

2017 The Mathematical Society of Japan

ANNUAL MEETING

Dates: March 24th (Fri)–27th (Mon), 2017

Venue: Tokyo Metropolitan University
1-1 Minami-Osawa, Hachioji-shi, Tokyo 192-0397Contact to: Tokyo Metropolitan University
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During session: Phone +81 (0) 90 1791 3483
The Mathematical Society of Japan
Phone +81 (0) 3 3835 3483

	I	II	III	IV	V	VI	VII	VIII	IX	
	Small Hall Auditorium	Bldg. 11 Rm. 204	Bldg. 11 Rm. 110	Bldg. 12 Rm. 101	Bldg. 12 Rm. 102	Bldg. 12 Rm. 103	Bldg. 12 Rm. 104	Bldg. 12 Rm. 201	Bldg. 12 Rm. 202	
24th (Fri)	Functional Equations 9:30–12:00 14:15–16:15	Algebra 9:30–11:45 14:25–17:00	Found. of Math. and History of Math. 9:00–11:30 14:15–16:40	Topology 10:00–12:00 15:30–17:00	Applied Mathematics 10:30–11:45 14:15–15:30	Statistics and Probability 9:45–12:00	Complex Analysis 9:30–11:50 14:15–16:05	Geometry 9:45–11:45 14:15–16:10	Functional Analysis 14:15–16:00	
	Featured Invited Talks					13:00–14:00				
	Invited Talk 16:30–17:30			Invited Talk 14:15–15:15	Invited Talk 15:50–16:50	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 16:20–17:20	Invited Talk 16:20–17:20	Invited Talk 16:15–17:15	
25th (Sat)	Functional Equations 9:30–12:00	Algebra 9:00–12:00	Found. of Math. and History of Math. 9:15–11:30	Topology 10:00–11:50 13:15–14:45	Applied Mathematics 10:00–11:45	Statistics and Probability 9:50–11:30 13:30–14:30	Complex Analysis 9:40–11:50	Geometry 9:20–11:30	Functional Analysis 9:00–12:00	
	Invited Talk 13:30–14:30	Invited Talk 13:30–14:30	Invited Talk 13:15–14:15				Invited Talk 13:15–14:15	Invited Talk 13:15–14:15	Invited Talk 13:15–14:15	
	MSJ Prizes Presentation (Large Hall, Auditorium) (15:00–15:20)									
	Plenary Talks (Large Hall, Auditorium) MSJ Spring Prize Winner (15:30–16:30) Toshiaki Shoji (Tongji Univ.) (16:40–17:40) Official Party (Lever son Verre “Minami-Osawa”) (18:00–20:00)									
26th (Sun)	Functional Equations 9:30–12:00 14:15–16:15	Algebra 9:15–12:00	Infinite Analysis 10:30–11:30	Topology 10:00–12:00 14:15–15:45	Applied Mathematics 14:15–16:30 Special Session 9:30–12:00	Statistics and Probability 9:50–12:00	Real Analysis 9:00–11:55 14:15–16:50	Geometry 9:50–11:40 14:15–15:35	Functional Analysis 9:30–12:00 14:15–16:15	
	Featured Invited Talks					13:00–14:00				
	Invited Talk 16:30–17:30	Invited Talks 14:30–15:30 15:40–16:40 16:50–17:50	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 16:00–17:00	Invited Talk 16:50–17:50	Invited Talks 14:15–15:15 15:30–16:30	Invited Talk 17:00–18:00	Invited Talk 15:50–16:50	Invited Talk 16:30–17:30	
27th (Mon)	Functional Equations 9:15–12:00 14:15–16:15	Algebra 9:15–12:00 14:15–16:00	Infinite Analysis 10:15–12:00		Applied Mathematics 9:30–11:30 14:15–16:20	Statistics and Probability 9:50–12:00	Real Analysis 9:00–11:40 14:15–16:25			
	Featured Invited Talks					13:00–14:00				
	Invited Talk 16:30–17:30				Invited Talk 16:40–17:40		Invited Talk 16:40–17:40			

Plenary Talks

March 25th (Sat) Large Hall, Auditorium

- 2017 Spring Prize Winner (15:30–16:30)
- Toshiaki Shoji (Tongji Univ.) Kostka functions associated to complex reflection groups .. (16:40–17:40)

Featured Invited Talks

March 24th (Fri)

Conference Room II

- Takeshi Tsuji (Univ. of Tokyo) The p -adic Simpson correspondence (13:00–14:00)

Conference Room III

- Toshimichi Usuba (Waseda Univ.) Universe of set theory —the Universe and Multiverse— ... (13:00–14:00)

March 26th (Sun)

Conference Room V

Guest Talk from the Japan Society for Industrial and Applied Mathematics

- Hideyuki Azegami (Nagoya Univ.) Regularized solutions to shape optimization problems and their applications (13:00–14:00)

Conference Room VII

- Yoshihiro Mizuta (Hiroshima Univ.*) Function spaces with variable exponents (13:00–14:00)

Conference Room VIII

- Mikio Furuta (Univ. of Tokyo) An introduction to mathematical aspect of topological phase and bulk-edge correspondence (13:00–14:00)

March 27th (Mon)

Conference Room III

- Atsuo Kuniba (Univ. of Tokyo) Matrix products in integrable probability (13:00–14:00)

Conference Room V

- Hiroshi Suito (Okayama Univ.) Mathematical sciences for understanding the mechanisms of cardiovascular diseases (13:00–14:00)
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Talks Invited by Research Sections and Special Session

March 24th (Fri)

Geometry (Conference Room VIII)

Atsufumi Honda (Miyakonojo Nat. Coll. of Tech.) Geometry of positive semi-definite metrics and isometric realization problem (16:20–17:20)

Complex Analysis (Conference Room VII)

Katsuhiko Matsuzaki (Waseda Univ.) Teichmüller spaces of circle diffeomorphisms (16:20–17:20)

Functional Equations (Conference Room I)

Kazuki Hiroe (Josai Univ.) Around accessory parameters of linear ordinary differential equations (16:30–17:30)

Functional Analysis (Conference Room IX)

Koichi Kaizuka (Gakushuin Univ.) Stationary scattering theory for invariant differential operators on symmetric spaces of noncompact type (16:15–17:15)

Statistics and Probability (Conference Room VI)

Tomoyuki Ichiba (Univ. of California, Santa Barbara) Stochastic analysis for collision of Brownian particles (14:15–15:15)

Award Lecture for the 2016 MSJ Analysis Prize

Tomohiro Sasamoto (Tokyo Tech) The KPZ equation and integrable stochastic interacting systems (15:30–16:30)

Applied Mathematics (Conference Room V)

Ying Miao (Univ. of Tsukuba)^b Combinatorics of Digital Fingerprinting (15:50–16:50)

Topology (Conference Room IV)

Mitsunobu Tsutaya (Kyushu Univ.) Applications of Stasheff's A_∞ -theory to Lie groups (14:15–15:15)

March 25th (Sat)

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

Akitoshi Kawamura (Univ. of Tokyo) Computational complexity in analysis (13:15–14:15)

Algebra (Conference Room II)

Scott Carnahan (Univ. of Tsukuba) Recent advances in Moonshine (13:30–14:30)

Geometry (Conference Room VIII)

Yu Kitabeppu (Kumamoto Univ.)^b On regular sets in metric measure spaces (13:15–14:15)

Complex Analysis (Conference Room VII)

Masanori Adachi (Tokyo Univ. of Sci.) Function theory on Levi-flats: case study on flat circle bundles (13:15–14:15)

Functional Equations (Conference Room I)

Award Lecture for the 2016 MSJ Analysis Prize

Shigeaki Koike (Tohoku Univ.) ABP maximum principle for L^p -viscosity solutions of fully nonlinear equations and its applications (13:30–14:30)**Functional Analysis** (Conference Room IX)

Kazuhiro Kawamura (Univ. of Tsukuba) Some Banach–Stone type theorems (13:15–14:15)

March 26th (Sun)

Algebra (Conference Room II)

Award Lecture for the 2017 MSJ Algebra Prize

Masanobu Kaneko (Kyushu Univ.) On multiple zeta values (14:30–15:30)

Award Lecture for the 2017 MSJ Algebra Prize

Mitsuyasu Hashimoto (Okayama Univ.) Commutative algebra and invariant theory (15:40–16:40)

Award Lecture for the 2017 MSJ Algebra Prize

Toshiyuki Katsura (Hosei Univ.) Algebraic geometry in positive characteristic (16:50–17:50)

Geometry (Conference Room VIII)Takayuki Okuda (Hiroshima Univ.)^b Pairs of totally geodesic submanifolds in Riemannian symmetric spaces without common geodesics (15:50–16:50)**Functional Equations** (Conference Room I)

Hisashi Nishiyama (Wakayama Univ.) Diffusion phenomena for damped wave equations (16:30–17:30)

Real Analysis (Conference Room VII)

Kenjiro Yanagi (Josai Univ.) Entropy in classical or quantum information theory (17:00–18:00)

Functional Analysis (Conference Room IX)

Yasufumi Hashimoto (Univ. of Ryukyus) Distributions of multiplicities in length spectra for congruence subgroups (16:30–17:30)

Statistics and Probability (Conference Room VI)

Gaku Igarashi (Univ. of Tsukuba) Boundary-bias-free asymmetric kernel density estimators .. (14:15–15:15)

Yasunori Fujikoshi (Hiroshima Univ.)^{*} High-dimensional properties of the estimation methods for reduced-dimensionality based on information criteria (15:30–16:30)**Applied Mathematics** (Conference Room V)

Norbert Pozar (Kanazawa Univ.) A level set approach to the crystalline mean curvature flow (16:50–17:50)

Topology (Conference Room IV)Yasuyuki Miyazawa (Yamaguchi Univ.) Links with trivial Q -polynomial (16:00–17:00)**Infinite Analysis** (Conference Room III)

Ivan Chi Ho Ip (Kyoto Univ.) Positive representation and cluster realization of quantum groups (14:15–15:15)

Akishi Kato (Univ. of Tokyo) Quiver mutation loops and partition q -series (15:30–16:30)

March 27th (Mon)

Functional Equations (Conference Room I)

Award Lecture for the 2016 MSJ Analysis Prize

Soichiro Katayama (Osaka Univ.) Global existence and asymptotic behavior for systems of non-linear wave equations (16:30–17:30)

Real Analysis (Conference Room VII)

Yusuke Murase (Meijo Univ.) Analysis for brewing process of Japanese Sake and quasi-variational inequalities (16:40–17:40)

Applied Mathematics (Conference Room V)

Shigetoshi Yazaki (Meiji Univ.) How to track the moving boundary arising in interfacial phenomena (16:40–17:40)

Open Lectures for Citizens

Date: March 26th (Sun) 14:00–16:30

Venue: Large Hall, Auditorium

Sponsored by: Mathematical Society of Japan

Co-sponsored by: Department of Mathematics and Information Sciences,
Tokyo Metropolitan University

Program: Opening Speech (14:00–14:10)
Motoko Kotani (President of MSJ/Tohoku Univ.)

Lecture 1: “A story on John Forbes Nash and arc spaces” ... (14:10–15:10)
Shihoko Ishii (Tokyo Women’s Christian Univ./Univ. of Tokyo)

Lecture 2: “Real algebraic geometries
—Möbius band and tropical curves—” (15:30–16:30)
Masanori Kobayashi (Tokyo Metropolitan Univ.)

