norikazu Yamaguchi (Univ. of Toyama), Antonio Siconolfi (Sapienza Univ. di Roma) — Hamilton–Jacobi flows and nowhere differentiablity of initial data ···· 10

21 Takashi Suzuki (Osaka Univ.) — Differentiability of eigenvalues concerning domain perturbations ····· 5

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

Daisuke Yamakawa (Tokyo Univ. of Sci.) — Geometry and symmetry of isomonodromic deformations

September 14th (Wed) Conference Room II

9:45–12:00

22 Kazuya Hirose (Hokkaido Univ.), Nao Hamamuki (Hokkaido Univ.) — A dynamical approach to lower gradient estimates for viscosity solutions of Hamilton–Jacobi equations ····· 10

23 Kuniyasu Misu (Hokkaido Univ.) — A game-theoretic approach to the asymptotic behavior of solutions to an obstacle problem for the mean curvature flow equation ····· 10

24 Ryunosuke Mori (Meiji Univ.), Eita Tomimatsu (Tokyo Tech), Yoshihiro Tonegawa (Tokyo Tech) — On a strong solution to a generalized mean curvature flow with a transport term in the sense of Brakke's formulation ····· 10

25 Keisuke Takasao (Kyoto Univ./Kyoto Univ.) — Existence of weak solution to volume preserving mean curvature flow in all dimensions ····· 10

26 Ryo Ito (Kanagawa Univ.), Hirokazu Ninomiya (Meiji Univ.) — Unbounded traveling wave solutions for reaction-diffusion equations ·· 10

27 Yu Ichida (Meiji Univ.) — Radially symmetric stationary solutions for certain chemotaxis systems based on compactification in phase space ····· 10

28 Jumpei Inoue (Waseda Univ.), Kousuke Kuto (Waseda Univ.), Homare Sato (Waseda Univ.) — Full cross-diffusion limit in the stationary SKT model with Dirichlet boundary conditions ····· 10

29 Yuki Tsukamoto (Meiji Univ.) — A convergence of reaction-diffusion approximation ····· 10

30 Yuta Ishii (Ibaraki Nat. Coll. of Tech.) — The existence and stability of multi-peak solutions to the Gierer–Meinhardt model on Y-shaped metric graph ····· 10

31 Yuta Ishii (Ibaraki Nat. Coll. of Tech.) — The existence and stability of multi-peak solutions to the Schnakenberg model on star shaped metric graph ····· 10

13:30–14:30 Talk Invited by Functional Equations Section

Masataka Shibata (Meijo Univ.) — Asymptotic behavior of positive solutions for a class of quasilinear elliptic equations with H^1-critical growth

September 15th (Thu) Conference Room II

9:45–12:00

32 Kota Ikeda (Meiji Univ.)
Stability analysis of a uniform flow in a mathematical model of camphor boats 10

33 Yuki Kaneko (Japan Women's Univ.)
Hiroshi Matsuzawa (Kanagawa Univ.)
Yoshio Yamada (Waseda Univ.)
Asymptotic behaviors of radially symmetric solutions for a free boundary problem of a reaction-diffusion equation with positive bistable nonlinearity 10

34 Masaaki Mizukami (Kyoto Univ. of Edu.)
Yuya Tanaka (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Occurrence of blow-up phenomena by chemotactic effects in a two-species chemotaxis-competition model 10

35 Florian Salin (Tohoku Univ.)
Goro Akagi (Tohoku Univ.)
Existence of energy solutions to fractional nonlinear diffusion equations posed on bounded domains 10

36 Dáithí Ó hAodha (Tohoku Univ.)
Tsukasa Iwabuchi (Tohoku Univ.)
The optimal decay estimate of solutions to the surface quasi-geostrophic equation 10

37 Tsukasa Iwabuchi (Tohoku Univ.)
Reinhard Farwig (TU Darmstadt)
Semigroups generated by fractional Laplacian and Sobolev spaces on arbitrary domains 10

38 Yutaka Kamimura ♭ (Tokyo Univ. of Marine Sci. and Tech.*)
Energy dependent inverse scattering and exploding soliton 10

39 Yohei Yamazaki (Kyushu Univ.)
Masaya Maeda (Chiba Univ.)
Center stable manifold for ground states of nonlinear Schrödinger equations with internal modes 10

40 Tomoharu Kinoshita (Waseda Univ.)
Infinitely many solutions for nonlinear Schrödinger equations under Berestycki–Lions condition 10

41 Masayuki Hayashi (Kyoto Univ.)
Noriyoshi Fukaya (Tokyo Univ. of Sci.)
Takahisa Inui (Osaka Univ./Univ. of British Columbia)
Traveling waves for a nonlinear Schrödinger system with quadratic interaction 10

14:15–16:45

42 Isao Kato (Kyoto Univ.)
Ill-posedness for the half wave Schrödinger equation 10

43 Wataru Nakahashi (Tokyo Univ. of Sci.)
Keiichi Kato (Tokyo Univ. of Sci.)
Non-smoothness of the fundamental solutions of Schrödinger equations in three dimensions with super-quadratic potential 10

44 Naoki Matsui (Tokyo Univ. of Sci.)
Minimal-mass blow-up solutions for inhomogeneous nonlinear Schrödinger equations with potentials 10

45 Yuji Sagawa (Chiba Inst. of Tech.)
Chunhua Li (Yanbian Univ.)
Yoshinori Nishii (Tokyo Univ. of Sci.)
Hideaki Sunagawa (Osaka Metro. Univ.)
Upper and lower L^2-decay bounds for a class of derivative nonlinear Schrödinger equations 10

46 Takuya Sato (Tohoku Univ.) ♭
Naoyasu Kita (Kumamoto Univ.)
Optimal L^2-decay of solutions to dissipative nonlinear Schrödinger equations with a critical cubic nonlinearity 10

47 Kouichi Taira (Ritsumeikan Univ.)
Strichartz estimates for Schrödinger equations with slowly decreasing potentials in dimension two 10

48 Toshiyuki Suzuki (Kanagawa Univ.) Nonlinear Schrödinger equations with some singular electromagnetic potentials of the critical scailing ····· 10

49 Hayato Miyazaki (Kagawa Univ.)
Masaki Kawamoto (Ehime Univ.) Long-range scattering for a critical homogeneous type nonlinear Schrödinger equation with time-decaying harmonic potentials ····· 10

