

2014 Mathematical Society of Japan

ANNUAL MEETING

Dates: March 15th (Sat)–18th (Tue), 2014

Venue: Gakushuin University

Contact to: Department of Mathematics,
Faculty of Sciences, Gakushuin University
Mejiro 1–5–1, Toshima-ku, Tokyo
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Mathematical Society of Japan

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	I West Bldg. 5 201	II West Bldg. 5 202	III West Bldg. 5 302	IV West Bldg. 5 303	V West Bldg. 2 201	VI West Bldg. 2 301	VII West Bldg. 2 302	VIII West Bldg. 2 401	IX West Bldg. 2 402
15th (Sat)	Algebra 9:00–12:00 14:15–16:30	Functional Analysis 9:30–11:50	Found. of Math. and History of Math. 9:30–11:30 14:15–17:00	Topology 10:00–12:00 14:15–16:30	Functional Equations 9:00–12:00 14:15–16:30	Statistics and Probability 9:30–12:00	Geometry 9:20–12:00 14:30–15:25	Complex Analysis 9:30–11:45 14:15–15:45	Applied Mathematics 9:30–11:50 14:30–16:40
	Featured Invited Talks					13:00–14:00			
	Invited Talk 16:45–17:45	Invited Talk 14:15–15:15		Invited Talk 17:00–18:00	Invited Talk 16:45–17:45	Invited Talks 14:30–15:30 15:45–16:45	Invited Talk 15:40–16:40	Invited Talk 16:00–17:00	Invited Talk 16:50–17:50
16th (Sun)	Algebra 9:00–12:00	Functional Analysis 10:00–11:50	Found. of Math. and History of Math. 9:30–11:40	Topology 9:30–11:45	Functional Equations 9:00–12:00	Statistics and Probability 9:00–11:25	Geometry 9:40–11:50	Complex Analysis 9:30–10:45	Applied Mathematics 9:30–11:30 13:00–14:30
	Invited Talk 13:15–14:15	Invited Talk 13:15–14:15	Invited Talk 13:10–14:10	Invited Talk 13:30–14:30	Invited Talk 13:15–14:15		Invited Talk 13:00–14:00	Invited Talk 11:00–12:00	
	MSJ Prizes Presentation (Conference Room I) (15:00–15:20)								
	Plenary Talks (Conference Room I) MSJ Spring Prize Winner (15:30–16:30)								
	Noriko Mizoguchi (Tokyo Gakugei Univ.) (16:45–17:45)								
	Official Party (Mejiro Club) (18:00–20:00)								
17th (Mon)	Algebra 9:30–12:00 14:15–15:00	Functional Analysis 9:30–12:00 14:15–15:00	Real Analysis 9:00–12:05 14:15–16:25	Topology 10:00–12:00 14:15–15:15	Functional Equations 9:00–12:00 14:15–16:15	Statistics and Probability 9:00–12:00	Geometry 10:00–11:50	Infinite Analysis 10:00–11:30 14:15–15:00	Applied Mathematics 9:00–12:00 14:30–16:30
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	Invited Talks 15:30–16:30 16:45–17:45	Invited Talks 15:15–16:15 16:30–17:30	Invited Talk 16:45–17:45	Invited Talk 15:45–16:45	Invited Talk 16:30–17:30	Invited Talks 14:30–15:30 15:45–16:45	Invited Talk 14:20–15:20	Invited Talk 15:15–16:15	Invited Talk 16:45–17:45
18th (Tue)	Algebra 9:00–12:00 14:15–16:45	Functional Analysis 10:00–11:40 14:15–15:15	Real Analysis 9:00–12:20 14:15–15:55		Functional Equations 9:00–12:00 14:15–15:15			Infinite Analysis 10:00–11:30	Applied Mathematics 10:00–11:30 14:15–15:45
	Featured Invited Talks					13:00–14:00			
			Invited Talk 16:15–17:15		Invited Talk 15:30–16:30			Invited Talk 14:15–15:15	Invited Talk 16:00–17:00

Plenary Talks

March 16th (Sun) Conference Room I

MSJ Spring Prize Winner		(15:30–16:30)
Noriko Mizoguchi (Tokyo Gakugei Univ.)	Blow-up in nonlinear parabolic equations	(16:45–17:45)

Featured Invited Talks

March 15th (Sat)

Conference Room I

Yoichi Motohashi (Finnish Acad. of Sci. & Letters)	* The twin prime conjecture	(13:00–14:00)
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Conference Room V

Akimichi Takemura (Univ. of Tokyo)	On recent developments of computational algebraic statistics	(13:00–14:00)
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Conference Room VII

Satoru Shimizu (Tohoku Univ.)	Special domains in several complex variables	(13:00–14:00)
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March 17th (Mon)

Conference Room V

Katsuyuki Takashima (Mitsubishi Electric Corp.)	The evolution of elliptic curve cryptography	(13:00–14:00)
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Conference Room VII

Takashi Shioya (Tohoku Univ.)	Concentration, convergence, and dissipation of spaces	(13:00–14:00)
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March 18th (Tue)

Conference Room V

Yoshitsugu Takei (Kyoto Univ.)	A survey on algebraic analysis of singular perturbation theory —on the exact treatment of exponentially small terms—	(13:00–14:00)
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Conference Room VII

Mitsuru Uchiyama (Shimane Univ.)	Analysis of matrix functions —Operator inequalities, polynomials, Gamma function—	(13:00–14:00)
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Talks Invited by Research Sections and Special Session

March 15th (Sat)

Algebra (Conference Room I)

Takehiko Yasuda (Osaka Univ.) Perspectives on the wild McKay correspondence (16:45–17:45)

Geometry (Conference Room VII)

Yu Kawakami (Yamaguchi Univ.) Value distribution of the Gauss map of surfaces (15:40–16:40)

Complex Analysis (Conference Room VIII)

Hideki Miyachi (Osaka Univ.) Thurston theory on the geometry of Teichmüller space (16:00–17:00)

Functional Equations (Conference Room V)

Haruya Mizutani (Gakushuin Univ.) On Strichartz estimates for Schrödinger equations with variable coefficients (16:45–17:45)

Functional Analysis (Conference Room II)

Kenichi Ito (Univ. of Tsukuba) Classification of threshold properties of one-dimensional discrete Schrödinger operators (14:15–15:15)

Statistics and Probability (Conference Room VI)

Masaaki Fukasawa (Osaka Univ.) Whittle likelihood for high frequency data (14:30–15:30)

Award Lecture for 2013 Analysis Prize

Toshiro Watanabe (Univ. of Aizu) Relation between infinitely divisible distributions and their Lévy measures (15:45–16:45)

Applied Mathematics (Conference Room IX)

Yoshio Okamoto (Univ. of Electro-Comm.) Free edge lengths in plane graphs (16:50–17:50)

Topology (Conference Room IV)

Takefumi Nosaka (Kyushu Univ.) Low dimensional topological invariants of bilinear forms from quandle theory (17:00–18:00)

March 16th (Sun)

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

Yasushi Hirata (Kanagawa Univ.) Comparing some topological properties of ordinals, LOTS', monotonically normal spaces, and their products (13:10–14:10)

Algebra (Conference Room I)

Takeshi Ikeda (Okayama Univ. of Sci.) K-theory of the flag varieties of classical type (13:15–14:15)

Geometry (Conference Room VII)

Kei Funano (Kyoto Univ.) Eigenvalues of Laplacian and multi-way isoperimetric constants on Riemannian manifolds (13:00–14:00)

Complex Analysis (Conference Room VIII)

Makoto Abe (Hiroshima Univ.) Meromorphic convexity and Steinness for complex spaces (11:00–12:00)

Functional Equations (Conference Room V)

Award Lecture for 2013 Analysis Prize

Yoshihiro Tonegawa (Hokkaido Univ.) On the regularity theory for mean curvature flow (13:15–14:15)

Functional Analysis (Conference Room II)

Kazuki Hiroe (Josai Univ.) Additive Deligne–Simpson problem and root systems (13:15–14:15)

Topology (Conference Room IV)Taro Yoshino (Univ. of Tokyo)^b On topological blowups (13:30–14:30)

March 17th (Mon)

Algebra (Conference Room I)

Award Lecture for 2014 Algebra Prize

Hidekazu Furusho (Nagoya Univ.) Various topics around associators (15:30–16:30)

Award Lecture for 2014 Algebra Prize

Yuji Yoshino (Okayama Univ.) Cohen–Macaulay modules over Cohen–Macaulay rings (16:45–17:45)

Geometry (Conference Room VII)

Tatsuya Tate (Tohoku Univ.) One and two dimensional quantum walks (14:20–15:20)

Functional Equations (Conference Room V)Atsushi Tachikawa (Tokyo Univ. of Sci.) On the regularity of $p(x)$ -harmonic maps (16:30–17:30)**Real Analysis** (Conference Room III)

Mitsuo Izuki (Tokyo Denki Univ.) A real analytic study of various function spaces with variable exponent (16:45–17:45)

Functional Analysis (Conference Room II)

Award Lecture for 2013 Analysis Prize

Yasuo Watatani (Kyushu Univ.) Singularities in operator algebras (15:15–16:15)

Sei-Ichiro Ueki (Ibaraki Univ.) Composition and Integral operators on Bargmann–Fock spaces (16:30–17:30)

Statistics and Probability (Conference Room VI)

Hisayuki Tsukuma (Toho Univ.) Decision-theoretic estimation of parameter matrices (14:30–15:30)

Taiji Suzuki (Tokyo Tech) Statistical properties of multiple kernel learning and sparse estimation (15:45–16:45)

Applied Mathematics (Conference Room IX)

Karel Svadlenka (Kanazawa Univ.) On the method of semidiscretization in time for nonlinear evolutionary problems (16:45–17:45)

Topology (Conference Room IV)

Megumi Harada (McMaster Univ.)* Okounkov bodies and toric degenerations (15:45–16:45)

Infinite Analysis (Conference Room VIII)

Todor Eliseev Milanov (Univ. of Tokyo) Hirota bilinear equations in singularity theory (15:15–16:15)

March 18th (Tue)

Functional Equations (Conference Room V)

Takeshi Wada (Kumamoto Univ.) Smoothing effects and global well-posedness of Maxwell–Schrödinger equations (15:30–16:30)

Real Analysis (Conference Room III)

Kota Kumazaki * A mathematical model for concrete carbonation phenomenon
(Tomakomai Nat. Coll. of Tech.) (16:15–17:15)

Applied Mathematics (Conference Room IX)

Yoshitaka Watanabe (Kyushu Univ.) Computer-assisted stability and instability proofs for the Orr–Sommerfeld problem (16:00–17:00)

Infinite Analysis (Conference Room VIII)

Takao Suzuki (Kinki Univ.) Higher order Painlevé system, rigid system and hypergeometric function (14:15–15:15)

Booth by ICM 2014 Organizing Committee

Schedule: March 15th (Sat)~17th (Mon), 2014

Place: West Bldg. No. 2, Rm. 405

Detailed Information on the URL:

<http://mathsoc.jp/en/meeting/gakushuin14mar/ICM2014/>

Open Lectures for Citizens

Date: March 15th (Sat) 14:00–16:30

Venue: West Bldg. No. 5, B1

Sponsored by: Mathematical Society of Japan

Program: Opening Speech:

Tadahisa Funaki (President of MSJ/Univ. of Tokyo) (14:00–14:10)

Lecture 1:

Tadashi Tokieda (Univ. of Cambridge/Harvard Univ)

Toy models (14:10–15:10)

Lecture 2:

Fumiharu Kato (Kumamoto Univ.)