Web Page: <http://mathsoc.jp/en/meeting/tmu17mar/>

Foundation of Mathematics and History of Mathematics

March 24th (Fri) Conference Room III

9:00–11:30

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|---|---|--|----|
| 1 | Shigeru Masuda
(Res. Workshop of Classical Fluid Dynamics) | The essential concept in a study of the mathematical physics by Laplace, Gauss and Poisson | 15 |
| 2 | Shigeru Masuda
(Res. Workshop of Classical Fluid Dynamics) | The mathematical newness of the new theory of the capillary action by Poisson | 15 |
| 3 | Noriko Tanaka
(Toyota Nishi High School) | An autobiographical note by Paul Lévy | 15 |
| 4 | Michiyo Nakane | Joseph Fourier’s course of analysis and his algebraic analysis | 15 |
| 5 | Tanaka Shotaro | ^b Representations of $(3k - 2)^q$, $\Sigma^n(3k - 2)^q$ & $\Sigma^\infty(3k - 2)^q x^{k-1}$ by Suida | 15 |
| 6 | <u>Katsushi Waki</u> (Yamagata Univ.)
Takuma Tsuchihashi (Meiji Univ.) | Construction of WASAN data base with graphic search capability | 15 |
| 7 | Tsukane Ogawa (Yokkaichi Univ.) | Mathematical philosophy of Aida Yasuaki | 15 |
| 8 | Mitsuo Morimoto
(Yokkaichi Univ./Sophia Univ.*) | On Volume 12 of the Taisei Sankei and the Tetsujutsu Sankei | 15 |
| 9 | Makoto Tamura (Osaka Sangyo Univ.) | On the order of problems of the “Shu” housed at Yuelu Academy | 15 |

11:30–12:00 Mathematics History Team Meeting

14:15–16:40

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| 10 | Shuhei Masumoto (Univ. of Tokyo) | On a generalized Fraïssé limit construction | 15 |
| 11 | Keita Yokoyama (JAIST) | König’s lemma for a tree which has at most finitely many paths in reverse mathematics | 15 |
| 12 | Kota Takeuchi (Univ. of Tsukuba)
<u>Akito Tsuboi</u> (Univ. of Tsukuba) | On the number of independent strict orders | 10 |
| 13 | Koichiro Ikeda (Hosei Univ.) | A remark on small stable theories | 15 |
| 14 | Hirotaka Kikyo (Kobe Univ.) | On simplicity of the automorphism groups of \mathbf{K}_f ’s | 15 |
| 15 | Daisuke Ikegami (Tokyo Denki Univ.) | On supercompactness of ω_1 | 15 |
| 16 | Hiroshi Sakai (Kobe Univ.) | On possible order-types of uncountable linearly ordered structures | 15 |
| 17 | Sakaé Fuchino (Kobe Univ.) | Reflection theorems on non-existence of orthonormal bases of pre-Hilbert spaces | 15 |
| 18 | Masanao Ozawa (Nagoya Univ.) | Conditional in quantum logic and Takeuti’s quantum set theory: Conditionals satisfying the quantum transfer principle | 15 |

March 25th (Sat) Conference Room III

9:15–11:30

19	Takashi Oyabu	^b Representation, and other 5 talks	5
20	Yuki Mizusawa (Tokyo Metro. Univ.) Koichiro Ban (Tokyo Metro. Univ.) Toshio Suzuki (Tokyo Metro. Univ.)	1-generic splittings of 2-c. e. degrees	15
21	Kenshi Miyabe (Meiji Univ.)	Can one compute a more random set uniformly?	15
22	Kohtaro Tadaki (Chubu Univ.)	A refinement of quantum mechanics by algorithmic randomness II: Discrete spectrum	15
23	Toshihiko Kurata (Hosei Univ.)	Decomposition of higher-order sequentiality	15
24	Taishi Kurahashi (Kisarazu Nat. Coll. of Tech.)	On partial disjunction properties and existence properties of theories of arithmetic containing PA	15
25	Sohei Iwata (Nagoya Univ.) Taishi Kurahashi (Kisarazu Nat. Coll. of Tech.)	Arithmetical completeness theorem of LP (Logic of Proofs)	15
26	Takahiro Seki (Niigata Univ.)	Craig's interpolation theorem for some non-associative substructural logics	15
27	Nobu-Yuki Suzuki (Shizuoka Univ.)	Some omniscience principles as axiom schemata in intermediate predi- cate logics	15

11:30–12:00 Research Section Assembly**13:15–14:15 Talk Invited by Section on Foundation and History of Mathematics**

Akitoshi Kawamura (Univ. of Tokyo) Computational complexity in analysis

Algebra

March 24th (Fri) Conference Room II

9:30–11:45

1	Shigeru Iitaka (Gakushuin Univ.*)	On Euler's perfect numbers	10
2	Daisuke Shiomi (Yamagata Univ.) Hidetaka Kitayama (Wakayama Univ.)	Irreducible Fibonacci polynomials and Lucas polynomials over finite fields	10
3	Soichi Ikeda (Shibaura Inst. of Tech.) Kaneaki Matsuoka (Nagoya Univ.)	On the functional relations for Euler–Zagier multiple zeta-functions . .	10
4	Makoto Minamide (Yamaguchi Univ.) Jun Furuya (Hamamatsu Univ. School of Medicine) Yoshio Tanigawa	On the functional equations for $\zeta(s)\zeta''(s)$ and $\zeta'(s)\zeta''(s)$	10

5	Wataru Takeda (Kyoto Univ.)	Visible lattice points and the Extended Riemann Hypothesis	15
6	Shota Inoue (Nagoya Univ.)	The Riesz mean of the Möbius function	10
7	Ade Irma Suriajaya (Nagoya Univ.) Hirotaka Akatsuka (Otaru Univ. of Commerce)	Distribution of zeros of the first derivative of Dirichlet L -functions . . .	15
8	Tomomi Ozawa (Tohoku Univ.)	Classical weight one Hilbert cusp forms in a Hida family	15
9	Kohta Gejima (Osaka Univ.)	An explicit formula of the unramified Shintani functions for $(\mathbf{GSp}_4, \mathbf{GL}_2 \times \mathbf{GL}_1 \mathbf{GL}_2)$	15

14:25–17:00

10	Toru Komatsu (Tokyo Univ. of Sci.) Yasuhiro Kishi (Aichi Univ. of Edu.)	On a family of imaginary quadratic fields whose ideal class groups have 3-rank at least three	15
11	Akiko Ito (Kanagawa Univ.) ^b	On the divisibility of the class numbers of imaginary quadratic fields $\mathbb{Q}(\sqrt{2^{2s}3^{2t} - k^n})$	10
12	Ryojun Ito (Chiba Univ.)	The Beilinson conjectures for CM elliptic curves via hypergeometric functions	15
13	Yoshiyasu Ozeki (Kanagawa Univ.)	Lattices in crystalline representations and iterated extensions	10
14	Yuri Yatagawa (Univ. of Tokyo)	Wild ramification of constructible sheaves and the direct images	15
15	Yasuhiro Terakado (Univ. of Tokyo)	The determinant and the discriminant of a complete intersection of even dimension	15
16	Aiichi Yamasaki (Kyoto Univ.) Akinari Hoshi (Niigata Univ.) Ming-chang Kang (Nat. Taiwan Univ.)	Relation modules of dihedral groups	15
17	Akinari Hoshi (Niigata Univ.) Ming-chang Kang (Nat. Taiwan Univ.) Aiichi Yamasaki (Kyoto Univ.)	Degree three unramified cohomology groups (II)	15
18	Akinari Hoshi (Niigata Univ.) Ming-chang Kang (Nat. Taiwan Univ.) Aiichi Yamasaki (Kyoto Univ.)	Multiplicative invariant fields of dimension ≤ 6	15

March 25th (Sat) Conference Room II

9:00–12:00

19	Takahiro Hasebe (Hokkaido Univ.) Shuhei Tsujie (Hokkaido Univ.)	Classifying posets by order quasisymmetric functions	15
20	Nobuhiro Higuchi (Yokohama Nat. Univ.) Shushi Harashita (Yokohama Nat. Univ.)	On specializations of minimal p -divisible groups	15
21	Shuhei Nakamura (Nihon Univ.) Ryuji Sasaki (Nihon Univ.)	An automorphism of order 2 in relation to the McLaughlin simple group	10
22	Taro Sakurai (Chiba Univ.)	When is an element of the Jennings basis central?: A relation to some Morita invariants	15

23	<u>Shuhei Kamioka</u> (Kyoto Univ.) Kazuhiro Morii (Kyoto Univ.)	A multiplicative partition function for symmetric plane partitions	15
24	Hiroshi Naruse (Univ. of Yamanashi)	Algebraic proof and applications for the generating function formula of generalized Hall–Littlewood functions	10
25	Tomonori Hashikawa (Tohoku Univ.)	On conformal designs of minimal conformal weight spaces of SVOAs	10
26	<u>Toshiyuki Abe</u> (Ehime Univ.) Ching Hung Lam (Academia Sinica) Hiromichi Yamada (Hitotsubashi Univ.)	On a construction of vertex operator algebras having group-like fusion	10
27	<u>Kazuya Kawasetsu</u> (Academia Sinica) Yuichi Sakai	Modular linear differential equations of fourth order and minimal \mathcal{W} -algebras	10
28	Tomoyuki Arakawa (Kyoto Univ.) <u>Kazuya Kawasetsu</u> (Academia Sinica)	Quasi-lisse vertex algebras and modular linear differential equations	10
29	Tomoyuki Arakawa (Kyoto Univ.) Thomas Creutzig (Univ. of Alberta) <u>Kazuya Kawasetsu</u> (Academia Sinica) Andrew R. Linshaw (Univ. of Denver)	Orbifolds and cosets of minimal \mathcal{W} -algebras	10
30	<u>Kazuya Kawasetsu</u> (Academia Sinica) Ching Hung Lam (Academia Sinica) Xingjun Lin (Univ. of Tsukuba)	\mathbb{Z}_2 -orbifold construction associated with (-1) -isometry and uniqueness of holomorphic vertex operator algebras of central charge 24	10
31	Naoki Genra (Kyoto Univ.)	Wakimoto representations for W -algebras	15

13:30–14:30 Talk Invited by Algebra Section

Scott Carnahan (Univ. of Tsukuba) Recent advances in Moonshine

March 26th (Sun) Conference Room II

9:15–12:00

32	So Okada (Oyama Nat. Coll. of Tech.)	BCOV rings on elliptic curves and the Dedekind eta function via meromorphic ambiguity	5
33	<u>Momonari Kudo</u> (Kyushu Univ.) Shushi Harashita (Yokohama Nat. Univ.)	Superspecial curves of genus 4 in small characteristic	15
34	Makoto Enokizono (Osaka Univ.)	Upper bounds on the slope of certain fibered surfaces	15
35	Shinya Kitagawa (Gifu Nat. Coll. of Tech.)	Examples of genus two fibrations with no sections on rational surfaces II	15
36	Kenta Watanabe (Nihon Univ.)	An example of a certain indecomposable Lazarsfeld–Mukai bundle	10
37	Tomohiro Iwami (Kyushu Inst. of Tech.) ^b	Quasi-thin property for the Cremona group of rank 3 and its application to a rationality of 3-folds with a pencil of rational curves	15
38	Tetsuya Ando (Chiba Univ.)	Semialgebraic varieties and symmetric inequalities of degree four with four variables	15