50 Alex Hernandez Ardila (Univ. Federal de Minas Gerais)
Masaru Hamano (Waseda Univ.)
Masahiro Ikeda (RIKEN/Keio Univ.) Global dynamics of mass-energy threshold for NLS with an inverse-power potential ····· 10

51 Haruya Mizutani (Osaka Univ.)
Zijun Wan (Central China Normal Univ.)
Xiaohua Yao (Central China Normal Univ.) The L^p-boundedness of wave operators for fourth-order Schrödinger operators in one space dimension ····· 10

52 Ryosuke Nakasato (Waseda Univ.) ♭ Global well-posedness and time-decay of solutions for the compressible quantum MHD model with Hall effect ····· 10

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

Hiroaki Kikuchi (Tsuda Coll.) Ground state of double power nonlinear Schrödinger equations in three space dimensions

September 16th (Fri) Conference Room II

9:45–12:00

53 Naofumi Mori (Tokyo Univ. of Marine Sci. and Tech.)
Mari Okada (Yamaguchi Univ.)
Shuichi Kawashima (Waseda Univ.) Decay property for symmetric hyperbolic system with memory-type diffusion ····· 10

54 Naofumi Mori (Tokyo Univ. of Marine Sci. and Tech.)
Mari Okada (Yamaguchi Univ.)
Shuichi Kawashima (Waseda Univ.) Decay property for symmetric hyperbolic system with memory-type relaxation ····· 10

55 Shunsuke Kitamura (Tohoku Univ.) ♭ Semilinear wave equations of derivative type with characteristic weights in one space dimension ····· 10

56 Takiko Sasaki (Musashino Univ./Tohoku Univ.) Singularity of a blow-up curve for systems of semilinear wave equations with different propagation speeds ····· 10

57 Yuta Wakasugi (Hiroshima Univ.)
Motohiro Sobajima (Tokyo Univ. of Sci.) Asymptotic expansion of solutions to the wave equation with space-dependent damping ····· 10

58 Koichi Taniguchi (Tohoku Univ.)
Masahiro Ikeda (RIKEN/Keio Univ.)
Yuta Wakasugi (Hiroshima Univ.) On global existence and asymptotic behavior for nonlinear damped wave equations on measure spaces ····· 10

59 Yusuke Ishigaki (Tokyo Tech)
Yoshihiro Ueda (Kobe Univ.) Asymptotic stability of stationary solutions to outflow problem for compressible viscoelastic system ····· 10

60 Yoshihiro Ueda (Kobe Univ.)
Marcio Antonio Jorge Silva (State Univ. of Londrina) Memory effects on the stability of viscoelastic Timoshenko systems ··· 10

61 Ikki Fukuda (Shinshu Univ.)
Masahiro Ikeda (RIKEN/Keio Univ.)
Asymptotic behavior of solutions to the Cauchy problem for the BBM–Burgers equation 10

62 Masashi Ohnawa
(Tokyo Univ. of Marine Sci. and Tech.)
Masahiro Suzuki (Nagoya Inst. of Tech.)
Asymptotic stability of river flows subject to friction 10

14:15–16:45

63 Tetu Makino (Yamaguchi Univ.⋆)
On the equation of motion of the rotating atmosphere of the Earth 10

64 Naoki Hamamoto (Osaka Metro. Univ.)
Higher-dimensional extension of uncertainty principle inequality with a degenerate structure for solenoidal fields 10

65 Hiroyuki Tsurumi (Kyoto Univ.)
Yasunori Maekawa (Kyoto Univ.)
Existence of the 2D stationary Navier–Stokes flow on the whole plane around a radial flow 10

66 Masahiro Suzuki (Nagoya Inst. of Tech.)
Masahiro Takayama (Keio Univ.)
Stationary solutions of the Vlasov–Poisson system 10

67 Keiji Yoneda (Kyushu Univ.)
Ryo Takada (Univ. of Tokyo)
Global solutions for the rotating magnetohydrodynamics system in the scaling critical Sobolev space 10

68 Motofumi Aoki (Tohoku Univ.)
Iwabuchi Tsukasa (Tohoku Univ.)
A sufficient condition for the energy conservation law of compressible Navier–Stokes equations 10

69 Taiki Takeuchi (Waseda Univ.)
On the local well-posedness and inviscid limits for the Keller–Segel–Navier–Stokes system 10

70 Kenta Oishi (Waseda Univ.)
Yoshihiro Shibata (Waseda Univ.)
On the global well-posedness and decay for a free boundary problem of the Navier–Stokes equation in unbounded domains 10

71 Keiichi Watanabe (Waseda Univ.)
Stability of stationary solutions to a free boundary problem of the Navier–Stokes equations 10

72 Mikihiro Fujii (Kyushu Univ.)
Keiichi Watanabe (Waseda Univ.)
Compressible Navier–Stokes–Coriolis system in critical Besov spaces .. 10

73 Naoto Kajiwara (Gifu Univ.)
Maximal regularity for the Stokes equations with various boundary conditions 10

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

Yutaka Terasawa (Nagoya Univ.) ♭
Weak solutions of nonlocal diffuse interface model for two-phase flows and those local asymptotics

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Real Analysis

September 15th (Thu) Conference Room VIII

9:30–11:30

1 Hiroyasu Mizuguchi (Kansai Univ.)
On the lower bound of a geometric constant in normed linear space 15

2 Koji Aoyama (Chiba Univ.) A quasinonexpansive extension of a mapping with an attractive point 15

3 Yasunori Kimura (Toho Univ.) Comparison of approximation methods of fixed points for a complete geodesic space 15

4 Jun Kawabe (Shinshu Univ.), Naoki Yamada — The completeness of the Lorentz spaces defined by the Choquet integral 15

5 Hiroki Saito (Nihon Univ.), Hitoshi Tanaka (Tsukuba Univ. of Tech.) — Choquet integrals, Hausdorff content and sparse operator 15