Pascal's half-plane (15:30–16:30)

Web Page: <http://mathsoc.jp/en/meeting/gakushuin14mar/>

Foundation of Mathematics and History of Mathematics

March 15th (Sat) Conference Room III

9:30–11:30

- 1 Shigeru Masuda (Kyoto Univ.) The Sturm–Liouville type problem in the modeling of the Schrödinger equations 20
- 2 Shigeru Masuda (Kyoto Univ.) The earlier toil and moil in proving on the describability of trigonometric series 20
- 3 Michiyo Nakane Examination of the Stark effect and development of the Hamilton–Jacobi theory in early 20th century 20
- 4 Hideyuki Majima (Ochanomizu Univ.)^b On the problem in the appendix of the “Tetsujutsu-Sankei (Mathematical Treatise on the Technique of Linkage)” 30
- 5 Shotaro Tanaka * Laurent expansion —Cauchy’s integral formulae and Y. Wada’s theorems— 20

11:30–12:00 Mathematics History Team Meeting

14:15–17:00

- 6 Takahiro Seki (Niigata Univ.) A Gentzen-style formulation for non-associative substructural logics II 15
- 7 Katsumi Sasaki (Nanzan Univ.) The exact **K4**-models in **S4** 15
- 8 Ken-etsu Fujita (Gunma Univ.) Intermediate lambda-terms between Church and Curry 15
Aleksy Schubert (Univ. of Warsaw)
- 9 Taishi Kurahashi (Kobe Univ.) On Henkin sentences based on Rosser provability predicates 15
- 10 Satoru Kuroda On minimal three-sort theories for PSPACE and EXPTIME 20
(Gunma Pref. Women’s Univ.)
- 11 Keita Yokoyama (JAIST) Finite iterations of infinite and finite Ramsey’s theorem 20
- 12 Takayuki Kihara (JAIST) Algorithmic randomness and null-additivity 15
Kenshi Miyabe (Univ. of Tokyo)
- 13 Kenshi Miyabe (Univ. of Tokyo/JSPS) Characterization of being a Lebesgue point for integral tests 20
- 14 Akitoshi Kawamura (Univ. of Tokyo) Distance trisector curves via the contraction mapping theorem 15

March 16th (Sun) Conference Room III

9:30–11:40

- 15 Takashi Oyabu ^b Mathematics an thermodynamics, and other 17 talks 5
- 16 Koichiro Ikeda (Hosei Univ.) Model complete generic structures I 15
Hirotaka Kikyo (Kobe Univ.)
- 17 Hirotaka Kikyo (Kobe Univ.) Model complete generic structures II 15
Koichiro Ikeda (Hosei Univ.)
- 18 Masanao Ozawa (Nagoya Univ.) Maximal beable subuniverse of quantum set theory 30

19	Teruyuki Yorioka (Shizuoka Univ.)	New preservation theorems for forcings with models as side conditions	15
20	Sakaé Fuchino (Kobe Univ.)	Rado's conjecture and reflection principles compatible with MM	40

11:40–12:10 Research Section Assembly

13:10–14:10 Talk invited by Section on Foundation and History of Mathematics

Yasushi Hirata (Kanagawa Univ.)	Comparing some topological properties of ordinals, LOTS', monotonically normal spaces, and their products
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Algebra

March 15th (Sat) Conference Room I

9:00–12:00

1	Shigeru Iitaka (Gakushuin Univ.*)	A variation of Euler's phi-function	10
2	Tomohiro Iwami (Kyushu Sangyo Univ.)	* On a projectivity criterion for certain three-dimensional Shimura varieties of semi-stable type	10
3	Tetsuya Ando (Chiba Univ.)	Development on cyclic homogeneous polynomial inequalities of three variables	15
4	Yoshifumi Tsuchimoto (Kochi Univ.)	Dynamical system over a finite field and non commutative algebraic geometry	15
5	So Okada (Oyama Nat. Coll. of Tech.)	Quintic periods and stability conditions via homological mirror symmetry	10
6	Makoto Sakurai	Chiral algebras and algebraization of Higgs bundles' stability	15
7	Nan Wang (Saitama Univ.) Fumio Sakai (Saitama Univ.)	Hyperelliptic and trigonal curves among cyclic coverings of the projective line	15
8	Osamu Matsuda (Tsuyama Nat. Coll. of Tech.)	Classification of curves on irrational ruled surfaces by mixed plurigenera	15
9	Kenta Watanabe (Osaka Univ.)*	On the classification of ACM line bundles on quartic hyper surfaces of $\mathbb{P}^3$	10
10	Shigeru Mukai (Kyoto Univ.) Hisanori Ohashi (Tokyo Univ. of Sci.)	The automorphism groups of Enriques surfaces covered by symmetric quartic surfaces	15
11	Kazuki Utsumi (Hiroshima Univ.)	Jacobian fibrations on the singular $K3$ surface of discriminant 3	10
12	Katsuhisa Furukawa (Waseda Univ.)	On general fibers of Gauss maps in arbitrary characteristic	15

14:15–16:30

- 13 Kiwamu Watanabe (Saitama Univ.) * Characterization of the complete flag manifold of type F_4 15
- 14 Tadashi Takahashi (Konan Univ.) On the application of elimination ideal V 10
- 15 Yusuke Nakajima (Nagoya Univ.) Dual F -signature of Cohen–Macaulay modules over rational double points 15
- 16 Shiro Goto (Meiji Univ.) Huneke–Wiegand conjecture and change of rings 15
 Ryo Takahashi (Nagoya Univ.)
Naoki Taniguchi (Meiji Univ.)
 Hoang Le Truong (IMVAST)
- 17 Shiro Goto (Meiji Univ.) * The first Euler characteristics versus the homological degrees 15
Kazuho Ozeki (Yamaguchi Univ.)
- 18 Shiro Goto (Meiji Univ.) * Relation between the first Hilbert coefficients and the homological torsions 10
Kazuho Ozeki (Yamaguchi Univ.)
- 19 Kei-ichiro Iima * Linkage of modules over a Gorenstein local ring 15
 (Nara Nat. Coll. of Tech.)
 Ryo Takahashi (Nagoya Univ.)
- 20 Tokuji Araya (Okayama Univ. of Sci.) Thick subcategories of stable categories over graded Gorenstein rings 10
- 21 Shigeru Kuroda (Tokyo Metro. Univ.) The automorphism group of an integral domain over the kernel of a locally nilpotent derivation 15

16:45–17:45 Talk invited by Algebra Section

- Takehiko Yasuda (Osaka Univ.) Perspectives on the wild McKay correspondence

March 16th (Sun) Conference Room I

9:00–12:00

- 22 Ken-ichiroh Kawasaki ^b On a characterization of cofinite complexes over regular rings of finite dimension 10
 (Nara Univ. of Edu.)
- 23 Shuhei Kamioka (Kyoto Univ.) Laurent biorthogonal polynomials, q -Narayana polynomials and domino tilings of the Aztec diamonds 15
- 24 Takayuki Hibi * A necessary and sufficient condition for strong Koszulness of edge rings associated with finite graphs 15
 (Osaka Univ./JST CREST)
Kazunori Matsuda
 (Rikkyo Univ./JST CREST)
 Hidefumi Ohsugi
 (Rikkyo Univ./JST CREST)
- 25 Takayuki Hibi Algebraic study on Cameron–Walker graphs 15
 (Osaka Univ./JST CREST)
Akihiro Higashitani (Osaka Univ.)
 Kyouko Kimura (Shizuoka Univ.)
 Augustine B. O’Keefe
 (Univ. of Kentucky)
- 26 Akihiro Higashitani (Osaka Univ.) Minkowski sum of edge polytopes and its normality 15

27	<u>Noritsugu Kameyama</u> (Shinshu Univ.) <u>Yuko Kimura</u> (Shinshu Univ.) <u>Kenji Nishida</u> (Shinshu Univ.)	Categories including all G-projective modules	10
28	<u>Takahide Adachi</u> (Nagoya Univ.) <u>Takuma Aihara</u> (Nagoya Univ.) Aaron Chan (Univ. of Aberdeen)	Classifying two-term tilting complexes for Brauer graph algebras	15
29	<u>Takahide Adachi</u> (Nagoya Univ.) <u>Takuma Aihara</u> (Nagoya Univ.) Aaron Chan (Univ. of Aberdeen)	Tilting-connectedness of Brauer graph algebras	15
30	<u>Hiroshi Nagase</u> (Tokyo Gakugei Univ.) * <u>Makoto Nagura</u> (Nara Nat. Coll. of Tech.)	Counting regular prehomogeneous vector spaces associated with Dynkin quivers	10
31	<u>Hidetoshi Asashiba</u> (Shizuoka Univ.) <u>Ken Nakashima</u> (Shizuoka Univ.)	Tilted algebras and configurations of self-injective algebras of Dynkin type	10
32	<u>Kenichi Shimizu</u> (Nagoya Univ.)	A characterization of unimodular finite tensor categories	15

13:15–14:15 Talk invited by Algebra Section

Takeshi Ikeda (Okayama Univ. of Sci.) K-theory of the flag varieties of classical type

