

2025 The Mathematical Society of Japan

AUTUMN MEETING

Dates: September 16th (Tue)–19th (Fri), 2025

Venue: Higashiyama Campus, Nagoya University
Furo-cho, Chikusa-ku, Nagoya, 464-8601, Aichi, JapanContact to: Graduate School of Mathematics,
Nagoya University
Furo-cho, Chikusa-ku, Nagoya, 464-8601, Aichi, Japan
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The Mathematical Society of Japan

	I C13	II C15	III C23	IV C25	V S2X	VI S30	VII C33	VIII C35	IX C43
16th (Tue)	Functional Equations 9:00–12:00 14:15–16:30	Functional Analysis 9:30–10:30	Complex Analysis 9:30–11:10 15:40–16:30	Statistics and Probability 9:00–12:00	Applied Mathematics 9:30–11:45 15:30–16:35	Geometry 9:30–11:45 14:15–16:45	Infinite Analysis 9:30–11:45 14:15–15:20	Topology 9:30–12:00 14:30–16:00	Algebra 9:00–12:00 15:30–17:15
	Featured Invited Talks					13:00–14:00			
	Invited Talk 17:00–18:00	Invited Talk 10:45–11:45	Invited Talk 14:20–15:20	Invited Talks 14:15–15:15 15:30–16:30	Invited Talks 14:15–15:15 16:50–17:50		Invited Talk 15:30–16:30	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15
17th (Wed)	Functional Equations 9:15–12:00	Functional Analysis 10:00–10:45	Complex Analysis 9:30–11:10	Statistics and Probability 9:20–11:20	Applied Mathematics 9:00–11:50 13:10–14:00	Geometry & Topology	Infinite Analysis 9:30–10:35		Algebra 9:00–12:00
	Invited Talk 13:00–14:00	Invited Talk 11:00–12:00	Invited Talk 13:00–14:00			Invited Talks 10:20–11:20 12:50–13:50	Invited Talk 10:45–11:45		Invited Talk 13:00–14:00
	MSJ Prizes Presentation (Toyoda Auditorium)					(14:30–15:00)			
	Plenary Talks (Toyoda Auditorium)					Autumn Prize Winner (15:15–16:15)			
18th (Thu)	Functional Equations 9:15–12:00 14:30–16:30	Functional Analysis 10:00–11:10 14:15–14:55	Real Analysis 10:00–11:30 14:15–15:30	Statistics and Probability 9:30–11:45	Applied Mathematics 10:00–12:00 14:15–16:00	Geometry 9:30–11:45 14:15–17:45	Found. of Math. & Hist. of Math. 10:00–11:55 15:30–16:45	Topology 9:30–11:30 14:15–16:00	Algebra 9:30–12:00 15:30–17:30
	Featured Invited Talks					13:00–14:00			
	Invited Talk 17:00–18:00	Invited Talk 15:10–16:10	Invited Talk 15:45–16:45	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 16:15–17:15		Invited Talk 14:15–15:15	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15
19th (Fri)	Functional Equations 9:15–12:00 14:15–16:30		Real Analysis 10:00–12:00 14:15–15:45	Statistics and Probability 10:00–11:45	Applied Mathematics 10:00–12:00 14:15–16:00	Geometry 9:30–10:45	Found. of Math. & Hist. of Math. 9:30–10:30 14:15–15:30	Topology 9:30–12:00 14:15–16:30	Algebra 9:30–12:00 15:30–17:30
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MSJ Autumn Meeting 2025

Organizing Committee Chair of Organizing Committee Mitsuru SUGIMOTO (Nagoya Univ.)

Chair of Executive Committee Akira ISHII (Nagoya Univ.)

Vice Chair of Executive Committee Sho TANIMOTO (Nagoya Univ.)

Organizer The Mathematical Society of Japan

Co-organizer Graduate School of Mathematics, Nagoya University

Acknowledgements We would like to thank Nagoya University for their great cooperation in organizing this Autumn Meeting.

Registration for Participation

Visit the following link to register.

<https://www.mathsoc.jp/activity/meeting/nagoya25sept/reg.html> (in Japanese)

This survey is conducted in order to grasp the number of participants in advance.

Please register by September 15th (Mon) if possible. (You can register during this annual meeting.)



Plenary Talks

September 17th (Wed) Toyoda Auditorium

Award Lecture for the 2025 MSJ Autumn Prize

Autumn Prize Winner (15:15–16:15)

Akio Tamagawa (Kyoto Univ.) Anabelian geomerty —past, present and future (16:30–17:30)

Featured Invited Talks

September 16th (Tue)

Conference Room III

Junjiro Noguchi (Univ. of Tokyo*/Sci. Tokyo*)	Value distribution and distribution of rational points III ..	(13:00–14:00)
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Conference Room IV

Hideki Tanemura (Chiba Univ.*)	Stochastic analysis of infinite particle systems with interactions	(13:00–14:00)
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Conference Room VI

Guest Talk from Korean Mathematical Society		
Cheol-Hyun Cho (Pohang Univ. of Sci. & Tech.)	Geometric models of simple Lie algebras via singularity theory	(13:00–14:00)

September 18th (Thu)

Conference Room II

Kyo Nishiyama (Aoyama Gakuin Univ.)	Orbits on flag varieties and representation theory: An overview	(13:00–14:00)
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Conference Room VI

Yoshihisa Kitagawa (Utsunomiya Univ.*)	Construction of flat tori in the 3-sphere and its applications	(13:00–14:00)
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September 19th (Fri)

Conference Room I

Tadayoshi Adachi (Kyoto Univ.)	Quantum scattering in spatially homogeneous electromagnetic fields	(13:00–14:00)
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Conference Room IX

Osamu Iyama (Univ. of Tokyo)	Freeness and simplicity: Tilting theory revisited	(13:00–14:00)
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Talks Invited by Research Sections and Special Session

September 16th (Tue)

Algebra (Conference Room IX)

Kenta Ueyama (Shinshu Univ.) Tilting theory for Artin–Schelter Gorenstein algebras (14:15–15:15)

Complex Analysis (Conference Room III)

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

Functional Equations (Conference Room I)

Kouichi Taira (Kyushu Univ.) Essential selfadjointness and spectral theory for the d’Alembertian on Lorentzian manifolds (17:00–18:00)

Functional Analysis (Conference Room II)

Takeshi Wada (Shimane Univ.) On initial boundary value problems for Maxwell–Schrödinger equations (10:45–11:45)

Statistics and Probability (Conference Room IV)

Toru Sera (Univ. of Osaka) Distributional limit theorems for intermittent dynamical systems and one-dimensional diffusion processes (14:15–15:15)

Ryosuke Shimizu (Kyoto Univ.) Singularity phenomena of Sobolev spaces and energy measures on fractals (15:30–16:30)

Applied Mathematics (Conference Room V)

Masatake Hirao (Aichi Pref. Univ.) Spherical design theory and its applications (14:15–15:15)

Mariko Hagita (Ochanomizu Univ.) Discrete mathematical approaches to impression evaluation (16:50–17:50)

Topology (Conference Room VIII)

Shuhei Maruyama (Kanazawa Univ.) On the Euler class of foliated sphere bundles (16:30–17:30)

Infinite Analysis (Conference Room VII)

Takafumi Mase (Univ. of Tokyo) Exact calculation of degrees for lattice equations (15:30–16:30)

September 17th (Wed)

Algebra (Conference Room IX)

Tatsuyuki Hikita (Kyoto Univ.) On the Stanley–Stembridge conjecture (13:00–14:00)

Geometry (Conference Room VI)

Award Lecture for the 2025 MSJ Geometry Prize

Shin-ichi Matsumura (Tohoku Univ.) Structure theorems for varieties with non-negative curvature (10:20–11:20)

Award Lecture for the 2025 MSJ Geometry Prize

Koichi Nagano (Univ. of Tsukuba) On the geometry of metric spaces with upper curvature bounds (12:50–13:50)

Complex Analysis (Conference Room III)

- Takahiro Inayama (Tokyo Univ. of Sci.) L^2 estimates, L^2 extension theorems, and positivity of curvature (13:00–14:00)

Functional Equations (Conference Room I)

- Tatsuya Watanabe (Kyoto Sangyo Univ.) Ground state solutions for nonlocal elliptic problems associated with the nonlinear Schrödinger–Poisson system (13:00–14:00)

Functional Analysis (Conference Room II)

- Shuji Horinaga (NTT-IFM)^b On local A-parameters containing unitary lowest weight representations of unitary groups and applications (11:00–12:00)

Infinite Analysis (Conference Room VII)

- Yuji Kodama (Ohio State Univ.)^b KP solitons and the Schottky uniformization (10:45–11:45)

September 18th (Thu)

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

- Masato Fujita (Japan Coast Guard Academy) Topologically tame ordered structures (14:15–15:15)

Algebra (Conference Room IX)

- Atsushi Ito (Univ. of Tsukuba) On M-regularity and rational maps defined by line bundles on abelian varieties (14:15–15:15)

Functional Equations (Conference Room I)

- Shuji Yoshikawa (Hiroshima Univ.) Structure-preserving discretization of differential equations and its applications (17:00–18:00)

Real Analysis (Conference Room III)

- Toru Nogayama (Tokyo Univ. of Sci.) A study of function spaces with mixed norm (15:45–16:45)

Functional Analysis (Conference Room II)

- Michiya Mori (Univ. of Tokyo) Various generalizations of Wigner’s theorem (15:10–16:10)

Statistics and Probability (Conference Room IV)

- Takeshi Emura (Hiroshima Univ.)^b Factorial survival analysis for treatment effects under dependent censoring and its asymptotic theory (14:15–15:15)

- Tomoaki Imoto (Univ. of Shizuoka) The constructions of flexible circular, toroidal, and cylindrical distributions and their applications (15:30–16:30)

Applied Mathematics (Conference Room V)

Award Lecture for the 2024 Applied Mathematics Prize

- Masato Kimura (Kanazawa Univ.) Irreversible fracture phase field models: Energy dissipation structure and applications (16:15–17:15)

Topology (Conference Room VIII)

- Toshiyuki Akita (Hokkaido Univ.) Associated groups of quandles, Wirtinger presentations, and group homology (16:30–17:30)

September 19th (Fri)

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

Yushiro Aoki	A discontinuous homomorphism on $C(X)$ and a fragment of	
(Tokyo Nat. Coll. of Tech.)	Martin's axiom	(10:45–11:45)

Algebra (Conference Room IX)

Toshiki Matsusaka (Kyushu Univ.)	b (Mock) modular nature of q -series	(14:15–15:15)
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Geometry (Conference Room VI)

Kento Osuga	b Volumes of moduli spaces of bordered Klein surfaces	(11:00–12:00)
(Nagoya Univ./Nagoya Univ.)		