6 Hiroki Saito (Nihon Univ.) A note on embedding inequalities for weighted Sobolev and Besov space 15

14:15–16:20

7 Jun Okamoto (Kyoto Univ.) On a singular limit of the Kobayashi–Warren–Carter energy 15

8 Youhei Tsutsui (Kyoto Univ.) Rearrangements, medians and their maximal functions 15

9 Ryota Kawasumi (Chuo Univ.) Pointwise multipliers on Orlicz–Morrey spaces of the second kind 15

10 Yoichi Miyazaki (Nihon Univ.) Improvement of the logarithmic Sobolev inequalities with BMO norm 15

11 Naoto Shida (Osaka Univ.) Boundedness of bilinear pseudo-differential operators with $BS^m_{0,0}$ symbols on Sobolev spaces 15

12 Takanobu Hara (Hokkaido Univ.) On singular elliptic problems and Sobolev type embeddings 15

16:40–17:40 Talk Invited by Real Analysis Section

Takeshi Iida (Fukushima Nat. Coll. of Tech.) — Orlicz maximal operators on L^p and Morrey spaces

September 16th (Fri) Conference Room VIII

9:30–11:50

13 Yoshiho Akagawa (Gifu Nat. Coll. of Tech.), Risei Kano (Kochi Univ.), Fukao Takeshi (Kyoto Univ. of Edu.) — Time-dependence of the thereshold function in a perfect plasticity model 15

14 Yutaro Chiyo (Tokyo Univ. of Sci.), Tomomi Yokota (Tokyo Univ. of Sci.) — Stabilization in a quasilinear attraction-repulsion chemotaxis system: balanced case 15

15 Chiharu Kosugi (Japan Women's Univ.), Toyohiko Aiki (Japan Women's Univ.) — A large time behavior of solutions to initial and boundary value problems for compressible elastic curves 15

16 Shodai Kubota (Kanagawa Univ.), Ken Shirakawa (Chiba Univ.) — Periodic solutions for KWC type systems of grain boundary motions 15

17 Keiichiro Kagawa (Waseda Univ.), Ôtani Mitsuharu (Waseda Univ.*) — Existence of solutions for initial value problem of viscous Cahn–Hilliard equation with dynamic boundary condition 15

18 Kosuke Kita (Waseda Univ.), Mitsuharu Ôtani (Waseda Univ.) — Existence and nonexistence of global solutions to nonlinear diffusion equations on a bounded domain 15

19 Takanori Kuroda (Waseda Univ.)
Mitsuharu Ôtani (Waseda Univ.)
Thierry Cazenave (Sorbonne Univ.)
Existence and non-existence of stationary solutions of the complex Ginzburg–Landau equations 15

20 Shunsuke Kurima (Tokyo Univ. of Sci.)
Convergence of a singular nonlocal phase field system of conserved type 15

14:15–16:20

21 Masahiro Ikeda (RIKEN / Keio Univ.)
Shun Uchida (Oita Univ.)
Takeshi Fukao (Kyoto Univ. of Edu.)
Heat equation on the hypergraph containing vertices with given data 15

22 Kota Kumazaki (Nagasaki Univ.)
Large time behavior of a solution to a free boundary problem describing the penetration of diffusant into rubber 15

23 Hiroshi Watanabe (Oita Univ.)
Decay estimates for entropy solutions to scalar parabolic-hyperbolic conservation laws 15

24 Hirotoshi Kuroda (Hokkaido Univ.)
Michał Łasica
(Polish Acad. of Sci. / Univ. of Tokyo)
Yoshikazu Giga (Univ. of Tokyo)
Radial solutions to the fourth-order total variation flow in $\mathbb{R}^n$ 15

25 Takeshi Fukao (Kyoto Univ. of Edu.)
Pierluigi Colli
(Univ. degli Studi di Pavia)
Luca Scarpa (Politecnico di Milano)
The Cahn–Hilliard equation with forward-backward dynamic boundary condition via vanishing viscosity 15

26 Ken Shirakawa (Chiba Univ.)
Shodai Kubota (Kanagawa Univ.)
Optimal inner-heat controls of Warren–Kobayashi–Lobkovsky–Carter type systems under higher dimensional settings 15

27 Noriaki Yamazaki (Kanagawa Univ.)
Nobuyuki Kenmochi (Chiba Univ.*)
Ken shirakawa (Chiba Univ.)
Singular optimal control problems for doubly nonlinear evolution inclusions with quasi-variational structure 15

16:40–17:40 Talk Invited by Real Analysis Section

Masaaki Mizukami
(Kyoto Univ. of Edu.)
Global existence and asymptotic behavior in some chemotaxis-consumption system

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Functional Analysis

September 13th (Tue) Conference Room I

10:00–11:45

1 Yoritaka Iwata (Kansai Univ.)
Generation of nolinear semigroup associated with second or third order nonlinearity 15

2 Itaru Sasaki (Shinshu Univ.)
A general theory of diagonalization by Bogoliubov transformations ... 15

3 Masaki Kawamoto (Ehime Univ.)
Atsuhide Ishida (Tokyo Univ. of Sci.)
Existence and nonexistence of wave operators for critical time-decaying harmonic oscillator 15

4	Fumio Hiroshima (Kyushu Univ.) Noriaki Teranishi (Hokkaido Univ.)	Matrix representation of time operators of 1D harmonic oscillator	15
5	Noriaki Teranishi (Hokkaido Univ.) Fumio Hiroshima (Kyushu Univ.)	A genralization of the phase operator	15
6	Pavel Exner (Czech Tech. Univ./Czech Acad. of Sci.) Shu Nakamura (Gakushuin Univ.) Yukihide Tadano (Tokyo Univ. of Sci.)	Continuum limit of the lattice quantum graph Hamiltonian	15

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

Youko Umeta (Josai Univ.) A unified family of P_{J}-hierarchies (J=I,II,IV,34) with a large parameter