March 17th (Mon) Conference Room I

9:30–12:00

33	<u>Ryo Kanda</u> (Nagoya Univ.) ^b	Specialization orders on atom spectra of Grothendieck categories	15
34	<u>Tomohiro Itagaki</u> (Tokyo Univ. of Sci.) <u>Katsunori Sanada</u> (Tokyo Univ. of Sci.)	The dimension formula of the cyclic homology of truncated quiver algebras over a field of positive characteristic	10
35	<u>Ayako Itaba</u> (Tokyo Univ. of Sci.)	On Hochschild cohomology of a self-injective special biserial algebra obtained by a circular quiver with double arrows	10
36	<u>Takahiko Furuya</u> (Meikai Univ.) <u>Takao Hayami</u> (Hokkai-Gakuen Univ.)	On Snashall's question about Hochschild cohomology	10
37	<u>Hirotaka Koga</u> (Univ. of Tsukuba)	Clifford extensions	15
38	<u>Izuru Mori</u> (Shizuoka Univ.) <u>Kenta Ueyama</u> (Shizuoka Univ.)	Ampleness of group actions on graded algebras	15
39	<u>Hidetoshi Asashiba</u> (Shizuoka Univ.)	Gluing of derived equivalences along bimodules	10
40	<u>Satoshi Yamanaka</u> (Okayama Univ.)	On Frobenius polynomials in skew polynomial rings	10
41	<u>Tsunekazu Nishinaka</u> (Okayama Shoka Univ.)	On primitivity of group algebras of amalgamated free products	10

14:15–15:00

42	<u>Hisayoshi Endo</u> (Tokai Univ.)	Discussion on the characteristics of coupled primes	10
43	<u>Kenichi Shimizu</u> * (Kenmei Girls' Junior and Senior High School)	On SP number	10
44	<u>Masanori Sawa</u> (Nagoya Univ.)	On a theorem of Hilbert related to Waring's problem, and Ellison's error	15

15:30–16:30 Award Lecture for 2014 Algebra Prize

Hidekazu Furusho (Nagoya Univ.) Various topics around associators

16:45–17:45 Award Lecture for 2014 Algebra Prize

Yuji Yoshino (Okayama Univ.) Cohen–Macaulay modules over Cohen–Macaulay rings

March 18th (Tue) Conference Room I

9:00–12:00

- 45 Soichi Ikeda (Nagoya Univ.)^b Characterization of the Euler double zeta function 10
Kaneaki Matsuoka (Nagoya Univ.)
- 46 Kaneaki Matsuoka (Nagoya Univ.)^b Mean values of the derivative of the Hardy function 10
- 47 Ade Irma Suriajaya (Nagoya Univ.) On the zeros of the k -th derivative of the Riemann zeta function under the Riemann hypothesis 15
- 48 Yoshikatsu Yashiro (Nagoya Univ.)* Approximate functional equation and mean value formula for the derivatives of L -function attached to cusp form 10
- 49 Kalyan Chakraborty (Harish-Chandra Research Inst.)* An inequality for Hecke multiplicative functions 10
Makoto Minamide (Kyoto Sangyo Univ.)
- 50 Isao Kiuchi (Yamaguchi Univ.)* Mean square formula for double zeta-function 10
Makoto Minamide (Kyoto Sangyo Univ.)
- 51 Masanori Katsurada (Keio Univ.) Transformation formulae and asymptotic expansions for double holomorphic Eisenstein series of two variables 10
Takumi Noda (Nihon Univ.)
- 52 Jun Furuya (Okinawa Nat. Coll. of Tech.)* Mean values of the error term with shifted arguments in the circle problem 10
Yoshio Tanigawa (Nagoya Univ.)
- 53 Yoshio Tanigawa (Nagoya Univ.)* Mean square of the error term in the asymmetric many dimensional divisor problem 10
Xiaodong Cao (Beijing Inst. of Petro-Chemical Tech.)
Wenguang Zhai (China Univ. of Mining and Tech.)
- 54 Hajime Kaneko (Nihon Univ./JSPS) On normal numbers and their generalizations 15
- 55 Taka-aki Tanaka (Keio Univ.) A new class of Mahler functions 10
- 56 Soichi Ikeda (Nagoya Univ.)* Sheffer sequences and supplementary formulas 10
- 57 Takao Komatsu (Hirotsaki Univ.) A note on the denominators of Bernoulli numbers 10
Florian Luca (UNAM)
Claudio de J. Pita Ruiz V. (Univ. Panamericana)
- 58 Takafumi Miyazaki (Nihon Univ.)* On the system of Diophantine equations $a^2 + b^2 = (m^2 + 1)^r$ and $a^x + b^y = (m^2 + 1)^z$ 15

14:15–16:45

59	Yūsuke Okuyama (Kyoto Inst. Tech.)	A quantitative logarithmic equidistribution in non-archimedean and complex dynamics	15
60	Yūsuke Okuyama (Kyoto Inst. Tech.)	Algebraic zeros divisors having small diagonals and small heights in adelic dynamics	15
61	Tetsuya Uematsu (Chuo Univ.)	On zero-cycles on diagonal cubic surfaces over p -adic fields	10
62	Yasufumi Hashimoto (Univ. of Ryukyus)	* Asymptotic behaviors for sums of class numbers of discriminants with Pell-type equations	15
63	Koji Tasaka (Kyushu Univ.)	On periods of modular forms and linear relations among multiple zeta values	10
64	Hirofumi Nagoshi (Gunma Univ.)	* Combining three theorems on the joint universality of L -functions	10
65	Kazuhito Kozuka (Miyakonojo Nat. Coll. of Tech.)	* A combinatorial-geometric approach to Halbritter's formula for Dedekind sums	10
66	Aiichi Yamasaki (Kyoto Univ.) Akinari Hoshi (Niigata Univ.) Ming-chang Kang (Nat. Taiwan Univ.)	Class numbers and algebraic tori	10
67	Shingo Sugiyama (Osaka Univ.) Masao Tsuzuki (Sophia Univ.)	* Relative trace formulas and subconvexity estimates of L -functions for Hilbert modular forms	10
68	Yasushi Mizusawa (Nagoya Inst. of Tech.)	* Semidihedral 2-class field towers and $\mathbb{Z}_2$ -extensions of real quadratic fields	10
69	Yasushi Mizusawa (Nagoya Inst. of Tech.)	* Isometric embeddings of finite fields	10
70	Shota Kojima (Rikkyo Univ.) Noboru Aoki (Rikkyo Univ.)	Nested square roots and Poincaré functions	10

Geometry

March 15th (Sat) Conference Room VII

9:20–12:00

1	Hiroataka Ebisui (Oval Research Center)	About Descartes Oval as the pure extension of Ellipse	5
2	Sadahiro Maeda (Saga Univ.)	* Classification theorems of Hopf hypersurfaces with η -parallel Ricci tensor in a nonflat complex space form	15
3	Sadahiro Maeda (Saga Univ.)	* Characterizations of three homogeneous real hypersurfaces in a complex hyperbolic space	15
4	Kurando Baba (Fukushima Nati. Coll. of Tech.)	Local orbit types of the s -representations for semisimple pseudo-Riemannian symmetric spaces	15
5	Hiroyuki Kurihara (Ibaraki Univ.) Koji Tojo (Chiba Inst. of Tech.)	Involutions on a compact 4-symmetric space of exceptional type	15

11 Geometry

6	Naoyuki Koike (Tokyo Univ. of Sci.)	The mean curvature flow starting from an invariant hypersurface in a Hilbert space with an almost free Lie group action	15
7	Shinobu Fujii (Oshima Nat. Coll. of Maritime Tech.)	Moment maps and isoparametric hypersurfaces in spheres —Grassmannian cases—	15
8	Akira Kubo (Hiroshima Univ.)	Geometry of polar actions on complex hyperbolic spaces	10
9	Kaname Hashimoto (Osaka City Univ.) Katsuya Mashimo (Hosei Univ.)	Classification of special Lagrangian submanifolds constructed from homogeneous hypersurfaces of the sphere	10
10	Takashi Sakai (Tokyo Metro. Univ.) Shinji Ohno (Tokyo Metro. Univ.)	Area-minimizing cones over minimal R-spaces	15

14:30–15:25

11	Masahiro Ooguri (Chuo Univ.)*	Three-dimensional locally homogeneous nondegenerate centroaffine hypersurfaces with null Tchebychev vector field	10
12	Tetsuya Taniguchi (Kitasato Univ.) Seiichi Udagwa (Nihon Univ.)	Characterizations of Ricci flat metrics and Lagrangian submanifolds in terms of the variational problem	10
13	Kazuyuki Hasegawa (Kanazawa Univ.)	The first Chern class and conformal area for a twistor holomorphic immersion	10
14	Mitsuhiro Itoh (Univ. of Tsukuba) Hiroyasu Satoh (Tokyo Denki Univ.)	Barycenter and information geometry	10

15:40–16:40 Talk invited by Geometry Section

Yu Kawakami (Yamaguchi Univ.)	Value distribution of the Gauss map of surfaces
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March 16th (Sun) Conference Room VII

9:40–11:50

15	Jin-ichi Itoh (Kumamoto Univ.) Costin Vilcu (IMRA, Bucharest)	Cut locus structure on graphs	15
16	Sorin Vasile Sabau (Tokai Univ.) Kazuhiro Shibuya (Hiroshima Univ.) Gheorghe Pitis (Transylvania Univ.)	Generalized Finsler structures on closed 3-manifolds	15
17	Jun-ichi Inoguchi (Yamagata Univ.) Kenji Kajiwara (Kyushu Univ.) Nozomu Matsuura (Fukuoka Univ.) Yasuhiro Ohta (Kobe Univ.)	Discrete mKdV and discrete sine-Gordon flows on discrete space curves	15
18	Shun Maeta (Shumei Univ.) Hajime Urakawa (Tohoku Univ.) Nobumitsu Nakauchi (Yamaguchi Univ.)	Chen's conjecture and triharmonic submanifolds	15
19	Shigehiro Sakata (Tokyo Metro. Univ.)	Uniqueness of a center of a body and geometry of the heart	15
20	Kei Kondo (Tokai Univ.)	The finite topological types and diffeomorphism theorems to Euclidean space in Riemann–Finsler geometry	15
21	Hiroki Sako (Tokai Univ.) Masato Mimura (Tohoku Univ.)	Group approximation in Cayley topology and coarse geometry, Part I: Coarse embeddings of amenable groups.	15

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

Kei Funano (Kyoto Univ.) Eigenvalues of Laplacian and multi-way isoperimetric constants on Riemannian manifolds