Functional Equations (Conference Room I)

Mitsuo Higaki	(Kobe Univ.)	A Runge-type approximation theorem for the unsteady Stokes	
		equations	(17:00–18:00)

Real Analysis (Conference Room III)

Yoshiho Akagawa (Kyoto Univ. of Edu.)	Variational inequality with time-nonlocal unknown depen-	
	dence for kinematic hardening	(16:00–17:00)

Applied Mathematics (Conference Room V)

Ayuki Sekisaka	(Meiji Univ.)	Spectral stability of traveling waves and mathematical struc-	
		ture: A perspective from domain dimensionality and bound-	
		edness	(16:15–17:15)

Date: September 20th (Sat) 14:00–16:30
 Venue: Sakata & Hirata Hall
 Organizer: The Mathematical Society of Japan
 Co-organizer: Graduate School of Mathematics, Nagoya University
 Program: Opening Speech (14:00–14:05)
 Kazuhiro Ishige (President of MSJ/Univ. of Tokyo)
 Lecture 1: “Mathematics of soap films, soap bubbles, and crystals, and their applications”
 (14:10–15:10)
 Miyuki Koiso (Kyushu Univ.)
 Lecture 2: “Computers and mathematics: From computational complexity to quantum
 computing” (15:30–16:30)
 François Le Gall (Nagoya Univ.)
 Web Page: <https://www.mathsoc.jp/en/meeting/nagoya25sept/>

Foundation of Mathematics and History of Mathematics

September 18th (Thu) Conference Room VII

10:00–11:55

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|---|---|---|----|
| 1 | Ikuo Yoneda
(Nat. Inst. of Tech., Tokuyama Coll.) | Quasi-geometric elimination of imaginaries and modular law in the real sort | 15 |
| 2 | Ikuo Yoneda
(Nat. Inst. of Tech., Tokuyama Coll.) | No implications between CF-property and elimination of imaginaries | 15 |
| 3 | Koki Okura (Univ. of Tsukuba) | Dp-finite groups expanded by closed sets | 15 |
| 4 | <u>Hiroataka Kikyo</u> (Kobe Univ.)
Akito Tsuboi (Univ. of Tsukuba*) | Chromatic number of several countable graphs | 15 |
| 5 | Koichiro Ikeda (Hosei Univ.) | On theories having a type with tree property | 15 |
| 6 | Akito Tsuboi (Univ. of Tsukuba*) | Applying HF to finite model theory: The power of proactive use | 10 |
| 7 | Koitaro Nakaura (Univ. of Tokyo) | On the chromatic numbers of stable and unstable graphs | 15 |

14:15–15:15 Talk Invited by Section on Foundation and History of Mathematics

Masato Fujita (Japan Coast Guard Academy)	Topologically tame ordered structures
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15:30–16:45

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| 8 | Haruka Kogure (Kobe Univ.)
<u>Taishi Kurahashi</u> (Kobe Univ.) | On partially conservative sentences 1 | 15 |
| 9 | <u>Haruka Kogure</u> (Kobe Univ.)
Taishi Kurahashi (Kobe Univ.) | On partially conservative sentences 2 | 15 |
| 10 | Yuta Sato (Kobe Univ.) | Uniform Lyndon interpolation theorem for $\mathbf{N}^+ \mathbf{A}_{m,n}$ through propositionalization and cut elimination | 15 |
| 11 | Takahiro Seki (Niigata Univ.) | Associativity and commutativity of variations of residual axioms | 15 |
| 12 | Ryo Kashima (Sci. Tokyo) | On the completeness of infinitary proof systems for the modal mu-calculus | 15 |

September 19th (Fri) Conference Room VII

9:30–10:30

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| 13 | <u>Takayuki Kihara</u> (Nagoya Univ.)
Ming Ng (Nagoya Univ.) | Subtoposes of the effective topos and the Katětov order | 15 |
| 14 | Kohtaro Tadaki (Chubu Univ.) | An analysis of Wigner's friend in the framework of the principle of typicality | 15 |
| 15 | Kenta Tsukuura (Nat. Fisheries Univ.) | The dissection of $(\dagger)$ | 15 |
| 16 | Takashi Yamazoe (Kobe Univ.) | Cardinal invariants of products of ideals | 15 |

10:45–11:45 Talk Invited by Section on Foundation and History of Mathematics

Yushiro Aoki (Tokyo Nat. Coll. of Tech.)	A discontinuous homomorphism on $C(X)$ and a fragment of Martin's axiom
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12:00–12:15 Research Section Assembly**14:15–15:30**

- 17 Tsukane Ogawa (Yokkaichi Univ.) On the completion of the five volumes of the *Kijutsu Kairo Hou* 15
Tanaka Noriko (Naragakuen Univ.)
- 18 Noriko Tanaka (Naragakuen Univ.) Takuma school, Oka Yukitada, Kijutu-Kairoho Vol. 5 and Shiki-Kijutsu
Ogawa Tsukane (Yokkaichi Univ.) math features 15
- 19 Koichi Hirata Renjutsu: from the viewpoint of inversive coordinates of circles 15
(Matsuyama Univ. / Ehime Univ. *)
- 20 Katsushi Waki (Yamagata Univ.)^b Layout analysis of WASAN documents using NDL.Layout 15
- 21 Hideyuki Majima (Ochanomizu Univ. *) On the sphere volume ratio 15

15:45–16:00 Mathematics History Team Meeting

Algebra

September 16th (Tue) Conference Room IX

9:00–12:00

- 1 Katsusuke Nabeshima Comprehensive Gröbner systems approach to Chevalley's theorem on
(Tokyo Univ. of Sci.) image of rational morphisms 15
Shinichi Tajima (Niigata Univ. *)
- 2 Koichiro Tani (Univ. of Osaka) Standard multigraded Hibi rings and Cartwright–Sturmfels ideals 15
Koji Matsushita (Univ. of Tokyo)
- 3 Koji Matsushita (Univ. of Tokyo) Invariants of graded rings associated with stable set polytopes 15
Akiyoshi Tsuchiya (Toho Univ.)
- 4 Kyosuke Maeda (Nihon Univ.) Ulrich ideals on rational triple points 15
Ken-ichi Yoshida (Nihon Univ.)
- 5 Ken-ichi Yoshida (Nihon Univ.) Ulrich ideals on 2-dimensional quotient singularities 15
Kyosuke Maeda (Nihon Univ.)
- 6 Kei-ichi Watanabe ^b The canonical trace ideal and nearly Gorenstein property for 2 dimen-
(Nihon Univ. / Meiji Univ.) sional normal local rings 15
Tomohiro Okuma (Yamagata Univ.)
Ken-ichi Yoshida (Nihon Univ.)
- 7 Sora Miyashita (Univ. of Osaka) When do pseudo-Gorenstein rings become Gorenstein? 15
- 8 Mitsuhiro Miyazaki A new property between Gorenstein and Cohen–Macaulay properties
(Osaka Metro. Univ.) of commutative rings 15
- 9 Naoki Endo (Meiji Univ.) Deformation of the quasi-Gorenstein property in extended Rees algebras
..... 15
- 10 Shinnosuke Ishiro Perfectoid towers and $\lim$ Cohen–Macaulay sequences 15
(Gunma Nat. Coll. of Tech.)
Kazuma Shimomoto (Sci. Tokyo)

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

Kenta Ueyama (Shinshu Univ.) Tilting theory for Artin–Schelter Gorenstein algebras

15:30–17:15

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| 11 | Yuki Mifune (Nagoya Univ.) | On upper bounds for the dimension of the singularity category | 15 |
| 12 | Kaito Kimura (Nagoya Univ.) | On defining ideals of singular loci | 15 |
| 13 | <u>Kei-ichiro Iima</u>
(Nat. Inst. of Tech., Nara Coll.)
Ryo Takahashi (Nagoya Univ.) | Extension-closed subcategories of Cohen–Macaulay module category over a complete local hypersurfaces | 15 |
| 14 | <u>Shu Minaki</u> (Tokyo Univ. of Sci.)
Ayako Itaba (Tokyo Univ. of Sci.) | Group and Lie algebra structure of Hochschild cohomology of Beilinson algebra of weighted down-up algebras | 10 |
| 15 | <u>Shota Inoue</u> (Tokyo Univ. of Sci.)
Ayako Itaba (Tokyo Univ. of Sci.) | Symmetric cohomology of triangular bialgebras | 15 |
| 16 | Mariko Ohara (Toyama Pref. Univ.) | A stable model category and Hopfological invariant | 15 |

September 17th (Wed) Conference Room IX

9:00–12:00

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| 17 | Ryota Wakao (Okayama Univ. of Sci.) | On R-matrices constructed from Hopf superalgebras of low dimension | 10 |
| 18 | Yasuhiko Asao (Fukuoka Univ.)
<u>Shun Wakatsuki</u> (Nagoya Univ.) | Minimal projective resolution and magnitude homology of geodetic metric spaces | 15 |
| 19 | Sota Asai (Univ. of Tokyo) | An extension theorem of semibricks in quiver representations | 15 |
| 20 | Yusuke Nishinaka (Nagoya Univ.) | Costello–Gwilliam factorization algebras and vertex algebras | 15 |
| 21 | <u>Shuji Fujino</u> (Tokyo Univ. of Sci.)
Yuta Kozakai (Tokyo Univ. of Sci.)
Kohei Takamura (Tokyo Univ. of Sci.) | How to construct two-sided tilting complexes for generalized Brauer tree algebras | 15 |
| 22 | <u>Shingo Okuyama</u>
(Nat. Inst. of Tech., Kagawa Coll.)
Yasuhiro Omoda
(Nat. Inst. of Tech., Akashi Coll.)
Kazunori Nakamoto
(Univ. of Yamanashi) | An example of a non-2-thick irreducible representation of the symmetric group | 15 |
| 23 | Maria Ferrara
(Univ. Campania Luigi Vanvitelli)
Marco Trombetti
(Univ. Napoli Federico II)
<u>Sin Yi Tsang</u> (Ochanomizu Univ.) | On orders whose arithmetical properties determine the structure of skew braces | 15 |
| 24 | <u>Kohji Yanagawa</u> (Kansai Univ.)
Xin Ren (Osaka Metro. Univ.) | Transposes in the q -deformed modular group and their applications to q -deformed rational numbers | 15 |
| 25 | Shuhei Tsujie (Hokkaido Univ. of Edu.)
<u>Ryo Uchiumi</u> (Univ. of Osaka) | On 2-multiarrangements of three lines over fields of positive characteristic | 15 |

26	<u>Shun-ichi Kimura</u> (Hiroshima Univ.) Hiyu Inoue (Hiroshima Univ.) Shin-nosuke Kadowaki (Hiroshima Univ.)	Ending partizan games	15
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27	Shun-ichi Kimura (Hiroshima Univ.)	Surreal numbers as the K-ring of some combinatorial games	15
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13:00–14:00 Talk Invited by Algebra Section

Tatsuyuki Hikita (Kyoto Univ.)	On the Stanley–Stembridge conjecture
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September 18th (Thu) Conference Room IX

9:30–12:00

28	Shota Maehara (Kyushu Univ.)	An algebraic research on minimum number of chambers for line arrangements	15
29	<u>Tatsushi Shimazaki</u> (Kobe Univ.) Takahiko Nobukawa (Kogakkan Univ.) Taikei Fujii (Kobe Univ.)	The number of set-valued semistandard tableaux and special values of Grothendieck polynomials	15
30	Takeshi Torii (Okayama Univ.) <u>Kazunori Nakamoto</u> (Univ. of Yamanashi)	The moduli of subalgebras of the full matrix ring of degree 3 (4)	15
31	Kohei Aoyama (Univ. of Osaka)	The property of being a Deligne–Mumford stack is not preserved by the warping stack	15
32	<u>Yasuhiro Oki</u> (Rikkyo Univ.) Kazuki Kanai (Kure Nat. Coll. of Tech.)	The rationality problem for multinorm one tori	15
33	Tomohiro Iwami (Kyushu Inst. of Tech.)	Certain mixed motivic sheaves for extensions of symmetric 2-forms related to three-dimensional Miyaoka–Yau type inequality with third Chern classes	15
34	Taro Sano (Kobe Univ.)	On Hodge structures of compact complex manifolds with semistable degenerations	15
35	Hisato Matsukawa (Hokkaido Univ.) ^b	The spectrum of triangulated categories with actions	15
36	<u>Shu Nimura</u> (Nagoya Univ.) Akira Ishii (Nagoya Univ.)	Derived McKay correspondence for real reflection groups of rank three	15

12:00–12:30 Research Section Assembly

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

Atsushi Ito (Univ. of Tsukuba)	On M-regularity and rational maps defined by line bundles on abelian varieties
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15:30–17:30

37	Natsume Kitagawa (Nagoya Univ.)	The standard models of del Pezzo fibrations of degree 4	15
38	Shuto Abe (Nagoya Univ.)	Automorphism groups of Fano threefolds	15
39	Kiwamu Watanabe (Chuo Univ.)	Quadratic varieties of small codimension	15
40	Osamu Fujino (Kyoto Univ.) <u>Hiroshi Sato</u> (Fukuoka Univ.)	On non-projective complete toric varieties	10