September 14th (Wed) Conference Room I

9:30–12:00

7	Hideyuki Ishi (Osaka Metro. Univ.)	Construction of homogeneous cones from colored homogeneous graphs	15
8	Hideto Nakashima (Inst. of Stat. Math.)	On b-functions and invariant differential operators of prehomogeneous vector spaces associated with sub-Hankel determinants	15
9	Kyo Nishiyama (Aoyama Gakuin Univ.) Lucas Fresse (IECL, Univ. Lorraine)	Steinberg theory for double flag varieties and RSK correspondence	15
10	Kyo Nishiyama (Aoyama Gakuin Univ.) Lucas Fresse (IECL, Univ. Lorraine)	Action of a Hecke algebra on the space of orbits on a double flag variety	15
11	Atsumu Sasaki (Tokai Univ.)	Invariant measures on non-symmetric reductive spherical homogeneous spaces of rank-one type	15
12	Kazuki Kannaka (RIKEN) ♭	Multiplicities of stable eigenvalues on compact anti-de Sitter 3-manifolds	15
13	Hiroyoshi Tamori (Hokkaido Univ.)	On the existence of a nonzero linear period	15
14	Cid Reyes-Bustos (NTT Inst. for Funda. Math.) Masato Wakayama (NTT Inst. for Funda. Math./Kyushu Univ.*)	Shifted non-commutative harmonic oscillators	15

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

Hiraku Atobe (Hokkaido Univ.) ♭ Local newforms for unramified odd unitary groups

September 15th (Thu) Conference Room I

9:30–12:00

15	Shigeru Furuichi (Nihon Univ.)	On inequalities related to logarithmic mean	15
16	Yuki Seo (Osaka Kyoiku Univ.) Sora Hiramatsu (Osaka Prefectural Izumiohtsu High School)	Karcher mean and normalized determinant	15
17	Mitsuru Uchiyama (Shimane Univ.*/Ritsumeikan Univ.)	Symmetric matrix means	15

14:15–16:00

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

Statistics and Probability

September 13th (Tue) Conference Room Ⅲ

9:30–11:50

4 Yuji Hamana (Univ. of Tsukuba) Square-root doundaries for Bessel processes ····· 10

5 Shun Yanashima (Tokyo Metro. Univ.), Kensuke Ishitani (Tokyo Metro. Univ.) On the weak convergence of conditioned Bessel bridges ····· 15

6 Hiroyuki Matsumoto (Aoyama Gakuin Univ.) Laplacian and Brownian motion on positive definite matrices, revisited ····· 15

7 Kôhei Sasaya (Kyoto Univ.) Some relation between spectral dimension and Ahlfors regular conformal dimension of resistance metrics ····· 15

8 Naotaka Kajino (Kyoto Univ.) On singularity of energy measures for symmetric diffusions with full off-diagonal heat kernel estimates II: Some borderline examples ····· 15

14:15–15:15 Award Lecture for the 2021 MSJ Analysis Prize

Makoto Katori (Chuo Univ.) Multiple Schramm–Loewner evolution and Dyson's Brownian motion model

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

Takahiro Hasebe (Hokkaido Univ.) Loewner chains, Markov processes and non-commutative stochastic processes

September 14th (Wed) Conference Room III

9:30–11:30

9 Yuki Hirai (Kyoto Univ.) Linear integral equations with additive noise in the pathwise Itô calculus ····· 15

10 Yushi Hamaguchi (Osaka Univ.) Chaos expansions for linear stochastic Volterra integral equations ···· 15

11 Toshio Nakata (Fukuoka Univ. of Edu.) Large deviations for super-heavy tailed distributions ····· 10

12 Shigeyoshi Ogawa (Ritsumeikan Univ.) Mean value theorems for the noncausal stochastic integral ····· 10

13 Yuki Ueda (Hokkaido Univ. of Edu.), Takahiro Hasebe (Hokkaido Univ.), Kei Noba (Inst. of Stat. Math.), Noriyoshi Sakuma (Nagoya City Univ.) Regularity results on the class of Boolean selfdecomposable distributions ····· 15

14 Shunsuke Usuki (Kyoto Univ.) $\times a$ and $\times b$ empirical measures, the irregular set and entropy ····· 15

15 Yuto Nakajima (Kyoto Univ.), Hiroki Takahashi (Keio Univ.) Hausdorff dimension of sets with restricted, slowly growing partial quotients in the semi-regular continued fraction ····· 15

11:30–12:00 Research Section Assembly

September 15th (Thu) Conference Room III

9:30–12:00

16 Toshiharu Fujita (Kyushu Inst. of Tech.) On recursive methods for converging decision process in stochastic environment ····· 15

17 Teruo Tanaka (Hiroshima City Univ.) Prophet inequalities for finite stage multiparameter optimal stopping problems ····· 10

18 Shoko Chisaki (Osaka Inst. of Tech.)
Shinji Kuriki (Osaka Pref. Univ.*)
Ryoh Fuji-Hara (Univ. of Tsukuba*)
Nobuko Miyamoto (Tokyo Univ. of Sci.)
Optimality of spanning bipartite block designs ····· 10

19 Ryuya Yahagi (Tokyo Univ. of Sci.)
Ayumu Uehara (Tokyo Univ. of Sci.)
Satoru Shinoda (Yokohama City Univ.)
Takuya Yoshimoto (Chugai Pharmaceutical Co.)
Kouji Tahata (Tokyo Univ. of Sci.)
The generalization of marginal cumulative inhomogeneity model for multi-way contingency tables ····· 15

20 Koji Tsukuda (Kyushu Univ.)
On the asymptotic behavior of the length of a Pitman partition ····· 15

21 Yoichi Miyata (Takasaki City Univ. of Econ.)
Takayuki Shiohama (Nanzan Univ.)
Toshihiro Abe (Hosei Univ.)
On an extension of the family of sine-skew circular distributions ····· 15

22 Yohji Akama (Tohoku Univ.)
Atina Husnaqilati (Tohoku Univ.)
A dichotomous behavior of Guttman–Kaiser criterion from equi-correlated normal population ····· 15

23 Yohji Akama (Tohoku Univ.)
Shrinkage of eigenvalue distributions of sample correlation matrix formed from equi-correlated normal population ····· 15

12:10–12:45 Presentation Ceremony for the 2021 & 2022 MSJ Analysis Prize

14:25–15:25 Talk Invited by Statistics and Probability Section

Shinpei Imori (Hiroshima Univ.)
Variable selection in high-dimensional multivariate linear regression models

15:45–16:45 Talk Invited by Statistics and Probability Section

Yuichi Goto (Kyushu Univ.)
Integrated copula spectrum with applications to tests for time-reversibility and tail symmetry