March 17th (Mon) Conference Room VII

10:00–11:50

- | | | | |
|----|---|---|----|
| 22 | Yuji Hirota (Tokyo Univ. of Sci.) | On prequantization of Dirac manifolds | 15 |
| 23 | Yushi Okitsu (Tokyo Tech) | The cutting construction of weakly convex contact toric manifolds . . . | 10 |
| 24 | Homare Tadano (Osaka Univ.) | Gap theorems for compact gradient Sasaki–Ricci solitons | 15 |
| 25 | Hiraku Nozawa (Ritsumeikan Univ.)
Gaël Meigniez (Univ. Bretagne-Sud) | On rigidity of Lie foliations | 15 |
| 26 | Daisuke Tarama (Kyoto Univ.) * | Analytic extension of Birkhoff normal forms for $SO(3)$ free rigid body dynamics | 15 |
| 27 | Akira Ushijima (Kanazawa Univ.)
Kazuhiro Ichihara (Nihon Univ.) | On the maximal volume of three-dimensional hyperbolic complete orthoschemes sharing the same base | 10 |

14:20–15:20 Talk invited by Geometry Section

Tatsuya Tate (Tohoku Univ.) One and two dimensional quantum walks

Complex Analysis

March 15th (Sat) Conference Room VIII

9:30–11:45

- | | | | |
|---|---|---|----|
| 1 | Katsuyuki Nishimoto
(Descartes Press Co.) | * The integral Contour of N-fractional calculus, interval of fractional integral of Riemann–Liouville and that of Weyl, and N-fractional calculus of some functions | 15 |
| 2 | Rikio Yoneda
(Otaru Univ. of Commerce) | * The invertible Toeplitz operator and the Berezin transform | 10 |
| 3 | Hiroaki Aikawa (Hokkaido Univ.) | Intrinsic ultracontractivity and the boundary Harnack principle —A unified approach with capacitary width— | 15 |
| 4 | Masakazu Shiba (Hiroshima Univ.)*
Hiroshi Yamaguchi (Shiga Univ.)* | Compact continuations of an open Riemann surface —the shape of the realized ideal boundary— | 15 |
| 5 | Kengo Shimomura (Osaka Univ.)
Ryosuke Mineyama (Osaka Univ.) | Deformation of a triangle group and the iterated function system | 15 |
| 6 | Erina Kinjo (Tokyo Tech) | On Teichmüller metric and the length spectrums of Riemann surfaces of infinite type | 15 |
| 7 | Yuki Iguchi (Tokyo Tech) | On accumulation points of Teichmüller geodesics | 15 |
| 8 | Yoshihiko Shinomiya (Tokyo Tech) | Periodic points on Veech surfaces | 15 |

14:15–15:45

- 9 Tatsuhiro Honda Growth and distortion theorems on homogeneous unit balls 15
(Hiroshima Inst. of Tech.)
Hidetaka Hamada
(Kyushu Sangyo Univ.)
Gabriela Kohr (Babeş-Bolyai Univ.)
- 10 Martin Chuaqui Pluriharmonic mappings and linearly connected domains in $\mathbb{C}^n$ 15
(Catholic Univ. of Chile)
Hidetaka Hamada
(Kyushu Sangyo Univ.)
Rodrigo Hernández
(Univ. Adolfo Ibáñez)
Gabriela Kohr (Babeş-Bolyai Univ.)
- 11 Ian Graham (Univ. of Toronto) Loewner differential equations in reflexive complex Banach spaces 15
Hidetaka Hamada
(Kyushu Sangyo Univ.)
Gabriela Kohr (Babeş-Bolyai Univ.)
Mirela Kohr (Babeş-Bolyai Univ.)
- 12 Ian Graham (Univ. of Toronto) Extremal properties associated with univalent subordination chains in
Hidetaka Hamada $\mathbb{C}^n$ 15
(Kyushu Sangyo Univ.)
Gabriela Kohr (Babeş-Bolyai Univ.)
Mirela Kohr (Babeş-Bolyai Univ.)
- 13 Atsushi Yamamori (POSTECH)* On holomorphic automorphisms fixing the origin and the Bergman
mapping 15

16:00–17:00 Talk invited by Complex Analysis Section

Hideki Miyachi (Osaka Univ.) Thurston theory on the geometry of Teichmüller space

March 16th (Sun) Conference Room VIII

9:30–10:45

- 14 Sachiko Hamano (Fukushima Univ.) Variation of reproducing kernels for the spaces of holomorphic semiexact
differentials 15
- 15 Katsusuke Nabeshima Parametric local cohomology and logarithmic vector fields 15
(Univ. of Tokushima)
Shinichi Tajima (Univ. of Tsukuba)
- 16 Atsushi Hayashimoto* Gap theorem for generalized pseudoellipsoids 15
(Nagano Nat. Coll. of Tech.)
- 17 Masanori Adachi (Nagoya Univ.) A local formula for the Diederich–Fornaess exponent on domains bounded
by Levi-flat real hypersurfaces 10
- 18 Takayuki Koike (Univ. of Tokyo)* On minimal singular metrics of certain class of line bundles whose
section ring is not finitely generated 10

11:00–12:00 Talk invited by Complex Analysis Section

Makoto Abe (Hiroshima Univ.) Meromorphic convexity and Steinness for complex spaces

Functional Equations

March 15th (Sat) Conference Room V

9:00–12:00

- 1 Koh Katagata (Ichinoseki Nat. Coll. of Tech.) Configurations of equilibrium points in complex differential equations and the Euler–Jacobi formula 10
- 2 Hideaki Izumi (Chiba Inst. of Tech.) Analytic solutions of functional equations associated to translative means 10
Janusz Matkowski (Univ. of Zielona Góra)
- 3 Kanae Akaiwa (Kyoto Univ.) On the asymptotic behavior in the recurrence relation of the quotient-difference method 12
Masashi Iwasaki (Kyoto Pref. Univ.)
Koichi Kondo (Doshisha Univ.)
- 4 Toshinori Takahashi (Kinki Univ.) On the WKB theoretic structure of a Schrödinger operator with a Stokes curve of loop type 12
- 5 Mika Tanda (Kinki Univ.) Alien derivatives for the Gauss hypergeometric differential equation ··· 12
- 6 Yoshiaki Goto (Hokkaido Univ.) Monodromy representation of Lauricella’s hypergeometric function F_C 12
- 7 Seiji Saito (Doshisha Univ.) On uniformly asymptotic boundedness of periodic difference equations 12
- 8 Yoichi Enatsu (Univ. of Tokyo) Asymptotic stability of equilibria of compartmental epidemic models with delays 12
- 9 Jitsuro Sugie (Shimane Univ.) Discrete condition for uniform asymptotic stability of damped linear oscillators 12
Masakazu Onitsuka (Okayama Univ. of Sci.)
- 10 Tetsutaro Shibata (Hiroshima Univ.) S-shaped bifurcation curve for semilinear two-parameter problems ···· 12
- 11 Ryuji Kajikiya (Saga Univ.) Existence of three positive solutions for the generalized Hénon equation 12
- 12 Katsuyuki Nishimoto * The solutions to the homogeneous Bessel equations by means of the (Descartes Press Co.) N-fractional calculus (The calculus in the 21 th century) (Again) ···· 6
- 13 Katsuyuki Nishimoto * The solutions to the nonhomogeneous Bessel equations by means of the (Descartes Press Co.) N-fractional calculus operator 6

14:15–16:30

- 14 Wataru Ichinose (Shinshu Univ.) The continuity and the differentiability of solutions on parameters to the Schrödinger equations and the Dirac equations 12
- 15 Wataru Ichinose (Shinshu Univ.) On the construction of the Feynman path integral for the Dirac equation 12
- 16 Kiyoshi Mochizuki Uniform resolvent estimates for magnetic Schrödinger operators in 2D exterior domain 12
(Tokyo Metro. Univ.*/Chuo Univ.)
Hideo Nakazawa (Nippon Medical School)
- 17 Fumihiko Hirose (Yamaguchi Univ.) On second order weakly hyperbolic equations and the ultradifferentiable classes 12
Haruhisa Ishida (Univ. of Electro-Comm.)

18	Megumi Sano (Osaka City Univ.)	A mean value property for polycaloric functions	12
19	Shigehiro Sakata (Tokyo Metro. Univ.)	Maximizers of the solution of Poisson's equation and the heart of a body	12
20	Mamoru Okamoto (Kyoto Univ.) Shuji Machihara (Saitama Univ.)	Well-posedness for the one dimensional Chern–Simons–Dirac system in critical and supercritical regularity spaces	12
21	Hiroyuki Hirayama (Nagoya Univ.)	Well-posedness for a system of quadratic derivative nonlinear Schrödinger equations on torus at the scaling critical regularity	10
22	Isao Kato (Nagoya Univ.) Kotaro Tsugawa (Nagoya Univ.)	Global well-posedness of Zakharov system at the critical space in four and more spatial dimensions	10
23	Sungyong Park (Tohoku Univ.) * Takayoshi Ogawa (Tohoku Univ.)	Local well-posedness and blow-up result for weakly dissipative Camassa– Holm equation	12

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

Haruya Mizutani (Gakushuin Univ.)	On Strichartz estimates for Schrödinger equations with variable coefficients
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March 16th (Sun) Conference Room V

9:00–12:00

24	Kazumasa Fujiwara (Waseda Univ.) Shuji Machihara (Saitama Univ.) Tohru Ozawa (Waseda Univ.)	Global well-posedness of the Cauchy problem for a semirelativistic system	12
25	Gaku Hoshino (Waseda Univ.) Tohru Ozawa (Waseda Univ.)	Analytic solutions to nonlinear Schrödinger equation	12
26	Yohei Yamazaki (Kyoto Univ.) *	Transverse instability of a nonlinear Schrödinger equation and the sta- bility of a bifurcation point	10
27	Kota Uriya (Tohoku Univ.) * Takayoshi Ogawa (Tohoku Univ.)	Final state problem for a system of quadratic nonlinear Schrödinger equations	10
28	Toshiyuki Suzuki (Tokyo Univ. of Sci.)	Blowup for Hartree type equations with inverse-square potentials	12
29	Takahisa Inui (Kyoto Univ.)	Classification of complex valued solutions for the nonlinear Klein– Gordon equation	10
30	Yuta Wakasugi (Osaka Univ.) *	On diffusion phenomena for the linear wave equation with space- dependent damping	10
31	Kosuke Ono (Univ. of Tokushima) *	Global existence and decay estimates for mildly degenerate Kirchhoff type dissipative wave equations to the Cauchy problem	12
32	Tomonari Watanabe (Hiroshima Univ.) *	Global existence and decay estimates for the nonlinear wave equations with space-time dependent dissipative term	12
33	Kimitoshi Tsutaya Paschalis Karageorgis (Trinity Coll.)	On the asymptotic behavior of solutions of the wave equation of Hartree type	12
34	Fumihiko Hirosawa (Yamaguchi Univ.)	Some classes of non-analytic functions for the global solvability of Kirchhoff equation	12
35	Nakao Hayashi (Osaka Univ.) *	Nonexistence of scattering states for the generalized Ostrovsky–Hunter equation	10