41	<u>Shingo Taki</u> (Tokai Univ.) Kei Miura (Yamaguchi Univ.)	Galois points and K3 surfaces	15
42	Ken Sato (Sci. Tokyo)	On symplectic actions on higher Chow cycles on $K3$ surfaces	15
43	Hizuru Yamagishi (Tokyo Denki Univ.)	Recurrence formulas with figurate numbers and elliptic surfaces	15

September 19th (Fri) Conference Room IX

9:30–12:00

44	Yuji Tsuno (Nat. Inst. of Tech., Wakayama Coll.)	On the unit group scheme of the group algebra of a certain non-commutative finite flat group scheme over an $\mathbb{F}_p$ -algebra	15
45	Yuki Kato (Kurume Nat. Coll. of Tech.)	Goodwille approximation of algebraic cobordism	15
46	<u>Manabu Yoshida</u> (Yamato Univ.) Yoshiyasu Ozeki (Kanagawa Univ.)	On the p -torsion fields of elliptic curves over $\mathbb{Q}_p$	15
47	Akio Nakagawa (Kanazawa Univ.)	Confluent hypergeometric functions over finite fields and Artin–Schreier curve	15
48	Masanori Morishita (Kyushu Univ.)	On a relation between Deninger’s foliated dynamical systems and Connes–Consani’s adelic spaces	15
49	Takenori Kataoka (Tokyo Univ. of Sci.)	Kida’s formula for graphs with ramifications	15
50	Haruki Ito (Nagoya Univ.)	Semi-integral points of bounded height on vector group compactifications	15
51	Masaki Kato (Ritsumeikan Univ.)	Macdonald symmetric functions and multiple polylogarithms	15
52	<u>Hiroshi Nozaki</u> (Aichi Univ. of Edu.) Masatake Hirao (Aichi Pref. Univ.) Koji Tasaka (Kindai Univ.)	Spherical designs associated with finite quaternionic groups and their applications to modular forms	15

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

Toshiki Matsusaka (Kyushu Univ.)^b (Mock) modular nature of q -series

15:30–17:30

53	<u>Shigeru Iitaka</u> (Open Univ. of Japan/Gakushuin Univ.*) Hikaru Kajita (Crimson Global Academy)	Double Euler functions and a kind of perfect numbers	10
54	Haruki Domoto (Yamaguchi Univ.) Tadaaki Igawa <u>Makoto Minamide</u> (Yamaguchi Univ.) Yoshio Tanigawa	On the average of $\sigma_a(n)$ for square-free integers	10
55	Hideto Iwata (Gunma Nat. Coll. of Tech.)	A relation to a remainder terms in an asymptotic formula for the associated Euler totient function	15
56	Fumi Ogihara (Sophia Univ.)	On the short interval average of the representation function related to square-full numbers	15
57	<u>Yuichiro Toma</u> (Nagoya Univ.) Iu-Iong Ng (Waseda Univ.)	On negative moments of Dirichlet L -functions	15

58	Takeshi Shinohara (Nagoya Univ.)	Explicit values of multiple zeta functions at non-positive integers using Stirling numbers	15
59	Takumi Anzawa (Nagoya Univ.)	A Lie algebra associated with both generalized symmetric multiple zeta values and parity results	15
60	Ku-Yu Fan (Nagoya Univ.)	A map between arborifications of multiple zeta values	15

Geometry

September 16th (Tue) Conference Room VI

9:30–11:45

1	Hiroyuki Hayashi (Kobe Univ.)	On striction curves of ruled surfaces with finite multiplicities	15
2	Yoshio Agaoka (Hiroshima Univ.*)	Ricci curvature of left invariant metrics and invariants —the 3-dimensional case—	15
3	<u>Nozomi Nakatsuyama</u> (Muroran Inst. of Tech.) Masatomo Takahashi (Muroran Inst. of Tech.)	Caustics and involutes of framed surfaces in Euclidean 3-space	15
4	<u>Shun Kumagai</u> (Hachinohe Inst. of Tech.) Kenji Kajiwara (Kyushu Univ.)	Planar curves with self-affinity in equiaffine geometry	15
5	Masahiro Morimoto (Tokyo Metro. Univ.)	Affine differential geometry of parallel transport maps and weakly reflective submanifolds	15
6	Jun Matsumoto (Sci. Tokyo)	A special class of affine maximal surfaces with singularities and its relationship with minimal surface theory	15
7	Kenzi Satô (Tamagawa Univ.)	Fermat–Torricelli points of a spherical or hyperbolic triangle	15

14:15–16:45

8	Naoki Kato (Chukyo Univ.)	Left-invariant transversely affine foliations and a generalization of left-symmetric structures	15
9	Masamichi Deguchi (Tokyo Metro. Univ.)	Maximal antipodal sets of oriented flag manifolds	15
10	Lijie Sun (Yamaguchi Univ.)	Notes on the geometry of quaternionic Heisenberg group	15
11	Lucas Henrique Silveira Gomes (Univ. of Osaka)	Vaisman solvmanifolds as finite quotients of Kodaira–Thurston nilmanifolds	15
12	<u>Osamu Ikawa</u> (Kyoto Inst. Tech.) <u>Shinji Ohno</u> (Nihon Univ.) Kurando Baba (Tokyo Univ. of Sci.)	The intersection of two real flag manifolds in a complex flag manifold, and the canonical form of a compact symmetric triad	15

13 Geometry

- 13 Taito Shimoji (Univ. of Osaka) Gradings on nilpotent Lie algebras and the fundamental groups of smooth complex algebraic varieties 15
- 14 Hiroyuki Tasaki Polars of Pin^c groups and related compact Lie groups. II 15
(Tokyo Metro. Univ./Univ. of Tsukuba)
- 15 Shinobu Fujii On s -commutative sets in real Grassmannian manifolds and representations of Clifford algebras 15
(Chitose Inst. of Sci. and Tech.)

September 17th (Wed) Conference Room VI

10:00–10:15 Presentation Ceremony for the 2025 MSJ Geometry Prize**10:20–11:20 Award Lecture for the 2025 MSJ Geometry Prize**

Shin-ichi Matsumura (Tohoku Univ.) Structure theorems for varieties with non-negative curvature

12:50–13:50 Award Lecture for the 2025 MSJ Geometry Prize

Koichi Nagano (Univ. of Tsukuba) On the geometry of metric spaces with upper curvature bounds

September 18th (Thu) Conference Room VI

9:30–11:45

- 16 Isami Koga (Kyushu Int. Univ.) Equivariant harmonic maps of quaternion projective spaces into Grassmannians 15
Yasuyuki Nagatomo (Meiji Univ.)
Masaro Takahashi
(Kurume Nat. Coll. of Tech.)
- 17 Yuya Takeuchi (Univ. of Tsukuba) CR Paneitz operator on non-embeddable CR manifolds 15
- 18 Rei Murakami (Tohoku Univ.) Complex Hessian equations and positivity 15
- 19 Kazuyuki Hasegawa (Kanazawa Univ.) Intrinsic characterization of projective special complex manifolds 15
Vicente Cortés (Univ. of Hamburg)
- 20 Hiroyasu Satoh (Nippon Inst. of Tech.) Conformal vector fields on complex hyperbolic space 15
Hemangi M. Shah
(Harish-Chandra Res. Inst.)
- 21 Shuhei Katsuta (Nagoya Univ.) Combinatorial structure in Nevanlinna theory 15
- 22 Masanori Adachi (Shizuoka Univ.) Harmonic measures and rigidity for transverse foliations on Seifert 3-manifolds 15
Yoshifumi Matsuda
(Aoyama Gakuin Univ.)
Hiraku Nozawa (Ritsumeikan Univ.)

14:15–17:45

- 23 Naoki Kuroda (Univ. of Tokyo)^b Computations of $\text{Spin-Sp}(4)$, $\text{Spin-SU}(8)$, and $\text{Spin-Spin}(16)$ bordism groups in dimensions up to 7 15
- 24 Yasushi Homma (Waseda Univ.) Eigenvalue estimates and stability on positive quaternion Kähler manifolds 15
- 25 Tadashi Udagawa (Waseda Univ.) Classification of the tt^* -Toda equation with the anti-symmetry condition 15
- 26 Shota Hamanaka (Univ. of Osaka) Extremal metrics involving in scalar curvature 15

27	Masaya Kawamura (Sugiyama Jogakuen Univ.)	On the t -Gauduchon connection on almost Hermitian manifolds	15
28	Masato Inagaki (Nagoya Univ.)	Spectral convergence of graph Laplacians with Ricci curvature bounds and in non-collapsed Ricci limit spaces	15
29	Nikita Evseev (Okinawa Inst. of Sci. and Tech. Grad. Univ.)	Rellich–Kondrachov theorem for mappings in metric spaces	15
30	Takuma Byakuno (Kansai Univ.)	An isometric embedding from a space of sequences of compact metric spaces into the Gromov–Hausdorff space	15
31	Hiroki Ishikura (Univ. of Tokyo)	Stallings–Swan’s theorem for Borel graphs	15
32	Kenshiro Tashiro (Okinawa Inst. of Sci. and Tech. Grad. Univ.) Samuël Borza (Univ. Vienna)	Varieties of the Grushin plane and the RCD condition	15

September 19th (Fri) Conference Room VI

9:30–10:45

33	Noriaki Ikeda (Ritsumeikan Univ.) Yuji Hirota (Azabu Univ.)	Poisson maps in Hamilton Lie algebroids	15
34	Takumi Arai (Kyoto Univ.)	Guillermou–Kashiwara–Schapira kernels of geodesic flows	15
35	Shinpei Baba (Univ. of Osaka)	Bending Teichmüller spaces and character varieties	15
36	Ryo Hayami (Nagano Univ.)	Cotangent path n -rackoids	15

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

Kento Osuga (Nagoya Univ./Nagoya Univ.)	b Volumes of moduli spaces of bordered Klein surfaces
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Complex Analysis

September 16th (Tue) Conference Room III

9:30–11:10

1	Natsuo Miyatake (Tohoku Univ.)	On the existence, uniqueness, and approximation of the extended com- plete harmonic metrics	15
2	Natsuo Miyatake (Tohoku Univ.)	Harmonic metrics, subharmonic functions, entropy, and free energy . . .	15
3	Natsuo Miyatake (Tohoku Univ.)	Entropy, free energy, hyperbolic metrics, and redundancy	15
4	Takao Ohno (Oita Univ.) Tetsu Shimomura (Hiroshima Univ.)	Maximal and Riesz potential operators on Musielak–Orlicz spaces over unbounded metric measure spaces	15

- 5 Ikkei Hotta (Yamaguchi Univ.) Nonlinear resolvents and decreasing Loewner chains 15
 Sebastian Schleißinger
 (Univ. of Würzburg)
 Toshiyuki Sugawa (Tohoku Univ.)
- 6 Shunsuke Kasao Bloch–Ros principle and its application 15
 (Shibaura Inst. of Tech. Kashiwa Junior & Senior High School)
Yu Kawakami (Kanazawa Univ.)