September 16th (Fri) Conference Room Ⅲ

9:30–12:00

24 Nobuhiro Taneichi (Hokkaido Univ. of Edu.)
Yuri Sekiya (Hokkaido Univ. of Edu.)
Jun Toyama (Inst. for Pract. Appl. of Math.)
Improvement of the test statistics for conditional independence in 3-way contingency table based on asymptotic expansion ····· 15

25 Koshiro Yonenaga (Hokkaido Univ.)
Akio Suzukawa (Hokkaido Univ.)
Higher order moments of the product of a Wishart matrix and a normal vector ····· 15

26 Ayaka Yagi (Tokyo Univ. of Sci.)
Takashi Seo (Tokyo Univ. of Sci.)
Multivariate pairwise comparisons among mean vectors with monotone missing data ····· 15

27 Yugo Nakayama (Kyoto Univ.)
Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
Robustness in high-dimensional principal component analysis ····· 15

28 Satoshi Kuriki (Inst. of Stat. Math.)
Takahiko Matsubara
(High Energy Accelerator Res. Organ.)
Asymptotic expansion of the expected Minkowski functional for isotropic central limit random fields ····· 15

29 Takayuki Yamada (Shimane Univ.)
High-dimensional asymptotic expansion of the null distribution for testing complete independence of normal random variables ····· 10

30 Kento Egashira (Univ. of Tsukuba)
Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
High-dimensional asymptotic behaviors of hierarchical clustering ····· 15

31 Hiroki Masuda
(Kyushu Univ. / Univ. of Tokyo)
BIC-type model selection for locally stable regression ····· 15

14:25–16:50

32 Yujie Xue (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
A new generalized estimator for autoregressive coefficient which improves MLE uniformly ····· 10

33 Kou Fujimori (Shinshu Univ.)
Yuichi Goto (Kyushu Univ.)
Yan Liu (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
The Lasso-based principal component analysis for high-dimensional stationary time series ····· 15

34 Tong Liu (Waseda Univ.)
Yujie Xue (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
Characterization of time series models by various divergences ····· 10

35 Fumiya Akashi (Univ. of Tokyo)
Robust statistical inference for vector autoregressive models by smoothed generalized empirical likelihood method ····· 15

36 Yan Liu (Waseda Univ.)
A minimum contrast estimation for spectral densities of multivariate time series ····· 15

37 Shogo Nakakita (Univ. of Tokyo)
Masaaki Imaizumi (Univ. of Tokyo)
Benign overfitting in overparameterized linear time series models ····· 15

38 Yoshihiko Maesono (Chuo Univ.)
Koudai Nakamura (Chuo Univ.)
On mean squared error of kernel quantile estimator ····· 10

39 Yoshihide Kakizawa (Hokkaido Univ.)
Asymmetric kernel density derivative estimation ····· 15

40 Atsushi Komaba (Univ. of Yamanashi)
Hisashi Johno (Univ. of Yamanashi)
Kazunori Nakamoto
(Univ. of Yamanashi)
An extension of the two-sample Kolmogorov–Smirnov test ····· 15

Applied Mathematics

September 13th (Tue) Conference Room V

10:00–11:45

1 Naoki Matsumoto (Keio Univ.)
Masaki Yamamoto (Seikei Univ.)
Masahito Yamazaki (Seikei Univ.)
The minimum number of vertices of graphs containing two monochromatic triangles for any edge 2-coloring ····· 15

2 Yumiko Ohno (Yokohama Nat. Univ.)
Naoki Matsumoto (Keio Univ.)
The difference between the achromatic number and the pseudoachroamtic number of caterpillars 15

3 Kengo Enami (Seikei Univ.)
Atsuhiro Nakamoto (Yokohama Nat. Univ.)
Kenta Ozeki (Yokohama Nat. Univ.)
Surface immersions and projective planar graphs 15

4 Hideaki Morita (Muroran Inst. of Tech.)
Ayaka Ishikawa (Yokohama Nat. Univ.)
On the Ihara expression for graps zeta functions 15

5 Ayaka Ishikawa (Yokohama Nat. Univ.)
Hideaki Morita (Muroran Inst. of Tech.)
A remark on inverse arcs in finite digraphs 15

6 Iwao Sato (Oyama Nat. Coll. of Tech.)
Norio Konno (Yokohama Nat. Univ.)
Takashi Komatsu (Math. Res. Inst. Calc for Industry)
Shunya Tamura (Yokohama Nat. Univ.)
A generalized Grover/Zeta correspondence 15

14:15–15:25

7 Shinsuke Odagiri (Shumei Univ.)
Faces of maximal chain polytopes and guided crown structure 15

8 Chie Nara (Meiji Univ.)
Jin-ichi Itoh (Sugiyama Jogakuen Univ.)
Erik Demaine (MIT)
Continuous flattening of all polyhedral manifolds using countably infinite creases 15

9 Tomohiro Kamiyoshi (Matsue Coll. of Tech.)
Makoto Nagura (Osaka Electro-Comm. Univ.)
Otani Shin-ich (Kanto Gakuin Univ.)
On exponential extended Riordan arrays and unified Stirling numbers 10

10 Daiki Kawabata (Osaka Pref. Univ.)
Tatsuya Maruta (Osaka Metro. Univ.)
On the achievement of the Griesmer bound 15

15:45–16:45 Talk Invited by Applied Mathematics Section

Momoko Hayamizu (Waseda Univ.)
Combinatorics of phylogenetic trees and networks

September 14th (Wed) Conference Room V

10:00–11:45

11 Akihiro Higashitani (Osaka Univ.)
Kenta Ueyama (Hirosaki Univ.)
Classification of (± 1)-skew polynomial rings by switching of graphs and its associated simplicial complexes 15

12 Shuhei Tsujie (Hokkaido Univ. of Edu.)
Tan Nhat Tran (Ruhr Univ. Bochum)
A characterization of strongly chordal graphs by edge-labeling 15

13 Norifumi Ojiro (Toyota Tech. Inst.)
Hajime Matsui (Toyota Tech. Inst.)
Minimum Euclidean weights for codes over rational integer quotient rings via tensor products 15

14 Ken'ichi Yoshida (Ochanomizu Univ.)
Hiroki Kodama (Tohoku Univ./RIKEN)
A mathematical model of network elastoplasticity 15