- 39 Takeshi Torii (Okayama Univ.) On the moduli of subalgebras of the full matrix ring of degree 3 (Part I)
Kazunori Nakamoto 15
 (Univ. of Yamanashi)
- 40 Yoshifumi Tsuchimoto (Kochi Univ.) Non commutative complex projective varieties 15
- 41 Yusuke Suyama (Osaka City Univ.) Toric Fano varieties associated to finite simple graphs 10
- 14:30–15:30 Award Lecture for the 2017 MSJ Algebra Prize**
 Masanobu Kaneko (Kyushu Univ.) On multiple zeta values
- 15:40–16:40 Award Lecture for the 2017 MSJ Algebra Prize**
 Mitsuyasu Hashimoto (Okayama Univ.) Commutative algebra and invariant theory
- 16:50–17:50 Award Lecture for the 2017 MSJ Algebra Prize**
 Toshiyuki Katsura (Hosei Univ.) Algebraic geometry in positive characteristic

March 27th (Mon) Conference Room II

9:15–12:00

- 42 Makoto Sakurai Beilinson’s regulator and chiral algebras’ regularization by OPEs 15
- 43 Shinichi Tajima (Univ. of Tsukuba) Improvement of efficiency of an algorithm for calculating eigenvectors
 Katsuyoshi Ohara (Kanazawa Univ.) of matrices with parallelized Horner’s rule for matrices 15
Akira Terui (Univ. of Tsukuba)
- 44 Shinichi Tajima (Univ. of Tsukuba) Calculating matrix inverse by the extended Horner’s rule with pseudo
 Katsuyoshi Ohara (Kanazawa Univ.) minimal polynomial 15
Akira Terui (Univ. of Tsukuba)
- 45 Hidefumi Ohsugi A Gröbner basis characterization for chordal comparability graphs ... 15
 (Kwansei Gakuin Univ.)
 Takayuki Hibi (Osaka Univ.)
- 46 Akiyoshi Tsuchiya (Osaka Univ.) Facets and normality of Gorenstein Fano polytopes 15
 Takayuki Hibi (Osaka Univ.)
- 47 Akiyoshi Tsuchiya (Osaka Univ.) Gorenstein simplices with finite abelian groups generated by few ele-
 ments 15
- 48 Kazunori Matsuda (Osaka Univ.) Non-Koszul quadratic Gorenstein toric rings 15
- 49 Naoki Taniguchi (Meiji Univ.) On the almost Gorenstein property of determinantal rings 15
- 50 Yūji Kamoi (Meiji Univ.)^b On Gorenstein diagonal subrings of multi-graded rings 5
- 51 Yūji Kamoi (Meiji Univ.)^b On Rees algebras defined by Heneke–Ulrich ideals 10

14:15–16:00

- 52 Kohsuke Shibata (Univ. of Tokyo) Rational singularities, ω -multiplier ideals and cores of ideals 10
- 53 Mitsuhiro Miyazaki (Kyoto Univ. of Edu.) Actions of special linear groups to tensors of indeterminates and standard property of a certain Ehrhart ring 15
- 54 Masamitsu Shimakura (Tokyo Univ. of Sci.) On the Hochschild cohomology ring of integral cyclic algebras 10
Katsunori Sanada (Tokyo Univ. of Sci.)
- 55 Ayako Itaba (Shizuoka Univ.) 3-dimensional quadratic Artin–Schelter regular algebras and superpotentials 15
- 56 Michio Yoshiwaki (Shizuoka Univ./Osaka City Univ.) Relative derived dimensions for cotilting modules 2 15
- 57 Izuru Mori (Shizuoka Univ.) 3-dimensional noetherian cubic Calabi–Yau algebras 15
Kenta Ueyama (Hirosaki Univ.)

Geometry

March 24th (Fri) Conference Room VIII

9:45–11:45

- 1 Tatsuya Yamashita (Hokkaido Univ.) Localizations of derivations in C^∞ -schemes 15
- 2 Yuya Takeuchi (Univ. of Tokyo) Q -prime curvature and Sasakian η -Einstein manifolds 15
- 3 Kotaro Kawai (Univ. of Tokyo) Second order deformations of associative submanifolds in nearly parallel G_2 -manifolds 15
- 4 Hiroshi Sawai (Numazu Nat. Coll. of Tech.) Locally conformal Kähler structures on solvmanifolds 15
- 5 Ryosuke Nomura (Univ. of Tokyo) The positivity of the canonical bundle of compact Kähler manifold with negative holomorphic sectional curvature 15
- 6 Satoshi Nakamura (Tohoku Univ.) On the logarithmic Chow semistability of polarized toric manifolds . . . 15
- 7 Kota Hattori (Keio Univ.)^b On the moduli space of the tangent cones at infinity of a complete Ricci-flat manifold 15

14:15–16:10

- 8 Naoyuki Koike (Tokyo Univ. of Sci.) Collapse of the mean curvature flow for a certain kind of invariant hypersurface in a Hilbert space 15
- 9 Toru Kajigaya (Osaka City Univ.) Reductions of minimal Lagrangian submanifolds with symmetries 15
- 10 Shintaro Akamine (Kyushu Univ.) Behavior of Gaussian curvature of timelike minimal surfaces with singularities 15
- 11 Isami Koga (Kyushu Univ.) Equivariant holomorphic embeddings from the complex projective line into a complex Grassmannian of 2-planes 15
Yasuyuki Nagatomo (Meiji Univ.)

- 12 Shigeo Kawai (Saga Univ.*) On the stationary maps of a functional related to pullbacks of metrics
 Nobumitsu Nakauchi
 (Yamaguchi Univ.) 15
- 13 Makoto Sakaki (Hirosaki Univ.)^b Ruled surfaces with bi-null curves and marginally trapped surfaces ... 10
- 14 Yoshio Agaoka (Hiroshima Univ.) A necessary and sufficient condition for a 3-dimensional Riemannian
 Takahiro Hashinaga manifold to be locally a submanifold of the 4-dimensional Euclidean
 (Kitakyushu Nat. Coll. of Tech.) space 15

16:20–17:20 Talk Invited by Geometry Section

- Atsufumi Honda Geometry of positive semi-definite metrics and isometric realization
 (Miyakonojo Nat. Coll. of Tech.) problem

March 25th (Sat) Conference Room VIII

9:20–11:30

- 15 Dounnu Sasaki (Waseda Univ.) Extension of intersection number and subset currents on surfaces 15
- 16 Motoko Kato (Univ. of Tokyo) Embeddings of right-angled Artin groups into higher-dimensional Thomp-
 son groups 10
- 17 Johannes Jaerisch (Shimane Univ.) Growth and cogrowth of normal subgroups of a free group 15
 Katsuhiko Matsuzaki (Waseda Univ.)
- 18 Kazuyoshi Watanabe (Tohoku Univ.) Combinatorial differential form and Gauss–Bonnet theorem 10
- 19 Taiki Yamada (Tohoku Univ.) Curvature dimension inequality on directed graphs 10
- 20 Homare Tadano (Osaka Univ.) Cheeger–Gromov–Taylor type compactness theorems via Bakry–Émery
 and modified Ricci curvatures 15
- 21 Mitsuhiro Itoh (Univ. of Tsukuba) Hessian of Busemann function and rank of geodesics on Hadamard
 Hiroyasu Satoh (Nippon Inst. of Tech.) manifolds 10
- 22 Tetsuya Nagano (Univ. of Nagasaki) Branching of geodesic at one point in Finsler space 15
- 23 Nobuhiro Innami (Niigata Univ.) On the nearest cut point 15

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

- Yu Kitabepu (Kumamoto Univ.)^b On regular sets in metric measure spaces

March 26th (Sun) Conference Room VIII

9:50–11:40

- 24 Qing Song Shi (Nagoya Inst. of Tech.) Comparison theorems on trajectory-harps II 10
 Toshiaki Adachi (Nagoya Inst. of Tech.)
- 25 Qing Song Shi (Nagoya Inst. of Tech.) Asymptotic behavior of trajectories on Hadamard Kähler manifolds ... 10
 Toshiaki Adachi (Nagoya Inst. of Tech.)
- 26 Tomoya Nakamura (Waseda Univ.) Pseudo-Poisson Nijenhuis manifolds 15
- 27 Noriaki Ikeda (Ritsumeikan Univ.) A Courant algebroid on a Poisson manifold and applications to T-
 Marc Heller (Tohoku Univ.) duality 15
 Satoshi Watamura (Tohoku Univ.)

28	Akifumi Sako (Tokyo Univ. of Sci.)	Formulation and exact solution of matricial Φ_2^3 quantum field theory	15
29	Shigehiro Sakata (Univ. of Miyazaki)	Characterization of symmetry of a convex body with radial centers	15
30	Jun O'Hara (Chiba Univ.)	Characterization of unit balls by regularized Riesz energy	15

14:15–15:35

31	Yoshinori Tanimura (Univ. of Tokyo)	On the flexibility of Clifford–Klein forms whose translation groups are solvable Lie groups whose Lie algebras are graded	15
32	Daisuke Tarama (Ritsumeikan Univ.) Wolfram Bauer (Univ. Hannover)	Integrability of geodesic flow on step-two nilpotent Lie groups of H-type with respect to a left-invariant metric	10
33	Kaoru Ikeda (Keio Univ.) ^b	Gauss decompositions of the semisimple Lie groups and the fundamental groups of the flag variety	15
34	Hiroyuki Tasaki (Univ. of Tsukuba)	Sequences of maximal antipodal sets in oriented real Grassmann manifolds	15
35	Yusuke Sakane (Osaka Univ.*) Andreas Arvanitoyeorgos (Univ. of Patras) Marina Statha (Univ. of Patras)	On homogeneous Einstein metrics on $SU(n)$	15

15:50–16:50 Talk Invited by Geometry Section

	Takayuki Okuda (Hiroshima Univ.) ^b	Pairs of totally geodesic submanifolds in Riemannian symmetric spaces without common geodesics	
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Complex Analysis

March 24th (Fri) Conference Room VII

9:30–11:50

1	Saburoou Saitoh (Gunma Univ.*/Inst. of Reproducing Kernels) Hiroshi Fujiwara (Kyoto Univ.)	^b The general sampling theory by using reproducing kernels	15
2	Saburoou Saitoh (Gunma Univ.*/Inst. of Reproducing Kernels) Hiroshi Michiwaki (NejiLaw Inc.)	^b $\log 0 = \log \infty = 0$ and applications	15
3	Shigeyoshi Owa (Yamato Univ.) Junichi Nishiwaki (Setsunan Univ.)	Analytic functions concerning with some subordinations	15
4	Hirokazu Shimauchi (Yamanashi Eiwa Coll.) Ikkei Hotta (Yamaguchi Univ.)	Numerical solution of the radial Loewner equation	15
5	Yoshikazu Yamagishi (Ryukoku Univ.) Takamichi Sushida (Hokkaido Univ.)	Disk packings on logarithmic spiral lattices	10