13:15–14:15 Award Lecture for 2013 Analysis Prize

Yoshihiro Tonegawa (Hokkaido Univ.) On the regularity theory for mean curvature flow

March 17th (Mon) Conference Room V

9:00–12:00

- 36 Noriaki Umeda (Meiji Univ.) On vanishing at space infinity for semilinear heat equation with absorption 12
- 37 Toshikazu Kuniya (Univ. of Tokyo) Invariance principle and Lyapunov functional for the asymptotic analysis of nonlinear partial differential equations with age variable 12
- 38 Tadashi Kawanago (Tokyo Tech) The Hopf bifurcation theorem for semilinear equations 12
- 39 Sachiko Ishida (Tokyo Univ. of Sci.) Boundedness of solutions to quasilinear degenerate Keller–Segel systems of parabolic-parabolic type on non-convex domains 12
Kiyotaka Seki (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
- 40 Kentarou Fujie (Tokyo Univ. of Sci.) Boundedness of solutions to parabolic-elliptic Keller–Segel systems with growth term and signal-dependent sensitivity function 12
Tomomi Yokota (Tokyo Univ. of Sci.)
- 41 Yoshiyuki Kagei (Kyushu Univ.) Uniqueness theorem on weak solutions to the Keller–Segel system of degenerate and singular types 12
Tatsuki Kawakami (Osaka Pref. Univ.)
Yoshie Sugiyama (Kyushu Univ.)
- 42 Yoshie Sugiyama (Kyushu Univ.) Global solutions to a chemotaxis system with non-diffusive memory 12
Yuuhei Tsutsui
(Waseda Univ./Osaka City Univ.)
Juan J. L. Velázquez (Univ. Bonn)
- 43 Yoshihisa Morita (Ryukoku Univ.) A reaction-diffusion system with mass conservation 10
Takashi Suzuki (Osaka Univ.)
- 44 Shigeru Sakaguchi (Tohoku Univ.)* Fast diffusion and geometry of domain 12
- 45 Norihisa Ikoma (Tohoku Univ.)* Singular perturbation problems for the Kirchhoff type equations with general nonlinearities 12
Giovany M. Figueiredo
(Univ. Federal do Pará)
João R. Santos Junior
(Univ. Federal do Pará)
- 46 Norihisa Ikoma (Tohoku Univ.)* Eigenvalue problems for fully nonlinear second-order elliptic PDE on balls 12
Hitoshi Ishii (Waseda Univ.)
- 47 Daisuke Naimen (Osaka City Univ.) The critical problem of Kirchhoff type elliptic equations in dimension four 12
- 48 Takanobu Hara (Tokyo Metro. Univ.) Regularity properties of weak solutions of second order elliptic equations with strongly singular drifts 10

14:15–16:15

- 49 Kousuke Kuto Limiting structure of steady-states to the Lotka–Volterra competition model with large diffusion and advection 12
(Univ. of Electro-Comm.)
Tohru Tsujikawa (Univ. of Miyazaki)
- 50 Kenichiro Umezū (Ibaraki Univ.)* On S -shaped and CS -shaped bifurcation diagrams in population dynamics 12
Humberto Ramos Quoirin
(Univ. de Santiago de Chile)

- 51 Yasuhito Miyamoto (Univ. of Tokyo) Structure of the positive radial solutions for elliptic equations with exponential growth 12
- 52 Shinji Adachi (Shizuoka Univ.) * Uniqueness and non-degeneracy of positive radial solutions for quasilinear elliptic equations with exponential nonlinearity 12
Tatsuya Watanabe
 (Kyoto Sangyo Univ.)
- 53 Francesca Gladiali On the number of peaks of the eigenfunctions of the linearized Gel'fand problem 12
 (Univ. degli Studi di Sassari)
 Massimo Grossi
 (Univ. di Roma "La Sapienza")
Hiroshi Ohtsuka (Kanazawa Univ.)
- 54 Naoki Sioji (Yokohama Nat. Univ.) Uniqueness of positive radial solutions of $\Delta u + \nabla \rho \nabla u / \rho - gu + hu^p = 0$ and its nondegeneracy 12
Kohtaro Watanabe
 (Nat. Defense Acad. of Japan)
- 55 Futoshi Takahashi (Osaka City Univ.) Extremal solutions to Liouville–Gelfand type elliptic problems with nonlinear Neumann boundary conditions 12
- 56 Futoshi Takahashi (Osaka City Univ.) Continuum spectrum for the linearized extremal eigenvalue problem with boundary reactions 12

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

Atsushi Tachikawa (Tokyo Univ. of Sci.) On the regularity of $p(x)$ -harmonic maps

March 18th (Tue) Conference Room V

9:00–12:00

- 57 Tomoyuki Nakatsuka (Nagoya Univ.) * On uniqueness of symmetric Navier–Stokes flows around a body in the plane 12
- 58 Erika Ushikoshi (Tamagawa Univ.) * New approach to the Hadamard variational formula for the Green function of the Stokes equations 10
- 59 Hiroki Ueno (Keio Univ.) On the thin film approximation for the flow of a viscous incompressible fluid down an inclined plane 12
Akinori Shiraishi
Tatsuo Iguchi (Keio Univ.)
- 60 Shintaro Kondo (Meiji Univ.) Almost-periodic solution of linearized Hasegawa–Wakatani equations with vanishing resistivity 12
- 61 Masahiro Suzuki (Tokyo Tech) * Stationary solutions to the equation for a multicomponent plasma 12
- 62 Masashi Ohnawa (Waseda Univ.) Asymptotic stability of strong traveling waves for a radiating gas model 12
- 63 Natsumi Yoshida (Osaka Univ.) Global asymptotic stability of a multiwave pattern for the scalar conservation law with degenerate flux and viscosity 12
- 64 Masatoshi Okita (Kyushu Univ.) Optimal decay rate for strong solutions in critical spaces to the compressible Navier–Stokes equations 12
- 65 Hajime Koba (Waseda Univ.) * On stability of Boussinesq type system 12
- 66 Tsukasa Iwabuchi (Chuo Univ.) * Global solutions for the Burgers equation in the Besov spaces and the large time behavior 12
- 67 Takahiro Okabe (Hiroshima Univ.) * Space-time asymptotics of the two dimensional Navier–Stokes flow in the whole plane 10

14:15–15:15

- 68 Takayuki Kubo (Univ. of Tsukuba) On the $\mathcal{R}$ -boundedness of solution operators for the compressible-compressible two phase problem 10
Yoshihiro Shibata (Waseda Univ.)
Kohei Soga (CNRS-ENS Lyon)
- 69 Yoshihiro Shibata (Waseda Univ.) $\mathcal{R}$ -bounded solution operators for the Stokes equations with free boundary condition and its application, Incompressible case 10
- 70 Yoshihiro Shibata (Waseda Univ.) $\mathcal{R}$ -bounded solution operators for the Stokes equations with free boundary condition and its application, Compressible case 10
Lorenz von Below (TU Darmstadt)
Yuko Enomoto (Shibaura Inst. of Tech.)
- 71 Yoshihiro Shibata (Waseda Univ.) On a global in time unique existence theorem for some free boundary problem of the Navier–Stokes equations without surface tension 10
- 72 Miho Murata (Waseda Univ.) Local in time unique existence of solutions to compressible viscous fluid flow 10
Yoshihiro Shibata (Waseda Univ.)

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

- Takeshi Wada (Kumamoto Univ.) Smoothing effects and global well-posedness of Maxwell–Schrödinger equations

Real Analysis

March 17th (Mon) Conference Room III

9:00–12:05

- 1 Yukino Tomizawa (Chuo Univ.) Non-Lipschitzian mappings with respect to the Bregman distance 15
- 2 Koji Aoyama (Chiba Univ.) Approximations to solutions of the variational inequality problem for inverse-strongly-monotone mappings 15
- 3 Ryotaro Tanaka (Niigata Univ.) A geometric approach to two-dimensional Tingley’s problem 15
- 4 Kenichi Mitani (Okayama Pref. Univ.) James constant of two dimensional Lorentz sequence space and its dual 15
Kichi-Suke Saito (Niigata Univ.)
Ryotaro Tanaka (Niigata Univ.)
- 5 Hiroyasu Mizuguchi (Niigata Univ.) Several geometric constants and the extreme points of the unit ball 15
- 6 Toshikazu Watanabe (Niigata Univ.) Fixed point theorem for set-valued Kannan mappings with a vector-valued distance 15
Masashi Toyoda (Tamagawa Univ.)
- 7 Toshiharu Ikeda (Kyushu Inst. of Tech.) On von Neumann–Jordan and James constants for absolute norms on $\mathbb{R}^2$ 15
Mikio Kato (Shinshu Univ.)
- 8 Sachiko Atsushiba (Univ. of Yamanashi) Strong convergence theorems for nonlinear mappings by iterative schemes 15
- 9 M. Ali Khan (Johns Hopkins Univ.) Weak sequential convergence in $L^1(\mu, X)$ and an exact version of Fatou’s lemma 15
Nobusumi Sagara (Hosei Univ.)
- 10 Yoichi Miyazaki (Nihon Univ.)* Introduction to complex interpolation between Sobolev spaces 15
- 11 Yōhei Yamasaki The commutation of limit and singular integral, avoiding the dominating functions 15