15 Kei Saito (Kanagawa Univ.) Etsuo Segawa (Yokohama Nat. Univ.) — Spectral analysis for continuous-time Szegedy walks · · · 15

16 Tomoyuki Terada (Yokohama Nat. Univ./Kanazawa Inst. of Tech.) Yusuke Ide (Nihon Univ.) Norio Konno (Yokohama Nat. Univ.) — Probability measure for the Szegedy walk on the path graph · · · 15

13:00–14:15

17 Shinya Fujita (Yokohama City Univ.) — Classification of graphs in terms of the domination number of central graphs · · · 10

18 Kiyoshi Ando (Nat. Inst. of Informatics) — Properly contractible edges and properly liftable vertices in a 4-connected graph · · · 15

19 Akira Saito (Nihon Univ.) Shingo Degawa (Nihon Univ.) — Secure domination in C_5-free graphs · · · 15

20 Akira Saito (Nihon Univ.) Hiroya Fijinami (Grad. Univ. for Adv. Stud.) — Relative length of triangle-free graphs · · · 15

September 15th (Thu) Conference Room V

9:30–12:00

21 Tokuhiro Eto (Univ. of Tokyo) — On a discrete scheme for the Mullins–Sekerka flow and its fine properties · · · 15

22 Kazunori Matsui (Seikei Univ.) — The rotation form and the Lagrange–Galerkin method for the Navier–Stokes equations · · · 15

23 Tomoya Kemmochi (Nagoya Univ.) — L^p-resolvent estimates for finite element approximation of the Stokes operator · · · 15

24 Daisuke Koyama (Univ. of Electro-Comm.) — An a priori difference estimate between the IP method and the HJ method for the biharmonic problem · · · 15

25 Yoshitaka Watanabe (Kyushu Univ.) — Another numerical verification proof of steady-state solutions for the Proudman–Johnson equation · · · 15

26 Hiroshi Fujiwara (Kyoto Univ.) Takaaki Nishida (Kyoto Univ.*) — Heat convections in the horizontal layer with non-uniform heat supply. Stommel model · · · 15

27 Takashi Sakajo (Kyoto Univ.) Vikas S. Krishnamurthy (Indian Inst. of Tech. Hyderabad) — Quantized point vortex equilibria with a Liouville-type background vorticity on a curved torus · · · 15

28 Yuuki Shimizu (Univ. of Tokyo) Tsuyoshi Yoneda (Hitotsubashi Univ.) — Locality of vortex stretching for the 3D Euler equations · · · 15

29 Makoto Okumura (Hokkaido Univ.) Yasuaki Kobayashi (Hokkaido Univ.) Masaharu Nagayama (Hokkaido Univ.) Hironobu Fujiwara (RIKEN) Yasugahira Yusuke (Hokkaido Univ.) Kota Ohno (Chuo Univ.) — Reproduction of the cylinder structure of hair follicles using a plastic deformable basement membrane model · · · 15

14:15–16:45

30 Junichi Takahashi (Kochi Univ.)
Shosuke Ohmori (Waseda Univ.)
Construction of Rigged Hilbert space for non-Hermitian quantum system with η symmetry · · · · · 10

31 Hirotaka Kai (Osaka City Univ.)
Path-properties of jump-diffusion processes on Riemannian manifolds · · · · · 15

32 Satoshi Iwakami (Earth Rise Company, Inc.)
Masahiko Tamega (Earth Rise Company, Inc.)
Masahide Sanada (Earth Rise Company, Inc.)
Michiaki Mohri (Earth Rise Company, Inc.)
Yoshitaka Iwakami (Earth Rise Company, Inc.)
Naoki Okamoto (Earth Rise Company, Inc.)
Eishi Mitsui (Earth Rise Company, Inc.)
Hidetaka Chikamori (Okayama Univ.)
Shuji Jimbo (Okayama Univ.)
Masaji Watanabe (Okayama Univ.*/Okayama Univ.)
Study of mathematical techniques for constructing underwater topography from positioning data and echo sounder data · · · · · 15

33 Enhao Liu (Kyoto Univ.)
Yusuke Imoto (Kyoto Univ.)
Yasuaki Hiraoka (Kyoto Univ.)
Curse of dimensionality in persistence diagrams · · · · · 15

34 Hiroe Oka (Ryukoku Univ.)
Equilibria and their stability in networks with steep sigmoidal nonlinearities · · · · · 15

35 Kazuyuki Yagasaki (Kyoto Univ.)
Some recent results on nonintegrability of dynamical systems · · · · · 15

36 Kazuyuki Yagasaki (Kyoto Univ.)
Nonintegrability of three- and four-dimensional dynamical systems near degenerate equilibria · · · · · 15

37 Yuika Kajihara (Kyoto Univ.)
Eiko Kin (Osaka Univ.)
Mitsuru Shibayama (Kyoto Univ.)
Braid types of periodic solutions in the planar $2n$-body problem · · · · · 15

38 Tomoharu Suda (Keio Univ.)
Partial maps generated by flows · · · · · 15

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

Junya Nishiguchi (Tohoku Univ.)
Infinite-dimensionality and transcendency brought by time-delay

September 16th (Fri) Conference Room V

9:30–12:00

39 Itsuki Watanabe (Waseda Univ.)
Application of Markov chain approximation method to nonlinear reaction-diffusion equation · · · · · 15

40 Yoichi Enatsu (Tokyo Univ. of Sci.)
Malay Banerjee (Indian Inst. of Tech. Kanpur)
A prey-predator model describing hunting cooperation · · · · · 15

14:15–16:10

54 Takuya Jinno (Univ. of Tokyo)
Hiroaki Miura (Univ. of Tokyo)
Kengo Nakai
(Tokyo Univ. of Marine Sci. and Tech.)
Yoshitaka Saiki (Hitotsubashi Univ.)
Tamaki Suematsu (RIKEN)
Daisuke Takasuka
(Japan Agency for Marine-Earth Sci. and Tech.)
Tsuyoshi Yoneda (Hitotsubashi Univ.)
Constructing a data-driven model of intraseasonal weather time-series using machine learning 15

16:25–17:25 Talk Invited by Applied Mathematics Section

Akane Kawaharada (Kyoto Univ. of Edu.)
Characterization of fractals generated by cellular automata