6	<u>Masashi Kisaka</u> (Kyoto Univ.) Tomoki Kawahira (Tokyo Tech)	Abundance of semihyperbolic dynamics in the boundary of the Mandelbrot set	15
7	Takanori Matsuno (Osaka Pref. Univ. Coll. of Tech.)	An application of strongly branched coverings	10
8	Takanori Matsuno (Osaka Pref. Univ. Coll. of Tech.)	A remark on Hurwitz groups	10
9	Hiroshige Shiga (Tokyo Tech)	On holomorphic motions and the extension problem	15
14:15–16:05			
10	<u>Katsusuke Nabeshima</u> (Tokushima Univ.) Katsuyoshi Ohara (Kanazawa Univ.) Shinichi Tajima (Univ. of Tsukuba)	Computing parametric Bernstein-Sato ideals and holonomic D-modules	15
11	<u>Katsuyoshi Ohara</u> (Kanazawa Univ.) Shinichi Tajima (Univ. of Tsukuba)	An algorithm for computing Grothendieck local residues II	15
12	<u>Takafumi Shibuta</u> (Kyushu Univ.) Shinichi Tajima (Univ. of Tsukuba)	Computing invariants of isolated singularities using Matlis duality	15
13	Cho-Ho Chu (Queen Mary Univ. of London) <u>Hidetaka Hamada</u> (Kyushu Sangyo Univ.) Tatsuhiro Honda (Hiroshima Inst. of Tech.) Gabriela Kohr (Babeş-Bolyai Univ.)	Bloch functions on bounded symmetric domains	15
14	Cho-Ho Chu (Queen Mary Univ. of London) <u>Hidetaka Hamada</u> (Kyushu Sangyo Univ.) Tatsuhiro Honda (Hiroshima Inst. of Tech.) Gabriela Kohr (Babeş-Bolyai Univ.)	Composition operators between Bloch spaces on bounded symmetric domains	15
15	Hidetaka Hamada (Kyushu Sangyo Univ.)	Weighted composition operators from H^∞ to the Bloch space of bounded symmetric domains	15

16:20–17:20 Talk Invited by Complex Analysis Section

Katsuhiko Matsuzaki (Waseda Univ.) Teichmüller spaces of circle diffeomorphisms

March 25th (Sat) Conference Room VII

9:40–11:50

16	<u>Makoto Abe</u> (Hiroshima Univ.) Gou Nakamura (Aichi Inst. of Tech.)	Strong disk property for domains in open Riemann surfaces	10
17	Tomohiro Okuma (Yamagata Univ.)	Complex surface singularities with a fixed integral homology sphere link	15

- 18 Tatsuhiro Honda (Hiroshima Inst. of Tech.) Bonk's distortion theorem for locally biholomorphic mappings on bounded symmetric domains in \mathbb{C}^n 15
 Cho-Ho Chu (Queen Mary Univ. of London)
 Hidetaka Hamada (Kyushu Sangyo Univ.)
 Gabriela Kohr (Babeş-Bolyai Univ.)
- 19 Kouhei Izuchi (Yamaguchi Univ.) Cyclicity of reproducing kernels in weighted Hardy spaces over the bidisk 15
- 20 Akio Kodama (Kanazawa Univ.)^b On proper holomorphic self-mappings of generalized complex ellipsoids and generalized Hartogs triangles 15
- 21 Atsushi Yamamori (Academia Sinica) On automorphisms of quasi-circular domains fixing the origin in \mathbb{C}^2 10
 Liyou Zhang (Capital Normal Univ.)
- 22 Genki Hosono (Univ. of Tokyo) On minimal singular metrics of line bundles whose stable base locus admits holomorphic tubular neighborhoods 15
 Takayuki Koike (Kyoto Univ.)
- 23 Kazuko Matsumoto (Tokyo Univ. of Sci.) Takeuchi's equality for the Levi form of the Fubini-Study distance to complex submanifolds in \mathbf{CP}^n 15

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

- Masanori Adachi (Tokyo Univ. of Sci.) Function theory on Levi-flats: case study on flat circle bundles

Functional Equations

March 24th (Fri) Conference Room I

9:30–12:00

- 1 Ichiro Tsukamoto (Toyo Univ.)^b Asymptotic behaviour of positive solutions of $x'' = t^{\alpha\lambda-2}x^{1+\alpha}$ in the remaining cases 10
- 2 Yoshiaki Goto (Otaru Univ. of Commerce) Irreducibility of the monodromy representation of Lauricella's F_C 12
 Keiji Matsumoto (Hokkaido Univ.)
- 3 Junya Nishiguchi (Kyoto Univ.) A necessary and sufficient condition for well-posedness of initial value problems of retarded functional differential equations 12
- 4 Shogo Yamanaka (Kyoto Univ.) Local analytic integrability of Poincaré–Dulac normal forms 12
- 5 Daiki Sugawara (Meiji Univ.) An epidemic model of two kinds of type A influenza 12
 Hiroshi Watanabe (Meiji Univ.)
- 6 Seiji Saito (Doshisha Univ.) Oscillatory theorems concerning linear and non-linear difference equations 10
 Satoshi Ito (Doshisha Univ.)
- 7 Seiji Saito (Doshisha Univ.) Globally asymptotical stability of SI models concerning difference equations 10
 Synsuke Ikezoe (Doshisha Univ.)
 Kenta Nozue (Doshisha Univ.)

8	Tetsutaro Shibata (Hiroshima Univ.)	Oscillatory bifurcation for semilinear ordinary differential equations ···	12
9	<u>Saburoou Saitoh</u> ^b (Gunma Univ.*/Inst. of Reproducing Kernels) L. P. Castro (Univ. of Aveiro) M. M. Rodrigues (Univ. of Aveiro)	A fundamental theorem on initial value problems by using the theory of reproducing kernels ············	5
10	<u>Saburoou Saitoh</u> ^b (Gunma Univ.*/Inst. of Reproducing Kernels) Sandra Pinelas (Academia Militar)	Division by zero $z/0=0$ and differential equations ··········	5
14:15–16:15			
11	Takashi Kajiwara (Tokyo Metro. Univ.)	Existence of a heteroclinic solution to the FitzHugh–Nagumo type reaction-diffusion system with heterogeneity ··········	12
12	Kazuyuki Yagasaki (Kyoto Univ.) <u>Shotaro Yamazoe</u> (Kyoto Univ.)	Bifurcation of equilibria in infinite-dimensional Hamiltonian system and its application to nonlinear Schrödinger equation ··········	12
13	<u>Megumi Sano</u> (Osaka City Univ.) Futoshi Takahashi (Osaka City Univ.)	Sublinear eigenvalue problems with singular weights related to the critical Hardy inequality ··········	10
14	Megumi Sano (Osaka City Univ.)	Minimization problems related to generalized critical Hardy inequalities on a bounded domain ··········	12
15	Masato Hashizume (Osaka City Univ.)	Minimization problem on the Hardy–Sobolev inequality in lower dimen- sion case ··········	12
16	Toshiaki Yachimura (Tohoku Univ.)	Singular perturbation of domains and two-phase eigenvalue problem ···········	12
17	Albert Rodríguez Mulet (Hokkaido Univ.)	Eigenfrequencies of a thin straight elastic body ··········	12
18	<u>Xiaojing Liu</u> (Ibaraki Univ.) Toshio Horiuchi (Ibaraki Univ.)	Improved Kato’s inequalities involving p -Laplacian and their application ···········	12
19	<u>Kenichiro Umezū</u> (Ibaraki Univ.) Uriel Kaufmann (Univ. Nacional de Córdoba) Humberto Ramos Quoirin (Univ. de Santiago de Chile)	Positivity for nontrivial nonnegative solutions of an indefinite sublinear problem ··········	12

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

Kazuki Hiroe	(Josai Univ.)	Around accessory parameters of linear ordinary differential equations
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March 25th (Sat) Conference Room I

9:30–12:00

20	Shun Kodama	Concentration phenomena of least energy solutions to several singularly perturbed elliptic problems with a totally degenerate potential ······	12
21	Shoichi Hasegawa (Tohoku Univ.)	Two critical exponents for a Hénon type equation on the hyperbolic space ··········	12
22	Satoshi Tanaka (Okayama Univ. of Sci.)	Symmetry-breaking bifurcation for the one-dimensional Hénon equation ···········	12

23	<u>Motohiro Sobajima</u> (Tokyo Univ. of Sci.) Giorgio Metafuno (Univ. of Salento) Chiara Spina (Univ. of Salento)	Kernel estimates for analytic semigroups generated by $ x ^\alpha \Delta$ with lower order terms	12
24	<u>Yasuhito Miyamoto</u> (Univ. of Tokyo) <u>Kazune Takahashi</u> (Univ. of Tokyo)	Generalized Joseph–Lundgren exponent and intersection properties for supercritical quasilinear elliptic equations	10
25	<u>Yasuhiro Fujita</u> (Univ. of Toyama) <u>Norikazu Yamaguchi</u> (Univ. of Toyama)	On a corresponding structure between a Hamilton–Jacobi equation and the Takagi function	12
26	<u>Tokinaga Namba</u> (Univ. of Tokyo) <u>Yoshikazu Giga</u> (Univ. of Tokyo)	Hamilton–Jacobi equations with Caputo’s time-fractional derivative	12
27	<u>Hiroyoshi Mitake</u> (Hiroshima Univ.) <u>Diogo A. Gomes</u> (King Abdullah Univ. of Sci. and Tech.) <u>Hung V. Tran</u> (Univ. of Wisconsin-Madison)	The Selection problem for discount Hamilton–Jacobi equations: some non-convex cases	12
28	<u>Hiroyoshi Mitake</u> (Hiroshima Univ.) <u>Kohei Soga</u> (Keio Univ.)	The selection problem for discount Hamilton–Jacobi equations: rate of convergence	12
13:30–14:30 Award Lecture for the 2016 MSJ Analysis Prize			
	<u>Shigeaki Koike</u> (Tohoku Univ.)	ABP maximum principle for L^p -viscosity solutions of fully nonlinear equations and its applications	

March 26th (Sun) Conference Room I

9:30–12:00

29	<u>Tatsu-Hiko Miura</u> (Univ. of Tokyo)	Zero width limit of the heat equation on moving thin domains	12
30	<u>Junichi Harada</u> (Akita Univ.)	Boundary behavior for solutions of the heat equation with a nonlinear boundary condition	10
31	<u>Masaaki Mizukami</u> (Tokyo Univ. of Sci.)	Boundedness and asymptotic stability in a fully parabolic two-species chemotaxis-competition model	12
32	<u>Takayoshi Ogawa</u> (Tohoku Univ.) <u>Hiroshi Wakui</u> (Tohoku Univ.)	Non-uniform bound and non-existence for time global solutions to a degenerate drift-diffusion equation with the mass critical exponent	12
33	<u>Keisuke Takasao</u> (Univ. of Tokyo)	Existence of weak solution and monotonicity formula for volume preserving mean curvature flow	10
34	<u>Takashi Suzuki</u> (Osaka Univ.)	Reaction diffusion systems on (fundamental) chemical processes of multi-species: homogenization of the renormalized solution	5
35	<u>Takashi Suzuki</u> (Osaka Univ.)	Global-in-time behavior of the solution to a parabolic equation with non-local term derived from the Gierer–Meinhardt system	5
36	<u>Toshitaka Nagai</u> <u>Tetsuya Yamada</u> (Fukui Nat. Coll. of Tech.)	Global existence of solutions to the Cauchy problem of an attraction-repulsion chemotaxis system in \mathbb{R}^2	12
37	<u>Hajime Koba</u> (Osaka Univ.)	On conservative forms and conservation laws of compressible fluid systems on an evolving surface	12
38	<u>Hirotsada Honda</u> (NTT/Keio Univ.) <u>Atsushi Tani</u> (Keio Univ.*)	On existence of stationary solution to Kuramoto–Sakaguchi equation	12

14:15–16:15

- 39 Naoki Tsuge (Gifu Univ.) Isentropic gas flow in the nozzle 12
- 40 Mamoru Okamoto (Shinshu Univ.) Asymptotic behavior of solutions to the short-pulse equation 10
- 41 Tetu Makino (Yamaguchi Univ.*) Slowly rotating axisymmetric solutions of Euler–Poisson equations ... 12
Juhi Jang (Univ. Southern California)
- 42 Hirokazu Saito (Waseda Univ.) Compressible fluid model of Korteweg type with free boundary condition: model problem 12
- 43 Yuka Teramoto (Kyushu Univ.) On the stability of bifurcating solutions of the artificial compressible system 12
- 44 Kyouhei Wakasa On the energy decay for dissipative nonlinear wave equations in one space dimension 10
(Muroran Inst. of Tech.)
Borislav Yordanov (Hokkaido Univ.)
- 45 Takuto Imai (Future Univ. Hakodate) The sharp lower bound of the lifespan of solutions to semilinear wave equations with low power in two space dimensions 12
Hiroyuki Takamura
(Future Univ. Hakodate)
Kyouhei Wakasa
(Muroran Inst. of Tech.)
Masakazu Kato
(Muroran Inst. of Tech.)
- 46 Yuta Wakasugi (Nagoya Univ.) Diffusion phenomena for the wave equation with space-dependent damping in an exterior domain 10
Motohiro Sobajima
(Tokyo Univ. of Sci.)