14:15–16:25

- 12 Toshiharu Kawasaki (Nihon Univ.) Criteria for the C-integral 15
 Shizu Nakanishi (Osaka Pref. Univ.)
 Ichiro Suzuki (Nihon Bunka Univ.)
- 13 Takanori Yamamoto * Majorization of singular integral operators with Cauchy kernel on L^2
 (Hokkai-Gakuen Univ.) 15
- 14 Aoi Honda (Kyushu Inst. of Tech.) * Linear quasi-metric of the Shepp space 15
 Yoshiaki Okazaki
 (Kyushu Inst. of Tech.)
 Hiroshi Sato (Kyushu Univ.)*
- 15 Jayson Mesitas Cunanan Inclusion relations between L^p -Sobolev and Wiener amalgam spaces
 (Nagoya Univ.) 15
- 16 Gaku Sadasue (Osaka Kyoiku Univ.) A characterization of BLO martingales 15
 Eiichi Nakai (Ibaraki Univ.)
- 17 Hitoshi Tanaka (Univ. of Tokyo) The Fatou property of block spaces 15
 Yoshihiro Sawano (Tokyo Metro. Univ.)
- 18 Masami Okada (Tokyo Metro. Univ.)* Toward two-dimensional approximate sampling theorem —scattered
 data— 15
- 19 Hiroki Saito (Tokyo Metro. Univ.) Boundedness of the Takeya maximal operators on the variable Lebesgue
 Hitoshi Tanaka (Univ. of Tokyo) spaces 15

16:45–17:45 Talk invited by Real Analysis Section

- Mitsuo Izuki (Tokyo Denki Univ.) A real analytic study of various function spaces with variable exponent

March 18th (Tue) Conference Room III

9:00–12:20

- 20 Yusuke Murase (Meijo Univ.) Existence of solutions for variational and quasi-variational inequalities
 Masahiro Kubo (Nagoya Inst. of Tech.) generated by quasi-subdifferential operators 15
- 21 Shun Uchida (Waseda Univ.) The solvability of double-diffusive convection system in general domains
 Mitsuharu Ôtani (Waseda Univ.) 15
- 22 Yutaka Tsuzuki (Tokyo Univ. of Sci.) Solvability of p -Laplace heat equations with constraints coupled with
 Takeshi Fukao (Kyoto Univ. of Edu.) Navier–Stokes equations in 3D domains 15
 Tomomi Yokota (Tokyo Univ. of Sci.)
- 23 Kentarou Yoshii (Tokyo Univ. of Sci.) Non-normal form of abstract evolution equations of hyperbolic type
 Noboru Okazawa (Tokyo Univ. of Sci.) 15
- 24 Tetsuya Koyama On a regularity theorem for non-smooth domains 15
 (Hiroshima Inst. of Tech.)
- 25 Takayoshi Ogawa (Tohoku Univ.)* On optimality of end-point L^1 maximal regularity for the Cauchy prob-
 Senjo Shimizu (Shizuoka Univ.) lem of the heat equation 15
- 26 Ken Shirakawa (Chiba Univ.) Mathematical models of grain boundary motions with solidifications
 Hiroshi Watanabe (Salesian Polytech.) 15
 Noriaki Yamazaki (Kanagawa Univ.)

27	Noriaki Yamazaki (Kanagawa Univ.)	Non-autonomous phase-field models of grain boundary motion with constraint	15
28	Hiroki Ohwa (Niigata Univ.)*	On the wave-front tracking algorithm for $n \times n$ hyperbolic systems of conservation laws	15
29	Dai Noboriguchi (Waseda Univ.) Kazuo Kobayashi (Waseda Univ.)	Uniqueness for the initial-boundary value problem for conservation laws with a multiplicative noise	15
30	Yōhei Yamasaki	Inverse maps and implicit functions without differentiation	15
31	Shigehiro Sakata (Tokyo Metro. Univ.)	Uniqueness of a maximizer of Riesz potential and the heart of a body	15

14:15–15:55

32	Takeshi Fukao (Kyoto Univ. of Edu.) Pierluigi Colli (Pavia Univ.)	Allen–Cahn equation with dynamic boundary conditions and mass constraints	15
33	Hiroshi Watanabe (Salesian Polytech.)	Strongly degenerate parabolic equations with diffusion terms depending on the spatial variable	15
34	Yoji Yamashita (Tokyo Univ. of Sci.) Tomomi Yokota (Tokyo Univ. of Sci.)	Existence of solutions to some degenerate parabolic equation associated with the p -Laplacian in the critical case	15
35	Toyohiko Aiki (Japan Women's Univ.) Oleh Krehel (TU Eindhoven) Adrian Muntean (TU Eindhoven)	Smoluchowski population balance equation modified for hot colloids	15
36	Kentarou Fujie (Tokyo Univ. of Sci.) Akio Ito (Kinki Univ.) Tomomi Yokota (Tokyo Univ. of Sci.)	Existence and uniqueness of local-in-time classical solutions to a mathematical model on tumor invasion phenomenon	15
37	Risei Kano (Kochi Univ.)	The solvability of the evolution problems for the tumor invasion models	15

16:15–17:15 Talk invited by Real Analysis Section

Kota Kumazaki (Tomakomai Nat. Coll. of Tech.)	* A mathematical model for concrete carbonation phenomenon
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Functional Analysis

March 15th (Sat) Conference Room II

9:30–11:50

1	Kazuo Takemura (Nihon Univ.)*	The best constants of discrete Sobolev inequalities on the finite d -regular weighted graph	10
2	Akito Suzuki (Shinshu Univ.)*	Spectra of graphs obtained from the d -dimensional lattice by periodically adding pendant vertices	15
3	Hiroyuki Yamagishi (Tokyo Metropolitan Coll. of Indus. Tech.) Kohtaro Watanabe (Nat. Defense Acad. of Japan) Yoshinori Kametaka (Osaka Univ.)*	The best constant of L^p Sobolev inequality corresponding to Dirichlet–Neumann boundary value problem	10

4	<u>Hiroyuki Yamagishi</u> (Tokyo Metropolitan Coll. of Indus. Tech.) Atsushi Nagai (Nihon Univ.) Yoshinori Kametaka (Osaka Univ.*)	The best constant of discrete Sobolev inequality corresponding to a bending problem of a string	10
5	Toshimitsu Takaesu (Gunma Univ.)	On the existence of ground state of massless ϕ^4 model with cutoffs for all values of coupling constants	15
6	Toshimitsu Takaesu (Gunma Univ.)	On the existence of ground state of relativistic quantum electrodynamics with cutoffs for all values of coupling constants	15
7	Takuya Mine (Kyoto Inst. Tech.)	Computation of the scattering amplitude in the elliptic coordinate . . .	15
8	Atsuhide Ishida (Otemon Gakuin Univ.)	On inverse problem for the Schrödinger equation with a repulsive potential	15
9	<u>Kohei Umeta</u> (Hokkaido Univ.) Naofumi Honda (Hokkaido Univ.)	The global sections of the sheaf of Laplace hyperfunctions and Laplace transforms	15

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

Kenichi Ito (Univ. of Tsukuba)	Classification of threshold properties of one-dimensional discrete Schrödinger operators
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March 16th (Sun) Conference Room II

10:00–11:50

10	Kazufumi Kimoto (Univ. of Ryukyus)	Two-parameter deformation of the determinant and formulas for rectangular characters	15
11	Masaki Mori (Univ. of Tokyo)	Cellular structure on the Hecke–Clifford superalgebra and construction of its irreducible representations	15
12	Akihito Wachi (Hokkaido Univ. of Edu.)	The strong Lefschetz property of the coinvariant algebras of complex reflection groups	15
13	Yuichiro Tanaka (Univ. of Tokyo)	Geometry of multiplicity-free representations of $SO(N)$ and visible actions	15
14	Toshihisa Kubo (Univ. of Tokyo)	The Dynkin index and parabolic subalgebras of Heisenberg type	15
15	Koichi Kaizuka (Univ. of Tsukuba)	Scattering theory for the Laplacian on symmetric spaces of noncompact type	15

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

Kazuki Hiroe (Josai Univ.)	Additive Deligne–Simpson problem and root systems
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March 17th (Mon) Conference Room II

9:30–12:00

16	Satoshi Goto (Sophia Univ.)	Computation of flat parts of inter-Dynkin connections	15
17	<u>Hiroshi Ando</u> (Univ. Copenhagen) Uffe Haagerup (Univ. Copenhagen) Carl Winsløw (Univ. Copenhagen)	Ultraproducts, QWEP von Neumann algebras and the Effros–Maréchal topology	15
18	Koichi Shimada (Univ. of Tokyo)	Actions of locally compact abelian groups with the Rohlin property on factors	15

- 19 Rui Okayasu (Osaka Kyoiku Univ.) Haagerup approximation property for arbitrary von Neumann algebras 15
- 20 Hisashi Aoi (Ritsumeikan Univ.) Schlichting completion of Hecke pairs 15
Takehiko Yamanouchi
(Tokyo Gakugei Univ.)
- 21 Masato Mimura (Tohoku Univ.)* Group approximation in Cayley topology and coarse geometry, Part II:
Hiroki Sako (Tokai Univ.) fibered coarse embedding 15
- 22 Norio Nawata (Chiba Univ.) Finite group actions on certain stably projectionless C^* -algebras with
the Rohlin property 15
- 23 Takahiro Sudo (Univ. of Ryukyus) The Euler characteristic and the Euler–Poincaré formula for C^* -algebras
..... 15

14:15–15:00

- 24 Tsuyoshi Kajiwara (Okayama Univ.) Matrix representations and K-groups of the cores of C^* -algebras as-
Yasuo Watatani (Kyushu Univ.) soiated with self-similar maps 15
- 25 Hiroyasu Hamada (Kyushu Univ.) C^* -algebras generated by composition operators induced by rational
functions 15
- 26 Kei Ji Izuchi (Niigata Univ.)* Path connected components in the space of weighted composition op-
Yuko Izuchi erators on the disk algebra 15
Shūichi Ohno (Nippon Inst. of Tech.)

15:15–16:15 Award Lecture for 2013 Analysis Prize

- Yasuo Watatani (Kyushu Univ.) Singularities in operator algebras

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

- Sei-Ichiro Ueki (Ibaraki Univ.) Composition and Integral operators on Bargmann–Fock spaces

March 18th (Tue) Conference Room II

10:00–11:40

- 27 Wataru Ichinose (Shinshu Univ.) On the uniqueness of the polar decomposition of bounded operators in
Kanao Iwashita (Shinshu Univ.) Hilbert spaces 15
- 28 Yuki Seo (Osaka Kyoiku Univ.) Buzano inequality in inner product C^* -modules via the operator geo-
metric mean 10
- 29 Junichi Fujii (Osaka Kyoiku Univ.) Reproducing property of interpolational operator means in a Karcher
equation 15
- 30 Hiroyuki Osaka (Ritsumeikan Univ.) Interpolation classes and matrix means 15
Dinh Trung Hoa (Duy Tan Univ.)
Toan M. Ho
(Mathematical Inst. , Hanoi)
- 31 Masaru Nagisa (Chiba Univ.) Order of operators determined by derivatives 10
Haruka Watanabe (Chiba Univ.)
- 32 Masaru Nagisa (Chiba Univ.) Operator monotonicity of Szabó’s function 10
Shuhei Wada (Nagaoka Univ. of Tech.)