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

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

15:40–16:30

- 7 Junichiro Narita On Hasumi’s theorem for the classification of plane domains by Hardy
 (Daido Univ./Daido Univ.*) classes 15
 Mikihiro Hayashi (Hokkaido Univ.*)
 Shigeo Segawa (Daido Univ.*)
- 8 Katsuhiko Matsuzaki (Waseda Univ.) Characterization of asymptotically smooth curve 15
 Fei Tao (Waseda Univ.)
- 9 Yūsuke Okuyama (Kyoto Inst. Tech.) Schwarzian derivatives and their generalizations of meromorphic func-
 tions appearing in complex dynamics 15

September 17th (Wed) Conference Room III

9:30–11:10

- 10 Takanori Ayano (Osaka Metro. Univ.) Solution to the KP equation in terms of a hyperelliptic function of
 Victor M. Buchstaber degree 2 15
 (Steklov Math. Inst.)
- 11 Takeo Ohsawa (Nagoya Univ.)^b An example of holomorphically nonconvex locally pseudoconvex ana-
 lytic set in $\mathbb{C}^3$ 15
- 12 Makoto Abe (Hiroshima Univ.*) Boundary distance functions of unramified Riemann domains over $\mathbb{C}^n$
 Tatsuhiro Honda (Senshu Univ.) 15
- 13 Tadashi Takahashi A computer algebraic study on Yoshihara’s defining equation 15
 (Hagoromo Univ. of Int. Stud.)
- 14 Atsushi Atsuji (Keio Univ.) Nevalinna theory for meromorphic functions on transient Kähler mani-
 folds 15
- 15 Kazuko Matsumoto Eigenvalues of the Levi form of logarithmic Fubini–Study distance to a
 (Tokyo Univ. of Sci.) non-singular complex curve in $\mathbb{CP}^2$ 15

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

- Takahiro Inayama (Tokyo Univ. of Sci.) L^2 estimates, L^2 extension theorems, and positivity of curvature
-

Functional Equations

September 16th (Tue) Conference Room I

9:00–12:00

- | | | | |
|----|---|--|----|
| 1 | Shunya Adachi (Utsunomiya Univ.) | Middle Laplace transform for linear Pfaffian systems and its application
..... | 10 |
| 2 | <u>Nobuki Takayama</u> (Kobe Univ.*)
Hiromasa Nakayama (Nihon Univ.) | Algorithm to classify hypergeometric systems to isomorphic classes ... | 10 |
| 3 | Kazuki Ishibashi
(Hiroshima Inst. of Tech.) | A Hille–Kneser type oscillation criterion for linear differential equations
with a PD-based operator | 10 |
| 4 | <u>Hiroyuki Usami</u> (Gifu Univ.*)
Manabu Naito (Ehime Univ.*) | Necessary conditions for half-linear ordinary differential equations in
order that they have solutions behaving exponentially | 10 |
| 5 | <u>Tomoyuki Tanigawa</u>
(Osaka Metro. Univ.)
Takaši Kusano (Hiroshima Univ.*)
Jaroslav Jaroš (Comenius Univ.)
Hiroyuki Usami (Gifu Univ.*) | On the amplitude and the slope at zeros of oscillatory solutions of
half-linear differential equations | 10 |
| 6 | Yasuhisa Saito (Shimane Univ.) | Global attractivity for a general delay differential equation with super-
linear damping | 10 |
| 7 | Kazuyuki Yagasaki (Kyoto Univ.) | Solvability of integrable partial differential equations under meromor-
phic initial conditions by quadrature | 10 |
| 8 | Tetsutaro Shibata (Hiroshima Univ.*) | Global bifurcation curves of nonlocal elliptic equations with oscillatory
nonlinear term | 10 |
| 9 | <u>Satoshi Tanaka</u> (Tohoku Univ.)
Kotaro Watanabe
(Nat. Defense Acad. of Japan)
Naoki Shioji (Yokohama Nat. Univ.) | Uniqueness and multiplicity of positive radial solutions to the super-
critical Brezis–Nirenberg type problem in an annulus | 10 |
| 10 | Satoshi Masaki (Hokkaido Univ.) | On quartic conserved quantity for a class of nonlinear ODE system
..... | 10 |
| 11 | <u>Ryuji Kajikiya</u>
(Osaka Electro-Comm. Univ.)
Shingo Takeuchi
(Shibaura Inst. of Tech.) | Estimate for the first eigenvalue of the one-dimensional p -Laplacian
..... | 10 |
| 12 | Ryuji Kajikiya
(Osaka Electro-Comm. Univ.) | Least energy solutions of the Hénon equation in reflectionally symmetric
or point symmetric unbounded domains | 10 |
| 13 | Slim Ibrahim (Univ. of Victoria)
<u>Ikkei Shimizu</u> (Kyoto Univ.) | Global perturbation of isolated equivariant chiral skyrmions from the
harmonic maps | 10 |
| 14 | Yuki Amari (Keio Univ.) | Saddle point solutions in $SU(3)$ Yang–Mills theory: Hyperbolic monopole–
antimonopole bound state | 10 |

14:15–16:30

- 15 Takeshi Suguro (Kumamoto Univ.) Stability estimates for the Sobolev type functional inequality for a p -Laplace equation 10
- 16 Naoki Hamamoto (Osaka Metro. Univ.) The Poincaré–Wirtinger constant for curl-free fields on the ball 10
- 17 Daowen Lin (Okinawa Inst. of Sci. and Tech. Grad. Univ.) Best constant and extremal functions for a class of Hardy–Sobolev–Mazya inequalities 10
Xinan Ma (Univ. of Sci. and Tech. of China)
- 18 Takashi Suzuki (Osaka Univ.) Blowup set of the Smoluchowski–Poisson equation in higher dimension 5
- 19 Yohei Toyota (Nat. Inst. of Tech., Nara Coll.) Behavior of ground state solutions for semilinear elliptic equation associated with critical Sobolev exponent 10
- 20 Kenta Kumagai (Sci. Tokyo) Bifurcation structure of semilinear elliptic equations with singular weights in two dimensions 10
- 21 Yuxiao Zhang (Hiroshima Univ.) Higher-order boundary estimates for large solutions to semilinear Poisson equations with exponential nonlinearities 10
- 22 Sho Katayama (Univ. of Tokyo) Infinite multiplicity of positive solutions of an inhomogeneous supercritical elliptic equation on $\mathbb{R}^N$ 10
Yasuhito Miyamoto (Univ. of Tokyo)
- 23 Yuki Osada (Tokyo Univ. of Sci.) Variational analysis for coupled nonlinear Schrödinger equations with point interaction 10
Alessio Pomponio (Politecnico di Bari)
- 24 Noriyoshi Fukaya (Waseda Univ.) Uniqueness and nondegeneracy of ground states for 2d-nonlinear scalar field equations with point interaction 10
- 25 Kouta Araki (Nihon Univ.) A priori estimates for solutions of nonlinear Fokker–Planck equations with inhomogeneous spatial diffusion 10
Masashi Mizuno (Nihon Univ.)

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

- Kouichi Taira (Kyushu Univ.) Essential selfadjointness and spectral theory for the d’Alembertian on Lorentzian manifolds

September 17th (Wed) Conference Room I

9:15–12:00

- 26 Mostafa Fazly (UTSA) Linear-coupling effect in the 1D Gross–Pitaevskii system: Exact solutions and eigenvalue problems 10
Yasuhito Miyamoto (Univ. of Tokyo)
- 27 Hiroshi Matsuzawa (Kanagawa Univ.) Ground state for a system of nonlinear Schrödinger equations with three waves interaction and critical nonlinearities 10
Hidenori Kokufukata (Tsurumi Senior High School)
- 28 Reiri Miyamoto (Tokyo Univ. of Sci.) The critical Fujita exponent for one-dimensional semilinear heat equations with potentials and space-dependent nonlinearities 10
Motohiro Sobajima (Tokyo Univ. of Sci.)
- 29 Junichi Harada (Akita Univ.) Remarks on the oscillating solutions to the 6D Fujita equation 6
- 30 Mizuki Kojima (Kanagawa Univ.) On self-similar solutions of time-fractional semilinear heat equations 10

- 31 Yasuhito Miyamoto (Univ. of Tokyo) Masamitsu Suzuki (Meiji Univ.) Solvability of the Cauchy problem for fractional semilinear parabolic equations in critical and doubly critical cases 10
- 32 Naoya Hatano (Univ. of Osaka) Masahiro Ikeda (Univ. of Osaka) Unconditional uniqueness of Hardy–Hénon parabolic equations on Herz spaces 10
- 33 Jiyuan Guo (Tokyo Univ. of Sci.) Shohei Kohatsu (Tokyo Univ. of Sci.) Tomomi Yokota (Tokyo Univ. of Sci.) Global existence of weak solutions in a three-dimensional flux-limited Keller–Segel–Navier–Stokes system involving superlinear production .. 10
- 34 Hiroshi Wakui (Univ. of Fukui) Tetsuya Yamada (Fukui Nat. Coll. of Tech.) Stability and large time behavior in a drift-diffusion equation with an attractive drift term 10
- 35 Yuri Soga (Tohoku Univ.) b Concentration phenomena to a chemotaxis system with indirect signal production 10
- 36 Kazuhiro Oeda (Kyushu Sangyo Univ.) Kousuke Kuto (Waseda Univ.) Stationary solutions of a prey-predator model with directed population flux and a protection zone 10
- 37 Yuki Kaneko (Kanto Gakuin Univ.) Yoshio Yamada (Waseda Univ.) Asymptotic behaviors and propagating terrace for a free boundary problem of a positive bistable reaction-diffusion equation under Dirichlet boundary conditions 10
- 38 Yuki Tsukamoto (Tokyo Univ. of Sci.) Appearance of stationary interfaces in the fast reaction limit 10
- 39 Makoto Nakamura (Univ. of Osaka) Kazusa Eguchi (Univ. of Osaka) Kento Tachibana (Univ. of Osaka) Global solutions for the Allen–Cahn type equation in de Sitter spacetime under a quartic potential 10

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

- Tatsuya Watanabe (Kyoto Sangyo Univ.) Ground state solutions for nonlocal elliptic problems associated with the nonlinear Schrödinger–Poisson system

September 18th (Thu) Conference Room I

9:15–12:00

- 40 Mamoru Aihara (Hokkaido Univ.) A game interpretation for the weighted p -Laplace equation 10
- 41 Takuya Sato (Univ. of Tokyo) A game approach to free boundary problems of anisotropic forced mean curvature flow equations 10
- 42 Hiroyoshi Mitake (Univ. of Tokyo) Panrui Ni (Univ. of Tokyo) Optimal rate of convergence for homogenization of Hamilton–Jacobi equations with prescribed contact boundary conditions 10
- 43 Hiroyoshi Mitake (Univ. of Tokyo) Panrui Ni (Univ. of Tokyo) Rate of convergence for homogenization of nonlinear weakly coupled Hamilton–Jacobi systems 10
- 44 Yasuhiro Fujita (Univ. of Toyama) Norikazu Yamaguchi (Univ. of Toyama) Residence time for a Hamilton–Jacobi flow starting from a pathological function 10
- 45 Takashi Kagaya (Muroran Inst. of Tech.) Solvability for fully nonlinear parabolic equations with a singular Dirichlet boundary condition 10
- 46 Qing Liu (Okinawa Inst. of Sci. and Tech. Grad. Univ.) Made Benny Prasetya Wiranata (Okinawa Inst. of Sci. and Tech. Grad. Univ.) Monge solutions of time-dependent Hamilton–Jacobi equations in metric spaces 10