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

- Hisashi Nishiyama (Wakayama Univ.) Diffusion phenomena for damped wave equations

March 27th (Mon) Conference Room I

9:15–12:00

- 47 Shouta Enomoto (Kyushu Univ.) Stability of space-time periodic states to the compressible Navier–Stokes equation in an infinite layer 12
Yoshiyuki Kagei (Kyushu Univ.)
Mohamad Nor Azlan
- 48 Abulizi Aihaiti (Kyushu Univ.) Large time behavior of solutions to the compressible Navier–Stokes equations in a cylinder under the slip boundary condition 12
Yoshiyuki Kagei (Kyushu Univ.)
- 49 Paolo Maremonti (Second Univ. Naples) Global existence of solutions to 2-D Navier–Stokes flow with non-decaying initial data in exterior domains 12
Senjo Shimizu (Kyoto Univ.)
- 50 Hideo Kozono (Waseda Univ.) Strong solutions of the Navier–Stokes equations based on the maximal Lorentz regularity theorem in Besov spaces 12
Senjo Shimizu (Kyoto Univ.)
- 51 Ken Abe (Kyoto Univ.) Global well-posedness of the two-dimensional exterior Navier–Stokes equations for non-decaying data 10
- 52 Takahiro Okabe (Hirosaki Univ.) Time periodic strong solutions to the incompressible Navier–Stokes equations with external forces of non-divergence form 12
Yohei Tsutsui (Shinshu Univ.)
- 53 Kengo Nakai (Tokyo Tech) Direction of vorticity and a refined blow-up criterion for the Navier–Stokes equations with fractional Laplacian 12

- 54 Kengo Nakai (Tokyo Tech) Disturbance of the direction vector of vorticity in Hatakeyama–Kambe
Yoshitaka Saiki (Hitotsubashi Univ.) turbulence model 12
Tsuyoshi Yoneda (Univ. of Tokyo)
- 55 Misaki Hirata (Tokyo Univ. of Sci.) Global existence and boundedness in a 2D two-species chemotaxis–
Shunsuke Kurima (Tokyo Univ. of Sci.) Navier–Stokes system with logistic source 12
Masaaki Mizukami
(Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
- 56 Hideo Kozono (Waseda Univ.) Existence and uniqueness theorem on mild solutions to the Keller–Segel
Yoshie Sugiyama (Kyushu Univ.) system coupled with the Navier–Stokes fluid 12
Masanari Miura (Kyushu Univ.)
- 57 Yoshihiro Shibata (Waseda Univ.) On L_p - L_q decay estimate for Stokes equations with free boundary con-
dition in an exterior domain 10
- 58 Yoshihiro Shibata (Waseda Univ.) Global wellposedness for the free boundary problem of the Navier–
Stokes equations in an exterior domain 10
- 14:15–16:15**
- 59 Teppei Kobayasi (Meiji Univ.) The Green matrix and the Green formulas of the Stokes equations for
a half space 12
- 60 Ryosuke Hyakuna (Waseda Univ.) Well-posedness of the Hartree type equation 10
- 61 Gaku Hoshino (Waseda Univ.) Leibniz rule for pseudo-conformal generator and its application to an-
alytic smoothing effect for non pseudo-conformally invariant nonlinear
Schrödinger equations 12
- 62 Masayuki Hayashi (Waseda Univ.) Global well-posedness for a generalized derivative nonlinear Schrödinger
Takahisa Inui (Kyoto Univ.) equation 12
Noriyoshi Fukaya (Tokyo Univ. of Sci.)
- 63 Hideaki Sunagawa (Osaka Univ.) Remarks on derivative nonlinear Schrödinger systems with multiple
Chunhua Li (Yanbian Univ.) masses 12
- 64 Toshiyuki Suzuki Contraction of wave operators for nonlinear Schrödinger equations of
(Kanagawa Univ./Kogakuin Univ.) L^2 -super-critical cases with inverse-square potentials 12
- 65 Sojiro Murai Strichartz estimates for wave equation with magnetic potential in exte-
(Tokyo Metropolitan Coll. of Indus. Tech.) rior domain 10
- 66 Hayato Miyazaki Long range scattering for nonlinear Schrödinger equations with critical
(Tsuyama Nat. Coll. of Tech.) homogeneous nonlinearity 12
Satoshi Masaki (Osaka Univ.)
- 67 Satoshi Masaki (Osaka Univ.) Modified scattering for the gauge-invariant quadratic nonlinear Klein–
Jun-ichi Segata (Tohoku Univ.) Gordon equation in two dimensions 12
- 16:30–17:30 Award Lecture for the 2016 MSJ Analysis Prize**
- Soichiro Katayama (Osaka Univ.) Global existence and asymptotic behavior for systems of nonlinear wave
equations
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Real Analysis

March 26th (Sun) Conference Room VII

9:00–11:55

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|----|--|--|----|
| 1 | Yoshifumi Ito (Tokushima Univ.*) | Axiomatic method of measure and integration (I). In the case of Jordan measure | 15 |
| 2 | Yoshifumi Ito (Tokushima Univ.*) | Axiomatic method of measure and integration (II). In the case of Riemann integral | 15 |
| 3 | Shigehiro Sakata (Univ. of Miyazaki) | Strict power concavity of a convolution | 15 |
| 4 | Nobusumi Sagara (Hosei Univ.) | Relaxation and purification for nonconvex variational problems in dual Banach spaces: The minimization principle in saturated measure spaces | 15 |
| 5 | Ryoichi Kunisada (Waseda Univ.) | Finitely additive measures and additive property | 12 |
| 6 | Toshiharu Kawasaki
(Nihon Univ./Tamagawa Univ.) | On the principal value of Henstock–Kurzweil integral | 15 |
| 7 | Aoi Honda (Kyushu Inst. of Tech.)
Yoshiaki Okazaki
(Fuzzy Logic Systems Inst.) | Nondiscrete inclusion-exclusion integral | 15 |
| 8 | Shin-ya Matsushita (Akita Pref. Univ.) | On the convergence of the Krasnosel’skii–Mann iteration | 15 |
| 9 | Sachiko Atsushiba
(Univ. of Yamanashi) | Convergence theorems for a family of nonlinear mappings related to hybrid mappings | 15 |
| 10 | Tomonari Suzuki
(Kyushu Inst. of Tech.) | Yet another generalization of the Banach contraction principle | 15 |
| 11 | Takeshi Iida
(Fukushima Nat. Coll. of Tech.) | The Pérez inequality on weighted Morrey spaces | 15 |

14:15–16:50

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|----|---|---|----|
| 12 | Jayson Mesitas Cunanan
(Shinshu Univ.)
Youhei Tsutsui (Shinshu Univ.) | Trace theorems on Wiener amalgam spaces | 10 |
| 13 | Takeshi Iida ^b
(Fukushima Nat. Coll. of Tech.)
Yoshihiro Sawano (Tokyo Metro. Univ.)
Hitoshi Tanaka
(Tsukuba Univ. of Tech.) | Decompositions of Morrey spaces | 15 |
| 14 | Denny Iveral Hakim ^b
(Tokyo Metro. Univ.)
Yoshihiro Sawano (Tokyo Metro. Univ.) | Complex interpolation of Morrey spaces | 15 |
| 15 | Shohei Nakamura (Tokyo Metro. Univ.) ^b
Yoshihiro Sawano (Tokyo Metro. Univ.) | Fourier transform and Morrey spaces | 15 |
| 16 | Gaku Sadasue (Osaka Kyoiku Univ.)
Eiichi Nakai (Ibaraki Univ.) | Characterizations of boundedness for generalized fractional integrals on martingale Morrey spaces | 15 |

- 17 Yukino Tomizawa (Chuo Univ.) Geometric constants of rotation invariant norms 15
 Ken-Ichi Mitani (Okayama Pref. Univ.)
 Kichi-Suke Saito (Niigata Univ.*)
 Ryotaro Tanaka (Kyushu Univ.)
- 18 Ryotaro Tanaka (Kyushu Univ.) On properties of extreme points of von Neumann algebras and its application to Tingley's problem 15
- 19 Hiroyasu Mizuguchi (Niigata Univ.) The difference between two orthogonality notions in Radon planes ... 15
- 20 Kichi-Suke Saito (Niigata Univ.) Matrix norm of James constant and its applications 15
 Naoto Komuro
 (Hokkaido Univ. of Edu.)
 Ryotaro Tanaka (Kyushu Univ.)
- 21 Mikio Kato (Kyushu Inst. of Tech.*) Some recent results on direct sums of Banach spaces 15
 Takayuki Tamura (Chiba Univ.)

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

Kenjiro Yanagi (Josai Univ.) Entropy in classical or quantum information theory

March 27th (Mon) Conference Room VII

9:00–11:40

- 22 Takano Hara (Tokyo Metro. Univ.) The Wolff potential estimate for solutions to elliptic equations with signed data 15
- 23 Masaaki Mizukami ^b A unified method for boundedness in Keller–Segel systems with signal-dependent sensitivity 15
 (Tokyo Univ. of Sci.)
 Tomomi Yokota (Tokyo Univ. of Sci.)
- 24 Shunsuke Kurima (Tokyo Univ. of Sci.) Existence of solutions to nonlinear diffusion equations and their approximations with error estimates 15
 Tomomi Yokota (Tokyo Univ. of Sci.)
- 25 Takanori Kuroda (Waseda Univ.) Finite time blow-up for a Ginzburg–Landau equation without linear term 15
 Mitsuharu Ôtani (Waseda Univ.)
- 26 Shun Uchida (Waseda Univ.) On the maximality of sum of maximal monotone operators in a Hilbert space 15
 Mitsuharu Ôtani (Waseda Univ.)
- 27 Hiroki Sano (Shizuoka Univ.) Well-posedness for semilinear functional differential equations and its applications 15
 Naoki Tanaka (Shizuoka Univ.)
- 28 Dai Noboriguchi Well-posedness of nonhomogeneous Dirichlet problem for stochastic scalar conservation laws 10
 (Kushiro Nat. Coll. of Tech.)
 Kazuo Kobayasi (Waseda Univ.)
- 29 Yutaka Tsuzuki Solvability of Vlasov–Poisson systems with errors in magnetic field in a half-space 15
 (Hiroshima Shudo Univ.)
- 30 Hiroshi Watanabe (Oita Univ.) Global solutions to nonlocal strongly degenerate parabolic systems with variable coefficients 15
- 31 Makoto Nakamura (Yamagata Univ.) On the derivation of several second order partial differential equations from the Einstein equation 10
- 32 Makoto Nakamura (Yamagata Univ.) On the nonrelativistic limit of a semilinear field equation in uniform and isotropic space 10

14:15–16:25

- 33 Risei Kano (Kochi Univ.) The existence of solutions for the perfect plasticity model 15
Takeshi Fukao (Kyoto Univ. of Edu.)
- 34 Ken Shirakawa (Chiba Univ.) Phase-field model of grain boundary motion including inhomogeneous
Hiroshi Watanabe (Oita Univ.) Dirichlet type boundary condition 15
J. Salvador Moll (Univ. Valencia)
- 35 Ryota Nakayashiki (Chiba Univ.) Allen–Cahn type equations involved in singular diffusions and dynamic
Ken Shirakawa (Chiba Univ.) boundary conditions 15
- 36 Takeshi Fukao (Kyoto Univ. of Edu.) A boundary control problem for GMS model 15
Noriaki Yamazaki (Kanagawa Univ.)
- 37 Hirokazu Komatsu (Kinki Univ.) An analysis of ordinary differential equations that describe non-weakly
Hiroyuki Nakajima (Kinki Univ.) reversible chemical reaction networks 15
- 38 Akio Ito Asymptotic stability of an equilibrium point for a biochemical reaction
Komatsu Hirokazu (Kinki Univ.) network constructed by cardiac hypertrophy factors 15
Nakajima Hiroyuki (Kinki Univ.)
- 39 Kota Kumazaki A free boundary problem describing adsorption phenomenon in porous
(Tomakomai Nat. Coll. of Tech.) materials 15
- 40 Toyohiko Aiki (Japan Women's Univ.) On existence and uniqueness for solutions of one-dimensional moisture
Sergey A. Timoshin transport equation appearing in concrete carbonation process 15
(Siberian Branch Russian Acad. Sci.)