14:15–15:15

- 33 Takeaki Yamazaki (Toyo Univ.) Generalized Ando–Hiai inequality for matrix power mean 10
- 34 Hiroshi Isa (Maebashi Inst. of Tech.) On relations between operator valued α -divergence and relative operator
Masatoshi Ito (Maebashi Inst. of Tech.) entropies 15
Eizaburo Kamei
Hiroaki Tohyama
(Maebashi Inst. of Tech.)
Masayuki Watanabe
(Maebashi Inst. of Tech.)
- 35 Shigeru Furuichi (Nihon Univ.) Unitarily invariant norm inequalities for some means 15
- 36 Kenjiro Yanagi (Yamaguchi Univ.) Non-hermitian extension of generalized skew information and uncer-
tainty relation 15

Statistics and Probability

March 15th (Sat) Conference Room VI

9:30–12:00

- 1 Dai Taguchi (Ritsumeikan Univ.) Strong rate of convergence for the Euler–Maruyama approximation of
Hoang-Long Ngo stochastic differential equations with irregular coefficients 10
(Hanoi Nat. Univ. of Edu.)
- 2 Toshio Nakata (Fukuoka Univ. of Edu.) Limit theorems for nonnegative independent random variables with
truncation 15
- 3 Katusi Fukuyama (Kobe Univ.)* The central limit theorem for subsequences of Erdős–Fortet sequence
Takafumi Minohara (Taiyo Elec Co.) 5
- 4 Yasunari Higuchi (Kobe Univ.) Construction of the incipient infinite cluster measure for 2D ising per-
Kazunari Kinoshita (Kobe Univ.) colation 10
Masato Takei (Yokohama Nat. Univ.)
Yu Zhang (Univ. Colorado)
- 5 Taro Murayama (Kanazawa Univ.)* The zero mass limit problem for a relativistic spinless quantum particle
Takashi Ichinose (Kanazawa Univ.) in an electromagnetic field 15
- 6 Nariyuki Minami (Keio Univ.) Definition and self-adjointness of the stochastic Airy operator 15
- 7 Kouji Yano (Kyoto Univ.) Functional limit theorems for processes pieced together from excursions
..... 15
- 8 Yu Ito (Kyoto Univ.) Lyons' extension theorem via fractional calculus 15
- 9 Atsushi Takeuchi (Osaka City Univ.) Large deviation principle for stochastic functional differential equations
..... 15

14:30–15:30 Talk invited by Statistics and Probability Section

- Masaaki Fukasawa (Osaka Univ.) Whittle likelihood for high frequency data

15:45–16:45 Award Lecture for 2013 Analysis Prize

Toshiro Watanabe (Univ. of Aizu) Relation between infinitely divisible distributions and their Lévy measures

March 16th (Sun) Conference Room VI

9:00–11:25

- | | | | |
|----|---|--|----|
| 10 | Shin-Ichiro Takazawa (Kobe Univ.) * | The convergence rate of the strong law of large numbers by a finite number of strategies in the unbounded forecasting game | 10 |
| 11 | Xiao-Nan Lu (Nagoya Univ.) | On affine-invariant strictly cyclic Steiner quadruple systems | 15 |
| 12 | <u>Kiyotaka Iki</u> (Tokyo Univ. of Sci.)
Kouji Yamamoto (Osaka Univ.)
Sadao Tomizawa (Tokyo Univ. of Sci.) | Quasi-diagonal exponent symmetry model for ordinal square contingency tables. | 10 |
| 13 | <u>Shoko Chisaki</u> (Tokyo Univ. of Sci.)
Nobuko Miyamoto (Tokyo Univ. of Sci.) | Difference system of sets with size 3 | 10 |
| 14 | <u>Kohei Yamada</u> (Tokyo Univ. of Sci.)
Nobuko Miyamoto (Tokyo Univ. of Sci.) | A construction of orthogonal arrays from Baer subplanes | 15 |
| 15 | <u>Takeshi Torii</u> (Osaka Pref. Univ.)
Shinji Kuriki (Osaka Pref. Univ.) | Two construction methods of a nested row-column design with split units | 15 |
| 16 | <u>Satoru Kadowaki</u>
(Matsue Coll. of Tech.)
Sanpei Kageyama
(Hiroshima Inst. of Tech.) | An equivalence theorem between an affine resolvable SRGD design and a difference scheme | 15 |
| 17 | Masahide Kuwada
(Int. Inst. for Nat. Sci.)
Yoshifumi Hyodo
(Okayama Univ. of Sci./Int. Inst. for Nat. Sci.)
<u>Hiromu Yumiba</u> (Int. Inst. for Nat. Sci.) | Existence conditions for balanced fractional 3^m factorial designs of resolution $R(\{00, 10, 01, 20, 11\})$ | 15 |
| 18 | Masatake Hirao
(Tokyo Woman's Christian Univ.)
<u>Masanori Sawa</u> (Nagoya Univ.) | Characterizing optimum designs in terms of finite irreducible reflection groups | 15 |
| 19 | <u>Kazuki Matsubara</u> (Hiroshima Univ.)
Sanpei Kageyama
(Hiroshima Inst. of Tech.) | Constructions of pairwise additive cyclic BIB designs | 10 |

11:30–12:00 Research Section Assembly

March 17th (Mon) Conference Room VI

9:00–12:00

- | | | | |
|----|---|--|----|
| 20 | Tamio Koyama (Kobe Univ.) | Holonomic modules associated with multivariate normal probabilities of polyhedra | 15 |
| 21 | Tomonari Sei (Keio Univ.) | A family of distributions on the sphere induced by Möbius transformations | 15 |
| 22 | <u>Sigeo Aki</u> (Kansai Univ.)
Katuomi Hirano (Josai Univ.) | Coupon collector's problems with statistical applications | 10 |

- 23 Kiyoshi Inoue (Seikei Univ.) Distributions of numbers of runs and scans on directed acyclic graphs
Sigeo Aki (Kansai Univ.) with generation 10
- 24 Koji Tsukuda An L^2 approach to detect a change of parameters in an ergodic diffusion
 (Grad. Univ. for Adv. Stud.) process model 15
Yoichi Nishiyama
 (Inst. of Stat. Math./Grad. Univ. for Adv. Stud.)
- 25 Fumiya Akashi (Waseda Univ.) LAN and frequency domain GMM approach to optimality of hypothesis
 testing 15
- 26 Yan Liu (Waseda Univ.) M-estimation in time series and its applications 15
- 27 Akio Tanikawa (Osaka Inst. of Tech.) Identification of partially unknown system matrix of discrete-time sto-
Yuichi Sawada (Kyoto Inst. Tech.) chastic systems via pseudomeasurement approach 10
- 28 Ayaka Yagi (Tokyo Univ. of Sci.) A test for equality of two mean vectors with three-step monotone
Takashi Seo (Tokyo Univ. of Sci.) missing data 15
- 29 Kazuyoshi Yata (Univ. of Tsukuba) Quadratic-type classifiers for high-dimensional data 15
Makoto Aoshima (Univ. of Tsukuba)
- 30 Masafumi Akahira (Univ. of Tsukuba) Asymptotic comparison of the MLE and MCLE of a natural parameter
 up to the second order for a truncated exponential family of distributions
 15
- 31 Masafumi Akahira (Univ. of Tsukuba) Asymptotic comparison of the MLE and MCLE up to the second order
Shintaro Hashimoto (Univ. of Tsukuba) for a two-sided truncated exponential family 10
Ken-ichi Koike (Univ. of Tsukuba)
Nao Ohyauchi (Univ. of Tsukuba)

14:30–15:30 Talk invited by Statistics and Probability Section

Hisayuki Tsukuma (Toho Univ.) Decision-theoretic estimation of parameter matrices

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

Taiji Suzuki (Tokyo Tech) Statistical properties of multiple kernel learning and sparse estimation

Applied Mathematics

March 15th (Sat) Conference Room IX

9:30–11:50

- 1 Kazuhiko Ushio (Kinki Univ.) Balanced C_4 -foil designs and related designs 15
- 2 Iwao Sato (Oyama Nat. Coll. of Tech.) A note on the discrete-time evolutions for quantum walk on a graph
Norio Konno (Yokohama Nat. Univ.) 15
Yusuke Higuchi (Showa Univ.)
Etsuo Segawa (Tohoku Univ.)
- 3 Jung-Rae Cho (Pusan Nat. Univ.) Travel groupoids on infinite graphs 10
Jeongmi Park (Pusan Nat. Univ.)
Yoshio Sano (Univ. of Tsukuba)

4	Jung-Rae Cho (Pusan Nat. Univ.) Jeongmi Park (Pusan Nat. Univ.) <u>Yoshio Sano</u> (Univ. of Tsukuba)	The non-confusing travel groupoids on a finite connected graph	10
5	<u>Akira Saito</u> (Nihon Univ.) Michael D. Plummer (Vanderbilt Univ.)	Contraction-critical graphs with respect to independence number	15
6	Atsuhiko Nakamoto (Yokohama Nat. Univ.) Kenta Ozeki (Nat. Inst. of Information/JST ERATO) <u>Kenta Noguchi</u> (Keio Univ.)	Division problems on closed surfaces	15
7	Yusuke Suzuki (Niigata Univ.)	Reductional operations for polyhedral quadrangulations	15
8	Guantao Chen (Georgia State Univ.) Hikoe Enomoto (Waseda Univ.) Kenta Ozeki (Nat. Inst. of Information/JST ERATO) <u>Shoichi Tsuchiya</u> (Tokyo Univ. of Sci.)	Plane triangulations without spanning Halin subgraphs	15
14:30–16:40			
9	<u>Chie Nara</u> (Tokai Univ.) Jin-ichi Itoh (Kumamoto Univ.)	Transformability and reversibility of unfoldings of doubly-covered polyhedra	15
10	<u>Maki Furukado</u> (Yokohama Nat. Univ.) Shunji Ito (Toho Univ.) Shin-ichi Yasutomi (Toho Univ.)	The condition for the generation of the stepped surfaces in terms of the modified Jacobi–Perron algorithm	15
11	Masato Mimura (Tohoku Univ.) *	Spehere equivalence, Banach spectral gaps, and extrapolation	12
12	Masato Mimura (Tohoku Univ.) *	Multi-way isoperimetries and imprimitive group actions on finite graphs	12
13	Hidefumi Ohsugi (Rikkyo Univ.) Akihiro Shikama (Osaka Univ.) Takayuki Hibi (Osaka Univ.) <u>Aki Mori</u> (Osaka Univ.)	The maximum number of edges of an edge polytope	20
14	<u>Satoshi Murai</u> (Yamaguchi Univ.) Kohji Yanagawa (Kansai Univ.)	On flag f -vectors of polyhedral complexes	10
15	<u>Masahiro Hachimori</u> (Univ. of Tsukuba) Kenji Kashiwabara (Univ. of Tokyo)	Hereditary-shellability and vertex decomposability of simplicial complexes	15
16	Masaya Tomie (Morioka Univ.)	Poset structures for pattern avoiding set partitions	10