47	Kotaro Motegi (Sci. Tokyo)	A regularity theorem for integral varifolds close to triple junction	10
48	Kiichi Tashiro (Sci. Tokyo)	On existence of weak mean curvature flow with prescribed contact angle	10
49	<u>Florian Gruen</u> (Kyoto Univ.) Tatsuya Miura (Kyoto Univ.)	Regularity and structure of non-planar p -elasticae	10
50	Ryunosuke Mori (Meiji Univ.)	Propagation and blocking of a curvature flow with driving force in two-dimensional cylinders with periodically arrayed obstacles	10
51	Satoshi Masaki (Hokkaido Univ.)	On the asymptotic behavior of solutions to NLS systems without coer- cive conserved quantities	10
52	<u>Hiroyuki Hirayama</u> (Univ. of Miyazaki) Masahiro Ikeda (Univ. of Osaka)	On traveling waves for the nonlinear Schrödinger system with quadratic three wave interaction	10
14:30–16:30			
53	Yuji Sagawa (Gifu Nat. Coll. of Tech.)	Asymptotic behavior of small solutions to a two-component system of cubic nonlinear Schrödinger equations in one space dimension	10
54	Chunhua Li (Yanbian Univ.) Yuji Sagawa (Gifu Nat. Coll. of Tech.) <u>Hideaki Sunagawa</u> (Osaka Metro. Univ.) Shinpei Washio (Shukugawa Junior High School & High School)	Remarks on L^2 -decay of small solutions to derivative nonlinear Schrödinger equations with weakly dissipative structure	10
55	<u>Haruya Mizutani</u> (Univ. of Osaka) Masaki Kawamoto (Okayama Univ.)	Modified scattering for the final state problem of the 1D cubic NLS with long-range potential	10
56	Minami Watanabe (Tsuda Coll.)	Scattering for the nonlinear Schrödinger equation with exponential nonlinearity	10
57	Sonae Hadama (Kyoto Univ.)	Semi-classical limit of scattering states: from the Hartree equation to the Vlasov equation	10
58	<u>Mamoru Okamoto</u> (Hiroshima Univ.) Guopeng Li (Beijing Inst. of Tech.) Liyang Tao (China Acad. of Eng. Phys.)	Global solution to the periodic energy-critical stochastic nonlinear Schrödinger equation	10
59	Kotaro Inami (Nagoya Univ.)	Smoothing property of the Schrödinger equation in modulation spaces	10
60	Masayuki Hayashi (Kyoto Univ.)	Uniqueness of solutions for the logarithmic Schrödinger equation	10
61	<u>Nobutatsu Kobayashi</u> (Tokyo Univ. of Sci.) Masahito Ohta (Tokyo Univ. of Sci.)	Global well-posedness for a generalized Zakharov system in a higher energy space	10

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

Shuji Yoshikawa (Hiroshima Univ.)	Structure-preserving discretization of differential equations and its ap- plications
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September 19th (Fri) Conference Room I

9:15–12:00

- 62 Takuma Yoshizumi (Univ. of Osaka) Blowup for semi-linear Klein–Gordon equations with positive initial
Makoto Nakamura (Univ. of Osaka) energy in FLRW spacetimes 10
- 63 Koji Wada (Hokkaido Univ.) Blow-up of solutions for discrete semilinear wave equation with the
Kyouhei Wakasa scale-invariant damping 10
(Muroran Inst. of Tech.)
- 64 Shunsuke Kitamura (Tohoku Univ.) Non-existence of time-local solutions of derivative type with spatial
weights and non-compactly supported data in one space dimension ... 10
- 65 Motohiro Sobajima A weighted energy method for wave equations with time-dependent
(Tokyo Univ. of Sci.) damping 10
- 66 I-Kun Chen (Nat. Taiwan Univ.) On the existence and regularity of weakly nonlinear stationary Boltz-
Chun-Hsiung Hsia (Nat. Taiwan Univ.) mann equations 10
Daisuke Kawagoe (Kyoto Univ.)
- 67 Dingqun Deng (Akita Univ.) Shock wave stability for the 3D Boltzmann equation: Bridging kinetic
theory and fluid dynamics 10
- 68 Naoto Deguchi (Sci. Tokyo) On stability of time-periodic compressible Navier–Stokes flows in three-
dimensional exterior domain 10
- 69 Masatoshi Okita On the asymptotic behavior of solutions to the compressible Navier–
(Kurume Nat. Coll. of Tech.) Stokes equations with the non-slip boundary condition in the half space
Yoshiyuki Kagei (Sci. Tokyo) 10
Takayuki Kobayashi (Univ. of Osaka)
Ryosuke Nakasato (Shinshu Univ.)
- 70 Takayuki Kobayashi (Univ. of Osaka) Analyticity and asymptotic behavior of solutions to the compressible
Ryosuke Nakasato (Shinshu Univ.) Navier–Stokes–Korteweg equations with the zero sound speed in critical
spaces 10
- 71 Masahiro Suzuki (Nagoya Inst. of Tech.) Stationary flows for viscous heat-conductive fluid in a perturbed half-
Mingjie Li (Minzu Univ. of China) space 10
Katherine Zhiyuan Zhang
(Northeastern Univ.)
- 72 Masahiro Suzuki (Nagoya Inst. of Tech.) The asymptotic behavior of solutions to the Vlasov–Poisson equation
Wenrui Huang (Brown Univ.) in convex domains 10
Benoît Pausader (Brown Univ.)
- 73 Taiki Okazaki (Tohoku Univ.) On the uniqueness of the surface quasi-geostrophic equation with the
Tsukasa Iwabuchi (Tohoku Univ.) fractional Laplacian 10
- 74 Mikihiro Fujii (Nagoya City Univ.) Sharp well-posedness and ill-posedness of the stationary quasi-geostrophic
Tsukasa Iwabuchi (Tohoku Univ.) equation 10
- 75 Yoshiki Iida (Waseda Univ.) Resolvent problem for the linearized primitive equations on non-smooth
layers 10

14:15–16:30

76	Kento Sube (Waseda Univ.)	Well-posedness and analyticity of solutions to the stationary MHD equations	10
77	Hiroki Ohyama (Kyoto Univ.) Junha Kim (Ajou Univ.) Ryo Takada (Univ. of Tokyo)	Asymptotics for the inviscid rotating stably stratified Boussinesq equations in a 3D layer	10
78	Hiroki Ohyama (Kyoto Univ.)	Long-time solvability and asymptotics for the 3D rotating MHD equations	10
79	Masakazu Yamamoto (Gunma Univ.)	Logarithmic time evolution of incompressible Navier–Stokes flow and symmetric structure of its drift term	10
80	Yuta Koizumi (Waseda Univ.)	On analyticity in time of Koch–Tataru solutions to the Navier–Stokes equations	10
81	Kenta Oishi (Nat. Inst. of Tech., Kagawa Coll.)	Time-periodic solutions for the Lagrangian formulation of the one-phase problem for the incompressible Navier–Stokes equations	10
82	Taiki Takeuchi (Kyushu Univ.)	Unique existence of solutions to the Navier–Stokes system with singular external forces	10
83	Motofumi Aoki (Kyoto Univ.) Yasunori Maekawa (Kyoto Univ.)	On the non-uniqueness of solutions to the two-dimensional forced Navier–Stokes equations in the half space	10
84	Yosuke Asami (Nagoya Univ.) Toshiaki Hishida (Nagoya Univ.)	Regularity properties of a generalized Oseen evolution operator in exterior domains, with applications to the Navier–Stokes initial value problem	10
85	Keiichi Watanabe (Suwa Univ. of Sci.)	Unique strong solution to the stationary Navier–Stokes equations around a uniform flow in the whole plane	10
86	Kazuyuki Tsuda (Kyushu Sangyo Univ.) Reinhard Farwig (TU Darmstadt)	Critical decay rate of stability for stationary solutions to the Navier–Stokes equations in exterior domains	10

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

Mitsuo Higaki (Kobe Univ.)	A Runge-type approximation theorem for the unsteady Stokes equations
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Real Analysis

September 18th (Thu) Conference Room III

10:00–11:30

1	Masaya Kitajima (Nagoya Univ.)	Application of differential formulas for generalized Bessel functions to the evaluation of lattice point errors for astroid-type p -circles	15
2	Katsuo Matsuoka (Toho Univ.)	Boundedness of some sublinear operators in power-weighted Herz spaces at indices beyond critical index	15
3	Hiroki Saito (Nihon Univ.)	Weighted trace inequality with Hausdorff capacity	15

- 4 Jingeon An (Univ. of Basel) Second order estimates for a free boundary phase transition 15
- 5 Haesung Lee (Kumoh National Inst. of Tech.) Local elliptic regularity for solutions to stationary Fokker–Planck equations via Dirichlet forms and resolvents 15

14:15–15:30

- 6 Yoshifumi Ito (Tokushima Univ.*) Reality of showing signs of physical phenomena 15
- 7 Yoshifumi Ito (Tokushima Univ.*) Phenomena of spectra of the hydrogen atoms 15
- 8 Kenichi Mitani (Okayama Pref. Univ.) Skewness and modulus of smoothness in Banach space 15
- 9 Shin-ya Matsushita (Akita Pref. Univ.) Inertial projection algorithm for fixed point problem 15

15:45–16:45 Talk Invited by Real Analysis Section

- Toru Nogayama (Tokyo Univ. of Sci.) A study of function spaces with mixed norm

September 19th (Fri) Conference Room III

10:00–12:00

- 10 Shohei Kohatsu (Tokyo Univ. of Sci.) Global existence and boundedness of weak solutions to a Keller–Segel system with flux dependent sensitivity and superlinear production ... 15
- 11 Naotaka Ukai (Chiba Univ.) Solvability of a pseudo-parabolic system based on a gradient flow with
Daiki Mizuno (Chiba Univ.) unknown-dependent energy 15
Ken Shirakawa (Chiba Univ.)
Harbir Antil (George Mason Univ.)
- 12 Hana Kakiuchi (Japan Women's Univ.) On behavior of free boundaries to two-phase Stefan problems for
Toyohiko Aiki (Japan Women's Univ.) parabolic partial differential equation systems 15
- 13 Daiki Mizuno (Chiba Univ.) Optimal control problem for grain boundary motion with heat exchange
Ken Shirakawa (Chiba Univ.) and variable-dependent mobility 15
- 14 Akiko Morimura (Japan Women's Univ.) Existence of weak solutions to a system describing moisture transport
Toyohiko Aiki (Japan Women's Univ.) in porous media with an elliptic-parabolic equation 15
- 15 Yuya Tanaka (Kwansei Gakuin Univ.) Boundedness and asymptotic behavior of classical solutions to a model
Masaaki Mizukami (Kyoto Univ. of Edu.) for tuberculosis granuloma formation 15
- 16 Yutaro Chiyo (Tokyo Univ. of Sci.) Global existence and boundedness in a one-dimensional quasilinear
Kazuki Hasegawa (Tokyo Univ. of Sci.) parabolic–elliptic–elliptic chemotaxis system with flux limitation 15
Shohei Kohatsu (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)

14:15–15:45

- 17 Chiharu Kosugi (Yamaguchi Univ.) A class of energy conservation systems representing stretching and
shrinking motions of the elastic curve with the compressible stress
function 15
- 18 Yusuke Murase (Meijo Univ.) Numerical analysis of mathematical modeling for moisture transport
with upwind difference scheme 15

- 19 Risei Kano (Kochi Univ.) On the boundary conditions of the Bernoulli–Euler beam model with piezoelectric effects 15
Takahiro Yamanaka
(Kochi Prefectural Sukumo High School)
- 20 Hiroshi Watanabe (Oita Univ.) Existence of solutions to a 3D-model associated with grain boundary motion with anisotropy 15
Ken Shirakawa (Chiba Univ.)
Jose Salvador Moll (Univ. Valencia)
- 21 Takeshi Fukao (Ryukoku Univ.) Characterization of dynamic boundary conditions in the zero-thickness limit 15

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

- Yoshiho Akagawa (Kyoto Univ. of Edu.) Variational inequality with time-nonlocal unknown dependence for kinematic hardening

Functional Analysis

September 16th (Tue) Conference Room II

9:30–10:30

- 1 Shuji Watanabe (Sanjo City Univ.) The Bogoliubov transformation and the gap equation in the BCS model of superconductivity with external magnetic field II 15
- 2 Hiroki Sako (Niigata Univ.) On intertwining operators between quantum walks 15
- 3 Fumio Hiroshima (Kyushu Univ.) Fiber decomposition of NcHO by 2pQRM 15
- 4 Yoritaka Iwata Cauchy problem of any order hyperbolic evolution equations in Besov spaces 15
(Osaka Univ. of Economics Law)
Takahiro Noi (Otemon Gakuin Univ.)