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

- Yusuke Murase (Meijo Univ.) Analysis for brewing process of Japanese Sake and quasi-variational
inequalities

Functional Analysis

March 24th (Fri) Conference Room IX

14:15–16:00

- 1 Sohei Ashida (Kyoto Univ.) Exponential bound on the widths of molecular predissociation reso-
nances 15
- 2 Hiroaki Niikuni On the spectra of periodic Schrödinger operators on a super carbon
(Maebashi Inst. of Tech.) nanotube 15
- 3 Daichi Komori (Hokkaido Univ.) Intuitive representation of local cohomology groups 15
- 4 Hiroyuki Yamagishi The best constant of discrete Sobolev inequalities on C36 15
(Tokyo Metropolitan Coll. of Indus. Tech.)
Yoshinori Kametaka (Osaka Univ.*)
- 5 Toru Fuda (Hokkaido Univ.) Localization and eigenvalues of a multi-dimensional quantum walk with
Daiju Funakawa (Hokkaido Univ.) one-defect. 15
Akito Suzuki (Shinshu Univ.)

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

Koichi Kaizuka (Gakushuin Univ.) Stationary scattering theory for invariant differential operators on symmetric spaces of noncompact type

March 25th (Sat) Conference Room IX

9:00–12:00

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|----|---|--|----|
| 6 | Chungchuan Chen
(Nat. Taichung Univ. of Edu.) | Topological dynamics on linear operators | 15 |
| 7 | Masaru Nagisa (Chiba Univ.) | Operator monotone rational function and its application | 15 |
| 8 | <u>Hiroaki Tohyama</u>
(Maebashi Inst. of Tech.)
Hiroshi Isa (Maebashi Inst. of Tech.)
Masatoshi Ito (Maebashi Inst. of Tech.)
Eizaburo Kamei
Masayuki Watanabe
(Maebashi Inst. of Tech.) | Relative operator entropies and operator valued divergences via divided difference | 15 |
| 9 | Yuki Seo (Osaka Kyoiku Univ.) | An interpolation of Jensen's inequality and its applications to mean inequalities | 10 |
| 10 | Takeaki Yamazaki (Toyo Univ.) | Some norm inequalities for matrix means | 10 |
| 11 | Junichi Fujii (Osaka Kyoiku Univ.) | Around the manifold of the positive invertible operators | 15 |
| 12 | <u>Rumi Shindo Togashi</u>
(Nagaoka Nat. Coll. of Tech.)
Miura Takeshi (Niigata Univ.)
Honma Dai
(Uchida Yoko IT Solutions Co.) | Characterizations related to the products and the spectral radius for the real-algebra isomorphisms between unital semi-simple commutative Banach algebras | 15 |
| 13 | Takeshi Miura (Niigata Univ.) | Properties of isometries between function spaces | 15 |
| 14 | <u>Sin-Ei Takahasi</u> (Yamagata Univ.*)
Takeshi Miura (Niigata Univ.)
Hiroyuki Takagi (Shinshu Univ.)
Junji Inoue (Hokkaido Univ.*) | A classification of semisimple commutative Banach algebras of type I | 15 |
| 15 | Osamu Hatori (Niigata Univ.) | Hermitian operators on vector-valued Lipschitz algebras | 15 |
| 16 | Osamu Hatori (Niigata Univ.) | Commutativity via gyrogroup operations | 15 |

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

Kazuhiro Kawamura Some Banach–Stone type theorems
(Univ. of Tsukuba)

March 26th (Sun) Conference Room IX

9:30–12:00

- | | | | |
|----|---|--|----|
| 17 | Sakaé Fuchino (Kobe Univ.) | Pre-Hilbert spaces without orthonormal bases | 15 |
| 18 | Kengo Matsumoto
(Joetsu Univ. of Edu.) | Relative Morita equivalence of C^* -algebras and flow equivalence of topological Markov shifts | 15 |

- 19 Yasuo Watatani (Kyushu Univ.)
Tsuyoshi Kajiwara (Okayama Univ.) C*-algebras associated with complex dynamical systems or self-similar maps and their maximal abelian subalgebras and dimension groups of the cores 15
- 20 Tomohiro Kanda (Kyushu Univ.)^b
Taku Matsui (Kyushu Univ.) The existence and the uniqueness of regular KMS states on the resolvent CCR algebra 10
- 21 Kei Hasegawa (Kyushu Univ.) Bass–Serre trees of amalgamated free product C*-algebras 15
- 22 Toshihiko Masuda (Kyushu Univ.) Classification of Roberts actions of strongly amenable C*-tensor categories on the injective factor of type III₁ 15
- 23 Reiji Tomatsu (Hokkaido Univ.) Continuous crossed product decomposition of an ultraproduct von Neumann algebras 15
- 24 Takahiro Hasebe (Hokkaido Univ.)
Marek Bozejko (Univ. of Wrocław)
Wiktor Ejsmont
(Wrocław Univ. of Econ.) Fock space of type D 15
- 14:15–16:15**
- 25 Yasumichi Matsuzawa (Shinshu Univ.)^b
Hiroshi Ando (Chiba Univ.) Groups of unitaries without property (FH) 15
- 26 Hiroshi Ando (Chiba Univ.)
Yasumichi Matsuzawa (Shinshu Univ.)
Andreas Thom (TU Dresden)
Asger Törnquist (Univ. Copenhagen) Unitarizability, Maurey–Nikishin factorization and Polish groups of finite type 15
- 27 Tatsuya Tsurii (Osaka Pref. Univ.) Finite hypergroups and finite graphs 15
- 28 Hideyuki Ishi
(Nagoya Univ./JST PRESTO)
Atsumi Ohara (Univ. of Fukui) An invariant potential under a group action on a Hessian domain 15
- 29 Hiroshi Oda (Takushoku Univ.)
Nobukazu Shimeno
(Kwansei Gakuin Univ.) Spherical functions for small K -types 15
- 30 Toshiyuki Kobayashi
(Univ. of Tokyo/Univ. of Tokyo)
Oleksii Leontiev (Univ. of Tokyo) Symmetry breaking of conformal transformation group $O(p, q)$ 15

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

- Yasufumi Hashimoto
(Univ. of Ryukyus) Distributions of multiplicities in length spectra for congruence subgroups

Statistics and Probability

March 24th (Fri) Conference Room VI

9:45–12:00

- 1 Yong Moo Chung (Hiroshima Univ.) Quadratic maps with flat rate function 15
Hiroki Takahasi (Keio Univ.)
Juan Rivera-Letelier (Univ. Rochester)
- 2 Isamu Dōku (Saitama Univ.) On the compact support of superprocess determined by a random
measure 15
- 3 Shigeyoshi Ogawa (Ritsumeikan Univ.) On strong inversion formulas of the natural SFT 10
Hideaki Uemura (Aichi Univ. of Edu.)
- 4 Atsushi Takeuchi (Osaka City Univ.) Malliavin calculus for marked Hawkes processes 15
- 5 Yuki Suzuki (Keio Univ.) A diffusion process with a contracted Brownian potential 15
- 6 Dai Taguchi (Ritsumeikan Univ.) On the Euler–Poisson scheme for SDEs with positive jumps and Hölder
continuous coefficient 10
Libo Li (Univ. of New South Wales)
- 7 Hideo Nagai (Kansai Univ.) Large deviation control for quadratic semi-martingale functionals 15
- 8 Hideo Nagai (Kansai Univ.) Large deviation control under model uncertainty 12

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

Tomoyuki Ichiba Stochastic analysis for collision of Brownian particles
(Univ. of California, Santa Barbara)

15:30–16:30 Award Lecture for the 2016 MSJ Analysis Prize

Tomohiro Sasamoto (Tokyo Tech) The KPZ equation and integrable stochastic interacting systems

March 25th (Sat) Conference Room VI

9:50–11:30

- 9 Masayuki Horiguchi (Kanagawa Univ.) On a multivariate Bayesian control problem in Markov decision pro-
cesses 15
- 10 Noboru Nomura (Kochi Univ.) Evaluation procedure of orthant probabilities with conditional distribu-
tion in subspaces 10
- 11 Hayato Takahashi Recent progress on random sequences with respect to conditional prob-
abilities 15
- 12 Yujie Xue (Waseda Univ.) Local Whittle likelihood approach for L^p -norm spectra 10
Taniguchi Masanobu (Waseda Univ.)
- 13 Fumiya Akashi (Waseda Univ.) Self-normalized and random weighting approach to likelihood ratio test
for the model diagnostics of stable processes 15
Jianqing Fan (Princeton Univ.)
- 14 Fumiya Akashi (Waseda Univ.) Quantile regression-based self-normalized block sampling method for
linear regression model with dependent errors 15
Shuyang Bai (Univ. of Georgia)
Murad S. Taqqu (Boston Univ.)

- 15 Katusi Fukuyama (Kobe Univ.) Metric discrepancy results for geometric progressions with ratios $3/2$,
Shinji Sakaguchi $4/3$, $8/3$, $10/3$, $13/6$ and $17/8$ 5
 (Aioi Nissay Dowa Insurance)
Osamu Shimabe
 (Hamada Electrical Industries)
Martina Tscheckl (Kobe Univ.)