Topology

September 13th (Tue) Conference Room VII

9:30–12:00

1 Yuji Akaike (Kure Nat. Coll. of Tech.)
Kazuo Tomoyasu
(Miyakonojo Nat. Coll. of Tech.)
Perfectness of Higson type compactifications and connectedness of remainders 10

2 Katsuhisa Koshino (Kanagawa Univ.)
Recognizing the topologies on spaces of metrics 15

3 Masateru Inoue (Okayama Univ. of Sci.)
The stable cooperations of Morava K-Theory and the fiber product of automorphism groups of formal group laws 10

4 Eiichi Matsuhashi (Shimane Univ.)
Yoshiyuki Oshima (Shimane Univ.)
Some decomposable continua and their hyperspaces 15

5 Katsuhiko Kuribayashi (Shinshu Univ.)
Takahito Naito (Nippon Inst. of Tech.)
Shun Wakatsuki (Shinshu Univ.)
Toshihiro Yamaguchi (Kochi Univ.)
Cartan calculi on the free loop spaces 15

6 Katsuhiko Kuribayashi (Shinshu Univ.)
Takahito Naito (Nippon Inst. of Tech.)
Shun Wakatsuki (Shinshu Univ.)
Toshihiro Yamaguchi (Kochi Univ.)
BV exactness and string brackets 15

7 Yasuhiko Asao (Fukuoka Univ.)
Kenshi Ishiguro (Fukuoka Univ.)
Makoto Yamagata (Fukuoka Univ.)
Admissible maps and the cohomology of classifying spaces 10

8 Masato Tanabe (Hokkaido Univ.)
Canonical stratification of definable groupoids 10

9 Takahiro Yamamoto (Tokyo Gakugei Univ.)
Topology of stable maps of surfaces with boundary into the plane 15

14:20–18:00

10 Chihaya Jibiki (Tokyo Tech) Constructions of left-orderings and investigating their properties ····· 15

11 Takamichi Sato (Waseda Univ.) On subgroups of Richard Thompson's group F ····· 15

12 Yu Tajima (Hokkaido Univ.) ♭ Magnitude homology of cycle graphs and the homotopy type of the Asao–Izumihara complexes ····· 15

13 Yuuki Tadokoro (Kisarazu Nat. Coll. of Tech.)
Takuya Sakasai (Univ. of Tokyo)
Kokoro Tanaka (Tokyo Gakugei Univ.)
Minimal generating sets of groups of Kim–Manturov ····· 10

14 Sakumi Sugawara (Hokkaido Univ.) $\mathbb{Z}$-local system cohomology of hyperplane arrangements and a CDO-type theorem ····· 15

15 Masahiko Yoshinaga (Osaka Univ.)
Suguru Ishibashi (ARISE analytics)
Sakumi Sugawara (Hokkaido Univ.)
The icosidodecahedral arrangement and related double coverings ····· 15

16 Shuichi Harako (Univ. of Tokyo) Computational results for the symplectic derivation Lie algebras ····· 15

17 Yakov Eliashberg (Stanford Univ.)
Noboru Ogawa (Tokai Univ.)
Toru Yoshiyasu (Kyoto Univ. of Edu.)
Stabilized convex symplectic manifolds are Weinstein ····· 15

18 Shin Hayashi (JST PRESTO / Tohoku Univ.) An index theorem for quarter-plane Toeplitz operators via extended symbols ····· 15

19 Alastair Darby (Xi'an Jiaotong-Liverpool Univ.)
Shintaro Kuroki (Okayama Univ. of Sci.)
Jongbaek Song (KIAS)
Equivariant cohomology of torus orbifolds ····· 15

20 Shunsuke Tamura (Tsuyama Nat. Coll. of Tech.) On odd-Euler-characteristic actions of finite groups on low-dimensional spheres ····· 15

September 14th (Wed) Conference Room VI

10:10–10:25 Presentation Ceremony for the 2022 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2022 MSJ Geometry Prize

Hiroshi Iriyeh (Ibaraki Univ.)
Masataka Shibata (Meijo Univ.)
A solution of Mahler's conjecture of three dimensional symmetric convex bodies

13:15–14:15 Award Lecture for the 2022 MSJ Geometry Prize

Tatsuki Kuwagaki (Kyoto Univ.) ♭ Geometry and algebraic analysis of sheaf quantization

September 15th (Thu) Conference Room VII

9:30–12:00

21 Genki Omori (Tokyo Univ. of Sci.)
Susumu Hirose (Tokyo Univ. of Sci.)
Finite presentations for the balanced superelliptic mapping class groups ····· 15

22 Genki Omori (Tokyo Univ. of Sci.) — The balanced superelliptic mapping class groups is generated by three elements ····· 10

23 Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.) — Four infinite presentations for the mapping class group of a non-orientable surface ····· 15

24 Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.) — Infinite presentations for fundamental groups of surfaces ····· 10

25 Takuya Katayama (Gakushuin Univ.), Erika Kuno (Osaka Univ.) — On virtual embeddings of braid groups into mapping class groups of surfaces ····· 15

26 Yusuke Kuno (Tsuda Coll.), Kae Takezawa (Tsuda Coll.) — On Penner's cocycle on the fatgraph complex ····· 10

27 Yuta Nozaki (Hiroshima Univ.), Masatoshi Sato (Tokyo Denki Univ.), Masaaki Suzuki (Meiji Univ.) — A non-commutative Reidemeister–Turaev torsion of homology cylinders ····· 15

28 Shunsuke Tsuji (Meiji Univ.) — Formulas for the actions of Dehn twists in some skein modules and their applications ····· 15

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

Christine Vespa (Univ. of Strasbourg / JSPS) — Eilenberg Mac Lane polynomial functors and their applications

15:40–18:00

29 Jun Murakami (Waseda Univ.) — On quantization of knot groups ····· 10

30 Yasutaka Nakanishi (Kobe Univ.), Shunki Takagi — Differences of Conway polynomials for knots caused by a single pass move ····· 15

31 Toshiyuki Akita (Hokkaido Univ.), Aoi Hasegawa (Hokkaido Univ.) — On the associated group of a quandle ····· 10

32 Atsuhiko Mizusawa (Waseda Univ.), Yuka Kotorii (Hiroshima Univ. / RIKEN) — A classification of 5-component link-homotopy classes through the clasper theory ····· 15