10:45–11:45 Talk Invited by Functional Analysis Section

- Takeshi Wada (Shimane Univ.) On initial boundary value problems for Maxwell–Schrödinger equations

September 17th (Wed) Conference Room II

10:00–10:45

- 5 Akihito Hora (Hokkaido Univ.) Jucys–Murphy elements for wreath products and dynamical random multi Young diagrams 15
- 6 Toshihisa Kubo (Ryukoku Univ.) The branching law of a scalar generalized Verma module for $(\mathfrak{sl}(n+1, \mathbb{C}), \mathfrak{p}_{1,n})$ to $\mathfrak{sl}(n, \mathbb{C})$ 15
- 7 Atsumu Sasaki (Tokai Univ.) Weyl group of reductive real spherical homogeneous space of real line bundle type 15

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

- Shuji Horinaga (NTT-IFM) On local A-parameters containing unitary lowest weight representations of unitary groups and applications

September 18th (Thu) Conference Room II

10:00–11:10

- 8 Takeaki Yamazaki (Toyo Univ.) On numerical range of generalized Aluthge trnasforms 10
Chafiq Benhida (Univ. de Lille)
- 9 Yuki Seo (Osaka Kyoiku Univ.) Matrix trace inequalities related to matrix geometric means 15
- 10 Shigeru Furuichi (Nihon Univ.) Matrix inequalities via block matrices 15
- 11 Junichi Fujii (Osaka Kyoiku Univ.*) A criterion of operator divergence 15
- 12 Dante Hoshina ALM-framework in the theory of multivariate operator means 15
(Nat. Inst. of Tech., Kisarazu Coll.)
Shuhei Wada
(Nat. Inst. of Tech., Kisarazu Coll.)

14:15–14:55

- 13 Katsuhisa Koshino (Kanagawa Univ.) Isometries between spaces of metrics 15
- 14 Hajime Moriya (Kanazawa Univ.)^b Graded tensor-product extension of KMS states 10
- 15 Taro Sogabe (Kyoto Univ.)^b Ergodic automorphisms on unital Kirchberg algebras 15
Kengo Matsumoto
(Joetsu Univ. of Edu.)

15:10–16:10 Talk Invited by Functional Analysis Section

- Michiya Mori (Univ. of Tokyo) Various generalizations of Wigner's theorem

Statistics and Probability

September 16th (Tue) Conference Room IV

9:00–12:00

- 1 Hiromichi Ono (Kyoto Univ.) Hausdorff dimension of the limit sets of tree iterated function systems 15
- 2 Katsunori Fujie (Kyoto Univ.) Perturbed Random Matrices and Free Probability of Type B' 15
Takahiro Hasebe (Hokkaido Univ.)
- 3 Kenshiro Tashiro The Bakry–Émery gradient estimate and the Dyson Brownian motion 15
(Okinawa Inst. of Sci. and Tech. Grad. Univ.)
Kohei Suzuki (Durham Univ.)
- 4 Ryo Inayoshi (Meijo Univ.) An operator information quantity of a semigroup and associated differential equations 15
- 5 Masaaki Fukasawa (Univ. of Osaka) Limit distribution of errors in discretization of stochastic Volterra equations with multidimensional kernel 15
Minato Hojo (Univ. of Osaka)

6	<u>Masaaki Fukasawa</u> (Univ. of Osaka) Basile Maire (Quantena AG) Marcus Wunsch (ZHAW School of Management and Law)	Liquidity provision of utility indifference type in decentralized exchanges	15
7	<u>Kei Noba</u> (Univ. of Osaka) José Luis Pérez (CIMAT)	Scale functions for spectrally negative Lévy processes killed by additive functionals	15
8	<u>Ryoichiro Noda</u> (Kyoto Univ.) Naotaka Kajino (Kyoto Univ.)	Generalized Kac's moment formula for positive continuous additive functionals	15
9	Takumu Ooi (Tokyo Univ. of Sci.)	Homeomorphism of the Revuz correspondence for finite energy integrals	15
10	Yuichi Shiozawa (Doshisha Univ.)	Volume growth, big jump, and essential spectrum for regular Dirichlet forms	15
11	Naomasa Ueki (Kyoto Univ.)	A definition of self-adjoint operators derived from the Schrödinger op- erator with the white noise potential on the plane	15

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

Toru Sera (Univ. of Osaka)	Distributional limit theorems for intermittent dynamical systems and one-dimensional diffusion processes
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15:30–16:30 Talk Invited by Statistics and Probability Section

Ryosuke Shimizu (Kyoto Univ.)	Singularity phenomena of Sobolev spaces and energy measures on frac- tals
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September 17th (Wed) Conference Room IV

9:20–11:20

12	Teruo Tanaka (Hiroshima City Univ.)	Nonlinear semigroups associated with optimal stopping problems for discrete time multiparameter Markov processes	15
13	Toshiharu Fujita (Kyushu Inst. of Tech.)	Max-add criterion in diverging Markov decision process	10
14	Hidefumi Kawasaki (Kyushu Univ.)	Weak extension of the ham-sandwich theorem: some ratio not in half	15
15	Shintaro Hashimoto (Hiroshima Univ.)	Robust Bayesian inference for censored survival data	15
16	<u>Yuzo Maruyama</u> (Chiba Univ.) Akimichi Takemura (Shiga Univ.)	A new perspective on dominating the James–Stein estimator	15
17	<u>Yoshihiko Maesono</u> (Chuo Univ.) Shota Akiba (Chuo Univ.)	Another representation of kernel quantile regression	10
18	<u>Yoshihide Kakizawa</u> (Hokkaido Univ.) Gu Yuting	Nonparametric regression using asymmetric kernels	15
19	<u>Koji Tsukuda</u> (Kyushu Univ.) Shun Matsuura (Keio Univ.)	Upper bounds for the MSE of estimators in allometric regression model: cases of elliptically symmetric error distributions	15
20	<u>Yuki Hayashi</u> (Nanzan Univ.) Takayuki Shiohama (Nanzan Univ.)	Adaptive estimation for the parameters of Jones–Pewsey distribution	10

11:30–12:00 Research Section Assembly

September 18th (Thu) Conference Room IV

9:30–11:45

- 21 Kou Fujimori (Shinshu Univ.) Sparse estimators for multivariate integer-valued autoregressive models
Hiroshi Shiraishi (Keio Univ.) with applications to estimations for Hawkes processes 15
Junichi Hirukawa (Nanzan Univ.)
Konstantinos Fokianos
(Univ. of Cyprus)
- 22 Yuta Koike (Univ. of Tokyo) Second-order accuracy of the double wild bootstrap in high-dimensions
..... 15
- 23 Shogo Nakakita (Univ. of Tokyo) Generalization error analysis of binary linear classification problems by
Lipschitz concentration 15
- 24 Shogo Nakakita (Univ. of Tokyo) Sparse estimation of high-dimensional Ornstein–Uhlenbeck processes
with repeated observations 15
- 25 Takayuki Yamada Testing the diagonality of the covariance matrix in high-dimensional
(Kyoto Women’s Univ.) data with missing values 15
Tetsuto Himeno (Shiga Univ.)
- 26 Tetsuya Umino (Univ. of Tsukuba) Automatic sparse estimation of the high-dimensional covariance matrix
..... 15
Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
- 27 Kento Egashira (Tokyo Univ. of Sci.) Change point detection for high dimensional data under a strongly
Kazuyoshi Yata (Univ. of Tsukuba) spiked eigenvalue model 15
Makoto Aoshima (Univ. of Tsukuba)
- 28 Yujie Xue (Inst. of Stat. Math.) Higher-order investigation of general time series divergences 10
Anna Clara Monti (Univ. of Sannio)
Masanobu Taniguchi (Waseda Univ.*)

12:15–12:45 Presentation Ceremony for the 2025 MSJ Analysis Prize**14:15–15:15 Talk Invited by Statistics and Probability Section**

- Takeshi Emura (Hiroshima Univ.)^b Factorial survival analysis for treatment effects under dependent cen-
soring and its asymptotic theory

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

- Tomoaki Imoto (Univ. of Shizuoka) The constructions of flexible circular, toroidal, and cylindrical distribu-
tions and their applications

September 19th (Fri) Conference Room IV

10:00–11:45

- 29 Hiroto Inoue F - t joint distribution and its application for two-sample problem 15
(Nishinippon Inst. of Tech.)
- 30 Rintaro Ichiya (Waseda Univ.) Detection of chaotic behaviors in stochastic systems 15
Rinka Sagawa (Waseda Univ.)
Yan Liu (Waseda Univ.)

31	Rikako Nomura (Waseda Univ.) <u>Yan Liu</u> (Waseda Univ.)	Normalizing transformation of the Hill estimator	15
32	Noboru Nomura (Kochi Univ.)	Estimation in conjoint analysis based on Gaussian distribution	15
33	Satoru Shinoda (Yokohama City Univ.) Takuya Yoshimoto (Chugai Pharmaceutical Co./Yokohama City Univ.) Kouji Tahata (Tokyo Univ. of Sci.)	A measure of departure from h th-order marginal symmetry for multi-way contingency tables	15
34	Atsushi Komaba (Univ. of Yamanashi) Hisashi Johno (Univ. of Yamanashi) <u>Kazunori Nakamoto</u> (Univ. of Yamanashi)	Kolmogorov–Smirnov test, Kuiper test and OVL- q test	15
35	<u>Tomoyuki Nakagawa</u> (Meisei Univ./RIKEN) Takeru Matsuda (Univ. of Tokyo/RIKEN) Kouji Tahata (Tokyo Univ. of Sci.)	An information-geometric interpretation of the partitioning of goodness-of-fit test statistics for symmetry in square contingency tables	15

Applied Mathematics

September 16th (Tue) Conference Room V

9:30–11:45

1	Kazunori Matsuda (Kitami Inst. of Tech.)	The minimum number of edges of connected graphs with $\text{ind-match}(G) = p$, $\text{min-match}(G) = q$ and $\text{match}(G) = r$	15
2	Shinya Fujita (Yokohama City Univ.)	High connectivity keeping paths in graphs	10
3	<u>Atsuhiko Nakamoto</u> (Yokohama Nat. Univ.) Naoki Matsumoto (Univ. of Ryukyus) Kyosuke Wakayama (Yokohama Nat. Univ.) Alkajim Ahadi Aradais (Mindanao State Univ.)	4-Polychromatic 5-coloring of subcubic plane graphs	15
4	<u>Shohei Satake</u> (Kumamoto Univ.) Yoshinori Yamasaki (Ehime Univ.)	On the embeddability of the Markoff mod p graph	15
5	<u>Emerson Gaw Escobar</u> (Kobe Univ.) Woojin Kim (KAIST)	Barcoding invariants and their equivalent discriminating power	15
6	<u>Hideki Matsumura</u> (Tokyo Metro. Univ.) Masanori Sawa (Kobe Univ.)	Ellipsoidal designs and the Prouhet–Tarry–Escott problem	15
7	<u>Tomoki Tamaru</u> (Kobe Univ.) Masanori Sawa (Kobe Univ.) Masatake Hirao (Aichi Pref. Univ.)	The subdesign problem in the Barnes–Wall and shorter Leech lattices	15

- 8 Eiichi Bannai (Kyushu Univ.*) On the existence and non-existence of spherical m -stiff configurations
Hirotake Kurihara (Yamaguchi Univ.) 15
 Hiroshi Nozaki (Aichi Univ. of Edu.)