11:30–12:00 Research Section Assembly**13:30–14:30**

- 16 Yan Liu (Waseda Univ.) A frequency domain bootstrap for irregularly spaced spatial data 15
Kun Chen
 (Southwestern Univ. of Finance and Economics)
Ngai Hang Chan
 (Chinese Univ. of Hong Kong)
Masanobu Taniguchi (Waseda Univ.)
- 17 Yurie Tamura (Waseda Univ.) Asymptotic theory of sphericity test statistic for high-dimensional time
Masanobu Taniguchi (Waseda Univ.) series 10
- 18 Yoshiyuki Tanida (Waseda Univ.) Asymptotic theory of Whittle estimator for high dimensional time series
Masanobu Taniguchi (Waseda Univ.) 10
- 19 Kazuyoshi Yata (Univ. of Tsukuba) Consistency for high-dimensional eigenvectors 15
Makoto Aoshima (Univ. of Tsukuba)

March 26th (Sun) Conference Room VI

9:50–12:00

- 20 Shuhei Mano (Inst. of Stat. Math.) Multiplicative measure on partitions and the A-hypergeometric system
 associated with the rational normal curve 15
- 21 Tomonari Sei (Univ. of Tokyo) Stein-type identity derived from coordinate-wise transformations 15
- 22 Tamio Koyama (Shiga Univ.) An integral formula for the powered sum of the independent, identically
 and normally distributed random variables 15
- 23 Yoshihiko Maesono (Kyushu Univ.) Modified gamma kernel density estimator 10
Rizky Reza Fauzi (Kyushu Univ.)
- 24 Daisuke Nemoto (Tokyo Univ. of Sci.) Generalized diagonal exponent conditional symmetry model and de-
Kiyotaka Iki (Tokyo Univ. of Sci.) composition for square contingency tables with ordered categories 10
Sadao Tomizawa (Tokyo Univ. of Sci.)
- 25 Hiroshi Nakano (Tokyo Univ. of Sci.) Measure of departure from marginal homogeneity using marginal odds
Kiyotaka Iki (Tokyo Univ. of Sci.) for square contingency tables with ordered categories 10
Sadao Tomizawa (Tokyo Univ. of Sci.)
- 26 Norito Takeda (Tokyo Univ. of Sci.) Measure of departure from symmetry using cumulative probabilities for
Kiyotaka Iki (Tokyo Univ. of Sci.) square contingency tables 10
Sadao Tomizawa (Tokyo Univ. of Sci.)
- 27 Tomohisa Maruyama Decomposition of marginal homogeneity using model based on comple-
 (Tokyo Univ. of Sci.) mentary log-log transform for square contingency tables 10
Yusuke Saigusa (Tokyo Univ. of Sci.)
Kouji Tahata (Tokyo Univ. of Sci.)
Sadao Tomizawa (Tokyo Univ. of Sci.)

- 28 Yutaro Kubo (Tokyo Univ. of Sci.) A measure of departure from partial marginal homogeneity for square
Yusuke Saigusa (Tokyo Univ. of Sci.) contingency tables 10
Koji Tahata (Tokyo Univ. of Sci.)
Sadao Tomizawa (Tokyo Univ. of Sci.)

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

- Gaku Igarashi (Univ. of Tsukuba) Boundary-bias-free asymmetric kernel density estimators

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

- Yasunori Fujikoshi (Hiroshima Univ.*) High-dimensional properties of the estimation methods for reduced-
dimensionality based on information criteria

March 27th (Mon) Conference Room VI

9:50–12:00

- 29 Jo Suzuki (Osaka Univ.) Mutual information estimation of continuous variables: Consistency
..... 15
- 30 Shintaro Hashimoto (Hiroshima Univ.) Robust estimation of asymmetric location-scale family by using log-
regularly varying function 15
- 31 Koji Tsukuda (Univ. of Tokyo) On Poisson approximations for the Ewens sampling formula with large
parameters 15
- 32 Kou Fujimori (Waseda Univ.) The Dantzig selector for diffusion processes with covariates 10
Yoichi Nishiyama (Waseda Univ.)
- 33 Hirofumi Wakaki (Hiroshima Univ.) On a model selection criterion for a linear mixed model 15
- 34 Masahide Kuwada Characteristics of balanced third-order designs of resolution $R^*({10, 01})$
(Int. Inst. for Nat. Sci.) with $N < \nu(m)$ and $NSV_2 \geq 1$ for 3^m factorials 15
Yoshifumi Hyodo
(Okayama Univ. of Sci./Int. Inst. for Nat. Sci.)
Hiromu Yumiba (Int. Inst. for Nat. Sci.)
- 35 Kazuki Matsubara (ChuoGakuin Univ.) Some existence of hierarchical 3-designs 15
Sanpei Kageyama (Tokyo Univ. of Sci.)
- 36 Shoko Chisaki (Tokyo Univ. of Sci.) A recursive construction of difference systems of sets 10
Yui Kimura (Tokyo Univ. of Sci.)
Nobuko Miyamoto (Tokyo Univ. of Sci.)

Applied Mathematics

March 24th (Fri) Conference Room V

10:30–11:45

- 1 Kazuhiko Ushio Balanced C_{10} -foil designs and related designs 15

- 2 Diogo Kendy Matsumoto (Shibaura Inst. of Tech.) Navigation groupoids and its application 15
- 3 Yutaro Sakamoto (Univ. of Electro-Comm.) Hamilton cycles in double generalized Petersen graphs 15
- 4 Kenta Noguchi (Tokyo Denki Univ.) 2-cell embeddings of optimal 1-planar graphs 15

14:15–15:30

- 5 Rachel Bass (Georgia Southern Univ.) Colton Magnant (Georgia Southern Univ.) Characterization of edge-colorings of complete graphs with forbidden rainbow subgraphs 10
- Kenta Ozeki (Nat. Inst. of Information/JST ERATO) Brian Pyron (Georgia Southern Univ.)
- 6 Shinya Fujita (Yokohama City Univ.) Partition problem on edge-colored graphs 10
- 7 Jun Fujisawa (Keio Univ.) Robert E. L. Aldred (Univ. of Otago) Akira Saito (Nihon Univ.) Edge proximity conditions for matching extendability of graphs 15
- 8 Chie Nara (Meiji Univ.) Jin-ichi Itoh (Kumamoto Univ.) Erik D. Demaine (MIT) Martin L. Demaine (MIT) Continuous flattening of orthogonal polyhedra 15

15:50–16:50 Talk Invited by Applied Mathematics Section

Ying Miao (Univ. of Tsukuba)^b Combinatorics of Digital Fingerprinting

March 25th (Sat) Conference Room V

10:00–11:45

- 9 Tomoya Machide (Nat. Inst. of Information/JST ERATO) Symmetric sum of regularized multiple zeta values and set partition 15
- 10 Hideo Mitsuhashi (Utsunomiya Univ.) Norio Konno (Yokohama Nat. Univ.) Iwao Sato (Oyama Nat. Coll. of Tech.) Quaternionic second weighted zeta functions of finite graphs 15
- 11 Iwao Sato (Oyama Nat. Coll. of Tech.) Norio Konno (Yokohama Nat. Univ.) Etsuo Segawa (Tohoku Univ.) The spectra of the time evolution matrices of Szegedy walk and SQW 15
- 12 Kei Saito (Yokohama Nat. Univ.) The quaternionic quantum walk on the one-dimensional lattice 15
- 13 Takashi Komatsu (Yokohama Nat. Univ.) Hikari Kawai (Yokohama Nat. Univ.) Norio Konno (Yokohama Nat. Univ.) Seiya Yoshida (Yokohama Nat. Univ.) Stationary measures of three-state quantum walks on the one-dimensional integer lattice 15
- 14 Akito Suzuki (Shinshu Univ.) Weak limit theorem for two-dimensional two-state quantum walks with position dependent coins 15

14:00–14:15 Presentation Ceremony for the 2016 MSJ Prize for Excellent Young Applied Mathematicians

March 26th (Sun) Conference Room V

9:30–12:00 Special Session “Modern trends on the theory of convex polytopes”

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| Satoshi Murai (Osaka Univ.) | Recent developments on face numbers of convex polytopes | 40 |
| Akihiro Higashitani
(Kyoto Sangyo Univ.) | History and future of the theory of lattice polytopes | 40 |
| Takayuki Hibi (Osaka Univ.) | Let’s listen a trio of convex polytopes, commutative algebra and statistics | 40 |
| 14:15–16:30 | | |
| 15 Masayuki Akamatsu
(Japan Coast Guard Academy) | Dual problem for bivariate function by perturbation function | 15 |
| 16 Shunzi Horiguchi
(Niigata Sangyo Univ.) | Extended complex Newton’s method and Riemann surface, various formulas to compare convergences | 10 |
| 17 Fuminori Sakaguchi (Univ. of Fukui) | On the hyperfunction components of extra solutions in an integer-type algorithm for ODEs | 15 |
| 18 Kohji Ohtsuka
(Hiroshima Kokusai Gakuin Univ.) | Examination about shape optimization of singular points in consideration of the shape sensitivity by generalized J-integral | 15 |
| 19 <u>Takehiko Kinoshita</u> (Kyoto Univ.)
Yoshitaka Watanabe (Kyushu Univ.)
Mitsuhiro T. Nakao (Kyushu Univ.) | Some remarks on the lower bounds of resolvent for compact operators | 15 |
| 20 <u>Yuki Chiba</u> (Univ. of Tokyo)
Norikazu Saito (Univ. of Tokyo) | L^∞ error estimates of discontinuous Galerkin methods for Poisson equation on non-convex polygonal domain | 15 |
| 21 <u>Takuya Tsuchiya</u> (Ehime Univ.)
Kenta Kobayashi (Hitotsubashi Univ.) | Approximating surface area by interpolations on triangulations | 15 |
| 22 Masahisa Tabata (Waseda Univ.) | Convergence of the upwind-element choice scheme for the Navier–Stokes equations | 15 |

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

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| Norbert Pozar (Kanazawa Univ.) | A level set approach to the crystalline mean curvature flow |
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March 27th (Mon) Conference Room V

9:30–11:30

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| 23 <u>Toshikazu Kuniya</u> (Kobe Univ.)
Jinliang Wang (Heilongjiang Univ.)
Ran Zhang (Harbin Inst. of Tech.) | Mathematical analysis of an HIV model with infection-age-structure and nonlinear incidence | 15 |
| 24 <u>Tetsuya Ishiwata</u>
(Shibaura Inst. of Tech.)
Emiko Ishiwata (Tokyo Univ. of Sci.)
Yukihiko Nakata (Shimane Univ.)
Katsuhiko Miki | Delay-induced blow-up in a limit-cycle oscillation model | 15 |

30 Applied Mathematics / Topology

- 25 Kaname Matsue (Kyushu Univ./Kyushu Univ.) Quasi-Poincaré compactifications and blow-up solutions 15
- 26 Kaname Matsue (Kyushu Univ./Kyushu Univ.) Compactifications, blow-up solutions and singular shock waves 15
- 27 Takuya Tsuchiya (Waseda Univ.) Constructing of constraint preserving scheme for Einstein equations . . 15
Gen Yoneda (Waseda Univ.)
- 28 Ryosuke Urakawa (Waseda Univ.) Analyzing constraint propagation of Einstein equation on non-flat back-
Takuya Tsuchiya (Waseda Univ.) ground 15
Gen Yoneda (Waseda Univ.)
- 29 Hideki Murakawa (Kyushu Univ.) A linear method for nonlinear diffusion problems 15

14:15–16:20

- 30 Akane Kawaharada (Kyoto Univ. of Edu.) Empirical CA construction method for the viscous Burgers equation
Tomoyuki Miyaji (Meiji Univ.) and its characteristics 15
Naoto Nakano
(JST PRESTO/Hokkaido Univ.)
- 31 Yuuki Shimizu (Kyoto Univ.) Vortex dynamics on a toroidal surface 15
Takashi Sakajo (Kyoto Univ.)
- 32 Takeshi Gotoda (Kyoto Univ.) Numerical simulations of pattern formation in vortex sheet model 15
Robert Krasny (Univ. of Michigan)
- 33 Tomoyuki Miyaji (Meiji Univ.) Torus bifurcation to a rippling rectangular wave 15
Toshiyuki Ogawa (Meiji Univ.)
Ayuki Sekisaka (Meiji Univ.)
- 34 Ayuki Sekisaka (Meiji Univ.) Accumulation of eigenvalues for periodic boundary conditions 15
- 35 Sungrim Seirin Lee (Hiroshima Univ.) Pattern formation on asymmetric cell division and mathematical prob-
lems 15
- 36 Syunsuke Kobayashi (Meiji Univ.) Oscillatory hexagonal pattern in a 2-dimensional integro-differential
Takashi Sakamoto (Meiji Univ.) reaction-diffusion system 15