33 Shun Sawabe (Waseda Univ.) — On the potential function of the colored Jones polynomial with arbitrary colors ····· 10

34 Masaaki Suzuki (Meiji Univ.), Anh T. Tran (Univ. of Texas at Dallas) — Genera and crossing numbers of 2-bridge knots ····· 10

35 Teruaki Kitano (Soka Univ.), Yuta Nozaki (Hiroshima Univ.) — Algebraic integrality of Reidemeister torsion ····· 10

36 Teruaki Kitano (Soka Univ.) — Epimorphisms between knot groups and the $SL(2;\mathbb{C})$-character variety ····· 10

37 Akihiro Takano (Univ. of Tokyo) — The Long–Moody construction and twisted Alexander invariants ····· 15

September 16th (Fri) Conference Room VII

9:30–12:00

38 Seiichi Kamada (Osaka Univ.)
Hiroki Ito (KISTEM)
Twisted intersection colorings and invariants of twisted links ····· 10

39 Naoko Kamada (Nagoya City Univ.)
Virtual link diagrams and their sublink diagrams ····· 10

40 Kodai Wada (Kobe Univ.)
Writhes and $2k$-moves for virtual knots ····· 10

41 Keiichi Sakai (Shinshu Univ.)
Saki Kanou
The Fox–Hatcher cycle and the Vassiliev invariants ····· 15

42 Tetsuya Abe (Ritsumeikan Univ.)
Keiji Tagami (Hiroshima Shudo Univ.)
Ribbon concordance and the minimality of torus knots ····· 15

43 Yuta Taniguchi (Osaka Univ.)
A relation between surface knot invariants obtained from a quandle 2-cocycle ····· 15

44 Jumpei Yasuda (Osaka Univ.)
Computation of the plat index for surface-links ····· 15

45 Tsukasa Isoshima (Tokyo Tech)
Trisections obtained by trivially regluing surface-knots ····· 15

46 Natsuya Takahashi (Osaka Univ.)
Minimal genus relative trisections of corks ····· 15

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

Shin Satoh (Kobe Univ.)
Toward tabulation of 2-knots

15:40–17:00

47 Motoo Tange (Univ. of Tsukuba)
Tatsumasa Suzuki (Tokyo Tech)
Pochette surgery of S^4 ····· 15

48 Hiroki Kodama ♭
(Tohoku Univ./RIKEN)
Naohiko Kasuya (Hokkaido Univ.)
Yoshihiko Mitsumatsu (Chuo Univ.)
Atsuhide Mori (Osaka Dent. Univ.)
Torus fibrations from S^5 to S^3 found from Milnor fibrations of certain complex surface singularities ····· 15

49 Yoshihiko Mitsumatsu (Chuo Univ.)
Naohiko Kasuya (Hokkaido Univ.)
Hiroki Kodama
(Tohoku Univ./RIKEN)
Atsuhide Mori (Osaka Dent. Univ.)
Lefschetz fibration of Milnor fibers of cusp singularities and topological decompositions of the K3 surface ····· 15

50 Yoshihiko Mitsumatsu (Chuo Univ.)
Naohiko Kasuya (Hokkaido Univ.)
Atsuhide Mori (Osaka Dent. Univ.)
Lefschetz-like critical points ····· 15

Infinite Analysis

September 13th (Tue) Conference Room IX

9:30–12:00

1 Yohei Tutiya (Kanagawa Inst. of Tech.) Theta function solutions for periodic ILW equation with discrete Laplacian · · · · · 10

2 Hidehito Nagao (Akashi Coll. of Tech.) A certain factorized matrix Lax form · · · · · 15

3 Kazuyuki Yagasaki (Kyoto Univ.) Integrability of the two-dimensional Zakharov–Shabat systems by quadrature · · · · · 15

4 Genki Shibukawa (Kobe Univ.), Tsuchimi Satoshi (Kobe Univ.) A generalization of Zwegers' μ-function according to the q-Hermite–Weber difference equation · · · · · 15

5 Tetsu Masuda (Aoyama Gakuin Univ.) Additional symmetry of Kajiwara–Noumi–Yamada systems · · · · · 15

6 Yumi Arai (Ochanomizu Univ.), Kouichi Takemura (Ochanomizu Univ.) On q-middle convolution and q-hypergeometric equations · · · · · 15

7 Shota Shigetomi (Kyushu Univ.), Kenji Kajiwara (Kyushu Univ.) An explicit formula of Kaleidocycle · · · · · 15

8 Yuta Nishiyama (Kumamoto Univ.) On a conjecture on 2-reduced Schur functions and Schur's Q-functions · · · · · 15

9 Yousuke Ohyama (Tokushima Univ.) A q-analogue of the Euler–Poisson–Darboux equation · · · · · 15

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

Ayumu Hoshino (Hiroshima Inst. of Tech.) Macdonald polynomials of type C with hook-shape diagrams and Pieri type formula

September 14th (Wed) Conference Room IX

9:30–10:50

10 Ryo Takenaka (Osaka Metro. Univ.) Affine Lie algebras of type $A_{2l}^{(2)}$ and fermionic formulas · · · · · 15

11 Hideya Watanabe (Osaka Metro. Univ.) On $\imath$canonical bases of finite type of real rank one · · · · · 15

12 Yuma Mizuno (Chiba Univ.) Mutations of blowups of toric surfaces and q-Painlevé systems · · · · · 15

13 Yuuki Shiraishi (Osaka Univ.), Atsushi Takahashi (Osaka Univ.), Akishi Ikeda (Josai Univ.), Takumi Otani (Osaka Univ.) A Frobenius manifold for ℓ-Kronecker quiver · · · · · 15

14 Wataru Takeda (Tokyo Univ. of Sci.), Maki Nakasuji (Sophia Univ.) Pfaffian expression of the Schur Q type multiple zeta functions · · · · · 15

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

Taichiro Takagi (Nat. Defense Acad. of Japan) A geometric lifting of integrable cellular automata and its continuum limits

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 `program22sept@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 in the venue.
There is no parking area for participants. Please use public transportation.
Hokkaido University is an eduroam participant.

You can check the site of Hokkaido University CO-OP
`https://www.hokudai.seikyou.ne.jp/bhours/`
for its business hours.