14:15–15:15 Talk Invited by Applied Mathematics Section

- Masatake Hirao (Aichi Pref. Univ.) Spherical design theory and its applications

15:30–16:35

- 9 Xiao-Nan Lu (Gifu Univ.) Completely uniform nested pairings in Boolean Steiner quadruple systems 15
- 10 Munenori Inagaki (Kobe Univ.) The multidimensional Prouhet–Tarry–Escott problem and combinatorial designs I 15
Yukihiro Uchida (Tokyo Metro. Univ.)
Masanori Sawa (Kobe Univ.)
Hideki Matsumura
 (Tokyo Metro. Univ.)
- 11 Nobuko Miyamoto (Tokyo Univ. of Sci.) Mutually orthogonal block sequences and spreads in a finite projective space 15
Shoko Chisaki (Osaka Inst. of Tech.)
Ryoh Fuji-Hara (Univ. of Tsukuba*)
- 12 Kazuki Matsubara (Saitama Univ.) A construction of regular rectangular designs 15
Shoko Chisaki (Osaka Inst. of Tech.)
Ryoh Fuji-Hara (Univ. of Tsukuba*)
Nobuko Miyamoto (Tokyo Univ. of Sci.)

16:50–17:50 Talk Invited by Applied Mathematics Section

- Mariko Hagita (Ochanomizu Univ.) Discrete mathematical approaches to impression evaluation

September 17th (Wed) Conference Room V

9:00–11:50

- 13 Taisuke Hosaka (Yokohama Nat. Univ.) Pulsation of quantum walk on graph with bridge 15
Etsuo Segawa (Yokohama Nat. Univ.)
- 14 Tatsuya Tsurii A study on periodicity of Fourier walk using group structures obtained from its evolution matrix 15
 (Tokyo Univ. of Information Sci.)
Naoharu Ito (Nara Univ. of Edu.)
Itsuki Kawabata
 (Takatsuki Yanagawa Junior High School)
- 15 Hiroto Sekido (Yokohama Nat. Univ.) Periodicity of quantum graph walks defined by covering graphs 15
Etsuo Segawa (Yokohama Nat. Univ.)
- 16 Kei Saito (Nihon Univ.) A spectral mapping theorem for the quantum searching algorithm via quantum walks 15
Yusuke Ide (Nihon Univ.)
Norio Konno (Nihon Univ.)
Kazuhiro Saito (KDDI Research, Inc.)
Satoshi Watanabe
 (KDDI Research, Inc.)
- 17 Tomohiro Washino Defining equations of the set of true parameters 15
 (Nat. Inst. of Tech., Nara Coll.)
Tadashi Takahashi
 (Hagoromo Univ. of Int. Stud.)

18	Hirotake Yaguchi (Mie Univ.*)	Generation of nonrecursive n -bit pseudorandom numbers by two times $(n\text{-bit}) \times (n\text{-bit})$ multiplication ($n = 64, 128, 192, \dots, 16384$)	15
19	Tetsuya Nagano (Univ. of Nagasaki*)	Note on unforgeability of a digital signature scheme based on Finsler encryption	15
20	Masaki Kashima (Keio Univ.)	Degree sum condition for claw-free graphs to have a 2-factor with few components	15
21	Jun Fujisawa (Keio Univ.)	Matching extension in regular non-bipartite graphs	15
22	Kenta Noguchi (Tokyo Univ. of Sci.)	4-connected graphs with and without HISTs	15

13:10–14:00

23	Iwao Sato (Oyama Nat. Coll. of Tech.) Takashi Kmatsu (Univ. of Yamanashi) Norio Konno (Ritsumeikan Univ./Yokohama Nat. Univ.*)	A characteristic polynomial for the transition probability matrix of a correlated random walk on a graph	15
24	Kosei Watanabe (Nagoya Univ.)	A decomposition formula of a Bartholdi zeta function of some covering of a hypergraph	15
25	Takashi Komatsu (Univ. of Yamanashi) Norio Konno (Ritsumeikan Univ./Yokohama Nat. Univ.*) Iwao Sato (Oyama Nat. Coll. of Tech.) Hideo Mitsuhashi (Hosei Univ.)	Matrix zeta function on covering graphs	15

September 18th (Thu) Conference Room V

10:00–12:00

26	Kota Ikeda (Meiji Univ.) Tomoyuki Miyaji (Kyoto Univ.)	Characterization of a periodic solution in a differential-difference equation derived from the optimal velocity model	15
27	Yumihiko S. Ikura (Meiji Univ.) Hirokazu Ninomiya (Meiji Univ.)	On periodic solutions generated by Greenberg–Hastings cellular automata	15
28	Kazuo Takemura (Nihon Univ.)	Green's function for nonlocal multipoint boundary value problems of the linear differential operator $(-1)^M(d/dx)^{2M}$	15
29	Tetsuya Ishiwata (Shibaura Inst. of Tech.) Yu Ichida (Kwansei Gakuin Univ.) Yukihiko Nakata (Aoyama Gakuin Univ.)	On the effects of distributed delays on blow-up of solutions	15
30	Koichi Anada (Waseda Univ. Senior High School) Tetsuya Ishiwata (Shibaura Inst. of Tech.) Takeo Ushijima (Tokyo Univ. of Sci.)	Remarks on behavior for Type II blow-up solutions of a quasilinear parabolic equation in the curve shortening problems	15
31	Hideki Murakawa (Ryukoku Univ.) Yoshitaro Tanaka (Future Univ.-Hakodate)	A relationship between haptotaxis and chemotaxis in cell sorting phenomena	15

- 32 Masumi Kondo (Okayama Univ. of Sci.) Conditional Ulam stability for the Gompertz model 15
Masakazu Onitsuka
 (Okayama Univ. of Sci.)

14:15–16:00

- 33 Yu Ichida (Kwansei Gakuin Univ.) Pull-in and touchdown phenomena in mathematical models of micro-
Daisuke Yamane (Ritsumeikan Univ.) machine behavior 15
- 34 Hideki Kawahara (Nagoya Univ.) Numerical approximation of delay differential equations via operator
 splitting in fractional domains 15
- 35 Yoshitaka Watanabe (Kyushu Univ.) Numerical verification for Elkouh’s problem representing fluid flow be-
Shuting Cai (Fujian Jiangxia Univ.) tween parallel circular disks 15
- 36 Takuya Tsuchiya (Meiji Gakuin Univ.) On structure-preserving numerical calculation of wave equation for a
 vector field 15
- 37 Akitoshi Takayasu (Univ. of Tsukuba) Computer-assisted proof of a saddle-to-saddle connection in the Swift–
 Hohenberg equation 15
- 38 Makoto Okumura (Konan Univ.) A finite difference scheme for the Cahn–Hilliard equation with dynamic
 boundary conditions using a nonlinear difference 15

16:15–17:15 Award Lecture for the 2024 Applied Mathematics Prize

- Masato Kimura (Kanazawa Univ.) Irreversible fracture phase field models: Energy dissipation structure
 and applications

September 19th (Fri) Conference Room V

10:00–12:00

- 39 Shunji Horiguchi Extended Schröder’s method 10
- 40 Shunji Horiguchi Relations between Newton’s method, the extended Newton’s method,
 Schröder’s method and interior, exterior division points 7
- 41 Fuminori Sakaguchi (Univ. of Fukui) Continued fractions, Euclidean algorithm and an integer-type algorithm
 for solving ODEs 15
- 42 Atsushi Nakayasu (Univ. of Tokyo) On a calculation method of the thickness via partial differential equa-
Takayuki Yamada (Univ. of Tokyo) tions 15
- 43 Toru Kan (Osaka Metro. Univ.) Asymmetric front propagation in the bistable reaction-diffusion equa-
Yoshihisa Morita (Ryukoku Univ.*) tion on a metric graph 15
Ken-Ichi Nakamura (Meiji Univ.)
Chang-Hong Wu
 (National Yang Ming Chiao Tung Univ.)
- 44 Kazuyuki Yagasaki (Kyoto Univ.) Bifurcations of synchronized solutions in the Kuramoto model with
 two-mode interaction depending on two graphs 15
- 45 Takashi Furuya (Doshisha Univ.) Transformers are universal in-context learners 15
- 46 Ryota Kawasumi (Gunma Univ.) Universal approximation property of neural ODEs via Orlicz norms
Ikeda Masahiro (Univ. of Osaka) 15

14:15–16:00

- 47 Enhao Liu (Kyoto Univ.) Interval multiplicities of persistence modules 15
 Hideto Asashiba (Shizuoka Univ.*)
- 48 Kota Takeda (Nagoya Univ.) Error analysis of the ensemble Kalman filter with partial and noisy observations 15
- 49 Shunsuke Kaji (Meijo Univ.) An inverse problem of partial differential equation for the future of interest rate 15
 Yasushi Ota (St. Andrew's Univ.)
- 50 Isamu Ohnishi (Hiroshima Univ.) Comparative analysis of control strategies for a linear system with noise 15
- 51 Isamu Ohnishi (Hiroshima Univ.) Stochastic model predictive control of cheer spikes and low-frequency noise in outdoor festivals 15
- 52 Rikuki Okamoto (Ritsumeikan Univ.) On the distribution of conditional maxima for quantum walks 15
 Norio Konno (Ritsumeikan Univ./Yokohama Nat. Univ.*)
 Jiro Akahori (Ritsumeikan Univ.)
 Syohei Koyama (Ritsumeikan Univ.)

16:15–17:15 Talk Invited by Applied Mathematics Section

- Ayuki Sekisaka (Meiji Univ.) Spectral stability of traveling waves and mathematical structure: A perspective from domain dimensionality and boundedness

Topology

September 16th (Tue) Conference Room VIII

9:30–12:00

- 1 Norihisa Takahashi (Ritsumeikan Univ.) On certain irreducible finite group actions on surfaces 10
 Hiraku Nozawa (Ritsumeikan Univ.)
- 2 Naoyuki Monden (Okayama Univ.) On Nielsen equivalence classes of two-elements generators of mapping class groups 15
 Susumu Hirose (Tokyo Univ. of Sci.)
- 3 Nariya Kawazumi (Univ. of Tokyo) On stable covariantly twisted cohomology of the mapping class group for surfaces 15
 Arthur Soulié (Univ. Caen Normandie/CNRS)
- 4 Nariya Kawazumi (Univ. of Tokyo) On the Weil–Petersson symplectic form on the Teichmüller space 15
- 5 Takuya Sakasai (Univ. of Tokyo) A variant of groups defined by Kim and Manturov 10
 Yuuki Tadokoro (Tokyo Univ. of Sci.)
 Kokoro Tanaka (Tokyo Gakugei Univ.)
- 6 Kanako Oie (Nara Women's Univ.) On the spectrum of the number of geodesics and tight geodesics in the curve complex 15
 Hiroshige Shiga (Sci. Tokyo*)
 Ryo Matsuda (Kyoto Univ.)
- 7 Aoi Wakuda (Univ. of Tokyo) A separability criterion for two loops on an orientable surface and the Goldman bracket 15
- 8 Tsukasa Ishibashi (Tohoku Univ.) Cyclic quantum Teichmüller theory 15

14:30–16:00

- 9 Reo Yabuguchi (Okayama Univ.) Knot surgered elliptic surfaces for a $(2, 2h + 1)$ -torus knot 15
Naoyuki Monden (Okayama Univ.)
- 10 Natsuya Takahashi (Univ. of Osaka) Stein fillings of planar contact 3-manifolds admitting genus-2 relative
Nobutaka Asano trisections 15
(Tsuyama Nat. Coll. of Tech.)
- 11 Tatsumasa Suzuki (Meiji Univ.) The non-simply connected Price twist for the 4-sphere 15
Tsukasa Isoshima (Keio Univ.)
- 12 Motoo Tange (Univ. of Tsukuba) Exotic $E(n)$ without 1-handles 15

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

- Shuhei Maruyama (Kanazawa Univ.) On the Euler class of foliated sphere bundles

September 17th (Wed) Conference Room VI

10:00–10:15 Presentation Ceremony for the 2025 MSJ Geometry Prize**10:20–11:20 Award Lecture for the 2025 MSJ Geometry Prize**

- Shin-ichi Matsumura (Tohoku Univ.) Structure theorems for varieties with non-negative curvature

12:50–13:50 Award Lecture for the 2025 MSJ Geometry Prize

- Koichi Nagano (Univ. of Tsukuba) On the geometry of metric spaces with upper curvature bounds