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

- Shigetoshi Yazaki (Meiji Univ.) How to track the moving boundary arising in interfacial phenomena

Topology

March 24th (Fri) Conference Room IV

10:00–12:00

- 1 Yusuke Mizota (Kyushu Sangyo Univ.) Remarks on C^∞ -liftable vector fields 15

2	<u>Takashi Sano</u> (Hokkai-Gakuen Univ.) Mahito Kobayashi (Akita Univ.) Minoru Yamamoto (Hirosaki Univ.)	Panorama view for a polygon	15
3	<u>Yutaro Kabata</u> (Hokkaido Univ.) Martín Barajas (ICMC-USP)	Projection of crosscap	15
4	Shunsuke Ichiki (Yokohama Nat. Univ.)	Composing generic linearly perturbed mappings and immersions/injections	15
5	<u>Huhe Han</u> (Yokohama Nat. Univ.) Takashi Nishimura (Yokohama Nat. Univ.)	The Wulff construction for convex integrands	15
6	<u>Takahiro Yamamoto</u> (Kyushu Sangyo Univ.) Osamu Saeki (Kyushu Univ.)	Singular fibers of stable maps on manifold pairs and its applications	15

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

Mitsunobu Tsutaya (Kyushu Univ.)	Applications of Stasheff’s A_∞ -theory to Lie groups
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15:30–17:00

7	Jin-ho Lee (Samsung Fire/Marine Insurance) Toshiyuki Miyauchi (Fukuoka Univ.) Juno Mukai (Shinshu Univ.*) <u>Mariko Ohara</u> (Shinshu Univ.)	The generators on 23-th, 24-th and 25-th homotopy groups of the n-th rotation group	15
8	Hisao Kato (Univ. of Tsukuba)	Topological entropy and indecomposability of continua	15
9	Atsuhide Mori (Osaka Dental Univ.)	Topology of information geometry	15
10	Shun Wakatsuki (Univ. of Tokyo)	On the semi-purity of Sullivan algebras	15
11	<u>Shin Kiriki</u> (Tokai Univ.) Teruhiko Soma (Tokyo Metro. Univ.)	Takens’ last problem and existence of non-trivial wandering domains	15

March 25th (Sat) Conference Room IV

10:00–11:50

12	Erika Kuno (Tokyo Tech)	Abelian subgroups of the mapping class groups for non-orientable sur- faces	10
13	<u>Erika Kuno</u> (Tokyo Tech) Genki Omori (Tokyo Tech)	On the distortion of the Torelli group in the mapping class group with boundary components	10
14	<u>Genki Omori</u> (Tokyo Tech) Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.)	A simple infinite presentation for the mapping class group of a non- orientable surface with boundary	15
15	Genki Omori (Tokyo Tech)	A small generating set for the twist subgroup of the mapping class group of a non-orientable surface by Dehn twists	15
16	Shunsuke Tsuji (Univ. of Tokyo)	A Johnson homomorphism on a compact connected non-orientable sur- face with non-empty boundary	10
17	Shunsuke Tsuji (Univ. of Tokyo)	The mapping class group and the Kauffman bracket skein algebra	10

- 18 Shunsuke Tsuji (Univ. of Tokyo) Construction of an invariant for integral homology 3-spheres via completed Kauffman bracket skein algebras 10

13:15–14:45

- 19 Mari Hataoka (Japan Women's Univ.) A presentation of a symmetric handlebody group 15
- 20 Teruaki Kitano (Soka Univ.)
Anh T. Tran (Univ. of Texas at Dallas) On the polynomial defined by $SL(2; \mathbb{C})$ -Reidemeister torsion for Brieskorn homology 3-spheres 10
- 21 Masakazu Teragaito (Hiroshima Univ.)
Kimihiro Motegi (Nihon Univ.) Generalized torsion elements and bi-orderability of 3-manifold groups 10
- 22 Tatsuro Shimizu (Kyoto Univ.) On the $SU(2)$ Chern–Simons perturbation theory 10
- 23 Tomohiro Asano (Univ. of Tokyo) The transverse element in the symplectic Khovanov homology 15

March 26th (Sun) Conference Room IV

10:00–12:00

- 24 Tomo Murao (Univ. of Tsukuba)
Yusuke Iijima (Univ. of Tsukuba) The complete connected component decomposition of quandles 10
- 25 Atsushi Ishii (Univ. of Tsukuba)
Masahide Iwakiri (Saga Univ.)
Seiichi Kamada (Osaka City Univ.)
Jieon Kim (Osaka City Univ.)
Shosaku Matsuzaki (Waseda Univ.)
Kanao Oshiro (Sophia Univ.) The algebraic structure of a partially multiplicative biquandle 10
- 26 Yusuke Takimura
(Gakushuin Boys' Junior High School) A pre-order of chord diagrams on knot projections 15
- 27 Noboru Ito (Univ. of Tokyo) Spaces of chord diagrams on spherical curves II 15
- 28 Takuji Nakamura
(Osaka Electro-Comm. Univ.)
Masahico Saito (Univ. of South Florida)
Shin Satoh (Kobe Univ.)
Yasutaka Nakanishi (Kobe Univ.) The palette numbers of 2-bridge knots 10
- 29 Kodai Wada (Waseda Univ.) Link invariants of Milnor type 10
- 30 Makoto Ozawa (Komazawa Univ.) Unknotting submanifolds of the 3-sphere by twistings 10
- 31 Hajime Fujita (Japan Women's Univ.)
Rika Akiyama (Japan Women's Univ.)
Yukie Inaba (Japan Women's Univ.)
Satomi Seita (Japan Women's Univ.)
Mari Hataoka (Japan Women's Univ.) The maximum genus of the generalized jenga game 15

14:15–15:45

- 32 Akiko Shima (Tokai Univ.)
Teruo Nagase (Tokai Univ.*) Regions without crossings for minimal charts 15
- 33 Kouki Sato (Tokyo Tech) A full-twist formula for the ν^+ -invariant 15

33 Topology / Infinite Analysis

- 34 Kouki Sato (Tokyo Tech) CP^2 -sliceness and Floer homologically thin knots 15
- 35 Motoo Tange (Univ. of Tsukuba) Slice-ribbon conjecture and handle slide 15
Tetsuya Abe (Osaka City Univ.)
- 36 Syunji Moriya (Osaka Pref. Univ.) The space of short ropes and the classifying space of the space of long
Keiichi Sakai (Shinshu Univ.) knots 15

16:00–17:00 Talk Invited by Topology SectionYasuyuki Miyazawa (Yamaguchi Univ.) Links with trivial Q -polynomial**Infinite Analysis**

March 26th (Sun) Conference Room III

10:30–11:30

- 1 Akishi Kato (Univ. of Tokyo) Quiver mutation sequences and q -binomial identities 15
Yuma Mizuno (Tokyo Tech)
Yuji Terashima (Tokyo Tech)
- 2 Ryosuke Kodera (Kyoto Univ.) Higher level Fock spaces and affine Yangian 15
- 3 Katsuyuki Naoi Noncommutativity between the operations of taking tensor products
(Tokyo Univ. of Agri. and Tech.) and classical limits of $U_q(\mathbf{Lg})$ -modules 15
- 4 Yoshihiro Takeyama On the eigenfunctions for the multi-species q -Boson system 15
(Univ. of Tsukuba)

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

Ivan Chi Ho Ip (Kyoto Univ.) Positive representation and cluster realization of quantum groups

15:30–16:30 Talk Invited by Infinite Analysis Special SessionAkishi Kato (Univ. of Tokyo) Quiver mutation loops and partition q -series

March 27th (Mon) Conference Room III

10:15–12:00

- 5 Hiroshi Kawakami The complete degeneration scheme of the four-dimensional Painlevé-
(Aoyama Gakuin Univ.) type equations 15
- 6 Hidehito Nagao (Akashi Coll. of Tech.) On q -Garnier systems 15
Yasuhiko Yamada (Kobe Univ.)
- 7 Hidehito Nagao (Akashi Coll. of Tech.) Reductions from q -Garnier systems to q -Painlevé systems 15
Yasuhiko Yamada (Kobe Univ.)
- 8 Genki Shibukawa (Osaka Univ.) A generalization of multivariate Meixner, Charlier and Krawtchouk
polynomials 15

- 9 Yousuke Ohya (Tokushima Univ.) q -Stokes phenomenon of q -hypergeometric series ${}_2\phi_0(a, 0; -; q, x) \cdots \cdots 15$
- 10 Yousuke Ohya (Tokushima Univ.) q -Stokes phenomenon of q -hypergeometric series ${}_1\phi_1(0; a; q, x) \cdots \cdots 15$
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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.

The talks with \flat marks denote presentations on whiteboard or blackboard. The speakers with \star marks are professors emeriti. If you find anything wrong in the program, do not hesitate to inform the Chair of Organizing Committee by sending e-mail to the address `program17mar@mathsoc.jp`.

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

Information for Participants

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

There are three restaurants “Student Refectory”, “Lever son Verre”, and “Student Cafeteria” on campus. However their capacity is not so large, especially on Saturday and Sunday. Participants are recommended to take lunch with them, which is available in the shopping district near campus.

Official Party

Date: March 25th (Sat) 18:00–20:00

Venue: Lever son Verre “Minami-Osawa”

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

Directions

2017 MSJ ANNUAL MEETING

Dates : March 24th (Fri)–27th (Mon), 2017

Venue : Tokyo Metropolitan University
1-1 Minami-Osawa, Hachioji-shi, Tokyo 192-0397

Contact to : Tokyo Metropolitan University
Department of Mathematics and Information Sciences
1-1 Minami-Osawa, Hachioji-shi, Tokyo 192-0397
tmu17mar@mathsoc.jp
Phone +81 (0) 90 1791 3483 (During session)

Web Site : <http://mathsoc.jp/en/meeting/tmu17mar/>

Conference Rooms

	Place	Research Sections
Conference Room I	Small Hall, Auditorium	Functional Equations
Conference Room II	Bldg. 11 2F Rm. 204	Algebra, Featured Invited Talk
Conference Room III	Bldg. 11 1F Rm. 110	Foundation of Mathematics and History of Mathematics, Infinite Analysis, Featured Invited Talks
Conference Room IV	Bldg. 12 1F Rm. 101	Topology
Conference Room V	Bldg. 12 1F Rm. 102	Applied Mathematics, Featured Invited Talks
Conference Room VI	Bldg. 12 1F Rm. 103	Statistics and Probability
Conference Room VII	Bldg. 12 1F Rm. 104	Complex Analysis, Real Analysis, Featured Invited Talk
Conference Room VIII	Bldg. 12 2F Rm. 201	Geometry, Featured Invited Talk
Conference Room IX	Bldg. 12 2F Rm. 202	Functional Analysis
Plenary Talks	Large Hall, Auditorium	
Open Lectures for Citizens	Large Hall, Auditorium	

Other Rooms

Membership Fee & Extended Abstracts	Bldg. 11, 1F Rm. 103
Discussion Rooms	Bldg. 12, 2F Rm. 203
Book Display and Sale	Bldg. 11, 1F Rm. 105, 106, 108
Executive Committee, MSJ President	Bldg. 11, 1F Rm. 102
Official Party	Lever son Verre “Minami-Osawa”