September 18th (Thu) Conference Room VIII

9:30–11:30

- 13 Naoki Kitazawa (Osaka Metro. Univ.) Reconstructing Morse functions with prescribed preimages of single
points 15
- 14 Naoki Kitazawa (Osaka Metro. Univ.) Reconstructing Morse functions on 3-dimensional compact and con-
nected manifolds with prescribed preimages of single points 10
- 15 Naoki Kitazawa (Osaka Metro. Univ.) A most natural special generic map whose image is an immersed com-
pact manifold of codimension 0 and the cohomology rings of the mani-
folds 15
- 16 Gakuto Kato (Nihon Univ.) On a construction of stable maps from a 3-manifold into the plane
..... 10
- 17 Saiei-Jaeyeong Matsubara-Heo Distinguishing Euler characteristics 15
(Tohoku Univ.)
- 18 Yasushi Hirata (Kanagawa Univ.) Embeddings as closed subspaces into irreducible spaces 15
Yukinobu Yajima (Kanagawa Univ.*)
- 19 Kazuo Tomoyasu Gartside's problem and hereditarily normal compactifications of metrizable
(Nat. Inst. of Tech., Miyakonojo Coll.) spaces 15
Heikki Junnila (Univ. of Helsinki)

14:15–16:00

- 20 Michiaki Takiwaki (Kyoto Univ.) An isometry theorem induced by the Radon transform between the convolution and interleaving distances 15
- 21 Katsuhiko Kuribayashi (Shinshu Univ.) Algebraic interleavings of spaces over the classifying space of the circle
Takahito Naito (Nippon Inst. of Tech.) 15
 Shun Wakatsuki (Nagoya Univ.)
 Toshihiro Yamaguchi (Kochi Univ.)
- 22 Kohei Tanaka (Shinshu Univ.) Directed homotopy theory on stratified spaces and small categories ... 15
- 23 Masaki Taho (Univ. of Tokyo) Topology and diffeology via metric-like functions 15
- 24 Tadayuki Haraguchi Adjunction spaces of diffeological spaces 15
 (Naragakuen Univ.)
 Kazuhisa Shimakawa (Okayama Univ.*)

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

- Toshiyuki Akita (Hokkaido Univ.) Associated groups of quandles, Wirtinger presentations, and group homology

September 19th (Fri) Conference Room VIII

9:30–12:00

- 25 Keisuke Himeno (Hiroshima Univ.) The unoriented band unknotting number of torus knots 10
- 26 Tetsuya Itoh (Kyoto Univ.) Slice Cromwell inequality of homogeneous knots 10
- 27 Yujiro Miki 4-moves and Kawauchi's conjecture for 2-component links 10
Kodai Wada (Kobe Univ.)
- 28 Noboru Ito (Shinshu Univ.) Arnold strangeness of surface immersions 15
Hiroki Mizuno (Shinshu Univ.)
- 29 Migiwa Sakurai Infinitely many virtual knots which have any given sequence of n -writhes
 (Shibaura Inst. of Tech.) 10
 Yoshiyuku Ohyama
 (Tokyo Woman's Christian Univ.)
- 30 Shin Satoh (Kobe Univ.) The α_2 -invariant of a ribbon 2-knot and a Gauss diagram 10
- 31 Inasa Nakamura (Saga Univ.) Deformations of dotted diagrams and reduced diagrams 10
- 32 Inasa Nakamura (Saga Univ.) Torus-covering knot groups and their irreducible metabelian $SU(2)$ -representations 10
- 33 Katsumi Ishikawa (Kyoto Univ.) On TAV groups of knots 10
 Masaaki Suzuki (Meiji Univ.)
Takayuki Morifuji (Keio Univ.)
- 34 Yuki Matsushima (Tokyo Metro. Univ.) On the HOMFLY polynomial of an r^2 -periodic knot 15
- 35 Keita Nakagane Twists on Frobenius algebra and link homology 10
 Jun Yoshida (RIKEN)
Noboru Ito (Shinshu Univ.)

14:15–16:30

36	Hajime Kubota (Kyoto Univ.)	On grid homology for diagonal knots	15
37	Satoshi Tsuchimi (Kindai Univ.)	The Kontsevich function and the Zwegers' μ -function	15
38	Sakumi Sugawara (Hokkaido Univ.)	The comology ring of the 3-manifold defined from a combinatorial line arrangement	15
39	Yuya Koda (Keio Univ./Hiroshima Univ.) Kazuto Takao (Tohoku Univ.)	Diagrammatic criteria for strong irreducibility of Heegaard splittings and finiteness of Goeritz groups	15
40	Yasuyoshi Tsutsumi (Kobe Shinwa Univ.)	Lescop invariants of both the Brieskorn–Hamm manifolds obtained by Dehn surgeries on knots in an integral homology 3-sphere	10
41	Kazuhiro Ichihara (Nihon Univ.) Toshio Saito (Joetsu Univ. of Edu.) Jong In Dae (Kindai Univ.)	On the knot complement conjecture and cosmetic surgery	15

Infinite Analysis

September 16th (Tue) Conference Room VII

9:30–11:45

1	Shota Shigetomi (Kyushu Univ.) Kenji Kajiwara (Kyushu Univ.) Shizuo Kaji (Kyushu Univ./Kyoto Univ.)	A proof of existence of Kaleidocycle	15
2	Serban Matei Mihalache (Univ. of Tokyo) Tomoro Mochida (Tohoku Univ.)	From polygon equations to simplex equations	15
3	Youichi Shibukawa (Hokkaido Univ.) Davide Ferri (Univ. of Turin)	Quiver-theoretic Yang–Baxter equation and Garside theory (1)	15
4	Youichi Shibukawa (Hokkaido Univ.) Davide Ferri (Univ. of Turin)	Quiver-theoretic Yang–Baxter equation and Garside theory (2)	15
5	Yosuke Kawamoto (Okayama Univ.) Alexander I. Bufetov (Steklov Math. Inst. RAS, etc.)	Boundary Feller–Dynkin processes associated with Laguerre processes	15
6	Yusuke Ohkubo (Setsunan Univ.)	Kac determinant for a q -deformation of the direct sum of the $N=1$ super Virasoro algebra and the free fermion algebra	15
7	Rei Inoue (Chiba Univ.) Atsuo Kuniba (Univ. of Tokyo) Yuji Terashima (Tohoku Univ.) Junya Yagi (Tsinghua Univ.)	Quantized six-vertex model on a torus	15
8	Toshio Oshima (Univ. of Tokyo*)	Transformations of Pfaffian systems with logarithmic singularities along hyperplane arrangements	15

14:15–15:20

- 9 Genki Shibukawa (Kitami Inst. of Tech.) A degeneration of the generalized Zwegers' μ -function according to the Ramanujan difference equation 15
Satoshi Tsuchimi (Kindai Univ.)
- 10 Yousuke Ohyama (Tokushima Univ.) Connection problems on q -Lommel functions 15
- 11 Yumi Arai (Ochanomizu Univ.) On q -middle convolution and generalized q -hypergeometric equation .. 15
- 12 Taikei Fujii (Kobe Univ.) Linear relations for Kajihara's q -hypergeometric series $\Phi_{1,1}^m$ and $\Phi_{2,0}^m$
Nobukawa Takahiko (Kogakkan Univ.) 15

15:30–16:30 Talk Invited by Infinite Analysis Special Session

Takafumi Mase (Univ. of Tokyo) Exact calculation of degrees for lattice equations

September 17th (Wed) Conference Room VII

9:30–10:35

- 13 Tatsushi Shimazaki (Kobe Univ.) Pecial values of Grothendieck polynomials in terms of hypergeometric
Takahiko Nobukawa (Kogakkan Univ.) functions 15
Taikei Fujii (Kobe Univ.)
- 14 Eriko Shinkawa (Tohoku Univ.) Virasoro action on Schur Q-functions and Pfaffian identities 15
Kazuya Aokage
(Ariake Nat. Coll. of Tech.)
HiroFumi Yamada (Rikkyo Univ.)
- 15 Masashi Hamanaka (Nagoya Univ.) Four-dimensional Wess–Zumino–Witten model and soliton resonances
Shangshuai Li (Shanghai Univ.) 15
Shan-Chi Huang (Nagoya Univ.)
Da-Jun Zhang (Shanghai Univ.)
- 16 Kanehisa Takasaki Large BKP vs. B-Toda in Lax–Sato form 15
(Osaka Metro. Univ./Kyoto Univ.*)

10:45–11:45 Talk Invited by Infinite Analysis Special Session

Yuji Kodama (Ohio State Univ.)^b KP solitons and the Schottky uniformization

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 *b* marks denote presentations on blackboard or whiteboard. 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 `program25sept@mathsoc.jp`.

Each conference room is equipped with a blackboard (or whiteboard) and a projector with VGA interface or HDMI 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 entire facility, including the lecture halls.

No parking is available on campus, and private vehicles are not permitted. Please use public transportation.

Nagoya University is an eduroam member.

There are not many dining options around Nagoya University. The on-campus cafeteria hours during the conference are as follows (closed on Saturdays):

South Cafeterias:	11:30–13:30
North Cafeterias:	10:30–15:00, 16:30–19:00
Dining Forest:	11:00–14:00
Universal Club:	11:30–14:00

There is a FamilyMart Nagoya University store across the street from the Liberal Arts and Sciences Main Building, and another FamilyMart IB-Kan store in front of Exit 3 of the Nagoya University subway station, which will be available throughout the conference. If you wish to eat and drink at the venue, please use the Hattori Hall on the 1st floor.

Official Party

Date: September 17th (Wed) 18:00–20:00

Venue: Hananoki Restaurant

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

Directions

2025 MSJ AUTUMN MEETING

Dates : September 16th (Tue)–19th (Fri), 2025

Venue : Higashiyama Campus, Nagoya University
Furo-cho, Chikusa-ku, Nagoya, 464-8601, Aichi, Japan

Contact to : Graduate School of Mathematics, Nagoya University
Furo-cho, Chikusa-ku, Nagoya, 464-8601, Aichi, Japan
nagoya25sept@mathsoc.jp

Web Site : <https://www.mathsoc.jp/en/meeting/nagoya25sept/>

Conference Rooms

	Place	Research Sections
Conference Room I	C13, 1F, Liberal Arts & Sci. Main Bldg.	Functional Equations, Featured Invited Talk
Conference Room II	C15, 1F, Liberal Arts & Sci. Main Bldg.	Functional Analysis, Featured Invited Talk
Conference Room III	C23, 2F, Liberal Arts & Sci. Main Bldg.	Complex Analysis, Real Analysis, Featured Invited Talk
Conference Room IV	C25, 2F, Liberal Arts & Sci. Main Bldg.	Statistics and Probability, Featured Invited Talk
Conference Room V	S2X, 2F, Liberal Arts & Sci. Main Bldg.	Applied Mathematics
Conference Room VI	S30, 3F, Liberal Arts & Sci. Main Bldg.	Geometry, Topology, Featured Invited Talks
Conference Room VII	C33, 3F, Liberal Arts & Sci. Main Bldg.	Infinite Analysis, Foundation of Mathematics and History of Mathematics
Conference Room VIII	C35, 3F, Liberal Arts & Sci. Main Bldg.	Topology
Conference Room IX	C43, 4F, Liberal Arts & Sci. Main Bldg.	Algebra, Featured Invited Talk
Plenary Talks	Toyoda Auditorium	
Open Lectures for Citizens	Sakata & Hirata Hall	

Other Rooms

Membership Fee & Extended Abstracts	C12, 1F, Liberal Arts & Sci. Main Bldg.
Discussion Areas	S2Y, 2F & C34, 3F, Liberal Arts & Sci. Main Bldg.
Book Display and Sale	C10 & C11, 1F, Liberal Arts & Sci. Main Bldg.
Executive Committee, MSJ President	C20, 2F, Liberal Arts & Sci. Main Bldg.
Official Party	Hananoki Restaurant