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

Yoshio Okamoto (Univ. of Electro-Comm.)	Free edge lengths in plane graphs
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March 16th (Sun) Conference Room IX

9:30–11:30

17	Hiroataka Ebisui (Oval Research Center)	One elementary expression of Zeta(3)	15
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18	Michiaki Kabe (Kanto Polytechnic Coll.)	How to detect scratches of sintered parts by using adjusted residuals of χ^2 test	15
19	Yoshihiro Mizoguchi (Kyushu Univ.) Hisaharu Tanaka (Saga Univ.) Issei Sakashita (Kyushu Univ.) Shuichi Inokuchi (Kyushu Univ.)	Formal proofs for automata and sticker systems	15
20	Yoshihito Ogasawara (Waseda Univ.) Shin'ichi Oishi (Waseda Univ.)	On spaces from primitive chaos	15
21	Guillaume Bacquela (Nihon Univ.) Yoshimi Egawa (Tokyo Univ. of Sci.) Shigeki Imamura (Nihon Univ.) Kenji Kimura (Tokyo Univ. of Sci.) Akira Saito (Nihon Univ.)	Offensive alliances in trees	15
22	Yoshimi Egawa (Tokyo Univ. of Sci.) Kenta Ozeki (Nat. Inst. of Information/JST ERATO)	Spanning trees with vertices having large degrees	15
13:00–14:30			
23	Akira Kamibeppu (Shimane Univ.)	On the boxicity of generalized Mycielski graphs	15
24	Valentin Borozan (Univ. Paris-Sud 11) Gerard Jennhwa Chang (National Taiwan Univ.) Nathann Cohen (Univ. Paris-Sud 11) Shinya Fujita (Yokohama City Univ.) N. Narayanan (Indian Institute of Tech.) Reza Naserasr (Univ. Paris-Sud 11) Petru Valicov (Univ. Paris-Sud 11)	From edge-coloring to strong edge-coloring	10
25	Takehito Yoshiki (Univ. of Tokyo)	The decay of the Walsh coefficients of a function which may not be differentiable	15
26	Kousuke Suzuki (Univ. of Tokyo)	WAFOM on abelian groups and the MacWilliams identity for the Dick weight	15
27	Shin Harase (Tokyo Tech)	Low-WAFOM point sets with small t -values for quasi-Monte Carlo integration	15

March 17th (Mon) Conference Room IX

9:00–12:00

28	Shunzi Horiguchi (Niigata Sangyo Univ.)	Formulas to compare the convergence of Halley method and the extended Halley method (Tsuchikura–Horiguchi–Murase–Halley method) (in the case of an equation)	10
29	Shunzi Horiguchi (Niigata Sangyo Univ.)	Numerical calculations of the formulas to compare the convergence of Halley method and the extended Halley method (Tsuchikura–Horiguchi–Murase–Halley method) (in the case of an equation)	10
30	Hidetsugu Kohzaki (Kyoto Univ.)	A Study on the quality assurance of mathematics education for medical technologist/paramedics in Japan.	15

- 31 Takaaki Aoki (Kyoto Univ.) Some mathematical properties of the dynamically inconsistent Bellman equation: A note on the two-sided altruism dynamics 15
- 32 Fumio Nakajima (Iwate Univ.) * A mathematical approach to the economy of atomic power generation 15
- 33 Shy Der Lin (Chung Yuan Christian Univ.) Caputo fractional derivative and its applications 15
- 34 Noriaki Umeda (Meiji Univ.) On non-well-definedness of the diffusive sign by the heat equation 15
- 35 Hideo Kubo (Hokkaido Univ.) Identifying dividend of underlying assets from option prices using
Chao Chen (Tohoku Univ.) Tikhonov regularization 15
- 36 Naoharu Ito (Nara Univ. of Edu.) A note on generalized Sylvester equations over Bezout domains 15
- 37 Takamichi Sushida (Ryukoku Univ.) Voronoi spiral tilings 15
Akio Hizume (Ryukoku Univ.)
Yoshikazu Yamagishi (Ryukoku Univ.)

14:30–16:30

- 38 Hideki Murakawa (Kyushu Univ.) Mathematical models of cell-cell adhesion: diffusion or advection 15
- 39 Masakazu Akiyama (Hokkaido Univ.) A mathematical model of planar cell polarity 15
Masakazu Yamazaki (Akita Univ.)
- 40 Tatsuki Mori (Ryukoku Univ.) Structure and stability of stationary solutions to a reaction-diffusion
Kousuke Kuto (Univ. of Electro-Comm.) model for cell polarization 15
Tohru Tsujikawa (Univ. of Miyazaki)
Masaharu Nagayama (Hokkaido Univ.)
Shoji Yotsutani (Ryukoku Univ.)
- 41 Masaji Watanabe (Okayama Univ.) Mathematical study on roll of microorganisms in microbial depolymer-
Fusako Kawai (Kyoto Inst. Tech.) ization processes 15
- 42 Masaharu Nagayama (Hokkaido Univ.) Mathematical analysis for the collective motion of camphor disks 15
Ken Wakai (Kanazawa Univ.)
Kei Nishi (Hokkaido Univ.)
Yasuaki Kobayashi (Hokkaido Univ.)
Yumihiko Ikura (Hokkaido Univ.)
Satoshi Nakata (Hiroshima Univ.)
- 43 Kota Ikeda (Meiji Univ.) Jamming phenomena in collective motion of camphor boats in an an-
Masaharu Nagayama nular water channel 15
(JST CREST/Hokkaido Univ.)
Akiyasu Tomoeda
(JST CREST/Meiji Univ.)
Shin-Ichiro Ei (Kyushu Univ.)

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

- Karel Svadlenka (Kanazawa Univ.) On the method of semidiscretization in time for nonlinear evolutionary problems

March 18th (Tue) Conference Room IX

10:00–11:30

- 44 Kiyohisa Tokunaga (Fukuoka Inst. of Tech.) Approximate values of a triangular double integral 15
- 45 Koya Sakakibara (Meiji Univ.) The dipole simulation method in a Jordan region with an analytic boundary 15
- 46 Guanyu Zhou (Univ. of Tokyo) Error analysis of a finite volume scheme for the Keller–Segel system of chemotaxis 15
Norikazu Saito (Univ. of Tokyo)
- 47 Elliott Ginder (Hokkaido Univ.) The hyperbolic BMO algorithm 15
Karel Švadlenka (Kanazawa Univ.)
- 48 Khoji Ohtsuka Shape optimization using GJ-integral 15
(Hiroshima Kokusai Gakuin Univ.)
- 49 Yoshihiro Saito Improved Heun method for systems of stochastic differential equations 10
(Gifu Shotoku Gakuen Univ.)

14:15–15:45

- 50 Takaharu Yaguchi (Kobe Univ.) On well-posedness of the weak form of the finite element exterior calculus on manifolds with boundaries 10
Takuya Tsuchiya (Ehime Univ.)
- 51 Yoshitaka Watanabe (Kyushu Univ.) An improvement of invertibility verifications for linear elliptic operators 15
Takehiko Kinoshita (Kyoto Univ.)
Mitsuhiro T. Nakao
(Sasebo Nat. Coll. of Tech.)
- 52 Yoshiki Sugitani (Univ. of Tokyo) A unilateral open boundary value problem for the Stokes equations 15
Guanyu Zhou (Univ. of Tokyo)
Norikazu Saito (Univ. of Tokyo)
- 53 Takiko Sasaki (Univ. of Tokyo) Linearly implicit finite difference scheme for a nonlinear wave equation with application to approximation of the blow-up time 15
Norikazu Saito (Univ. of Tokyo)
- 54 Shinya Uchiumi (Waseda Univ.) Behavior of characteristics finite element solutions for small time increments 15
Masahisa Tabata (Waseda Univ.)

16:00–17:00 Talk invited by Applied Mathematics Section

- Yoshitaka Watanabe (Kyushu Univ.) Computer-assisted stability and instability proofs for the Orr–Sommerfeld problem

Topology

March 15th (Sat) Conference Room IV

10:00–12:00

- 1 Tetsuya Abe (Tokyo Tech) Infinitely many ribbon disks with the same exterior 15

2	<u>Makoto Ozawa</u> (Komazawa Univ.) Koya Shimokawa (Saitama Univ.)	Dehn surgery and Seifert surface system	10
3	<u>Kazuhiro Ichihara</u> (Nihon Univ.) Tsuyoshi Kobayashi (Nara Women's Univ.) Yo'av Rieck (Univ. of Arkansas)	Strong cylindricality and the monodromy of bundles	10
4	Neil Hoffman (Univ. of Melbourne) Kazuhiro Ichihara (Nihon Univ.) Masahide Kashiwagi (Waseda Univ.) Hidetoshi Masai (Tokyo Tech) Shin'ichi Oishi (Waseda Univ. / JST CREST) <u>Akitoshi Takayasu</u> (Waseda Univ.)	Verified computations for hyperbolic 3-manifolds	15
5	Naoki Sakata (Hiroshima Univ.)	Canonical decompositions of hyperbolic fibered two-bridge link complements	10
6	Mikio Furokawa (Hiroshima Univ.)	A construction of the Ford domains of fuchsian once-punctured Klein bottle groups	10
7	Eiji Ogasa (Meiji Gakuin Univ.) *	New developments of local move identities of knot polynomials	10
8	<u>Taizo Kanenobu</u> (Osaka City Univ.) Hiromasa Moriuchi (Kinki Univ.)	Evaluations of Gordian distances of knots by polynomial invariants . . .	10
9	<u>Sumiko Horiuchi</u> (Tokyo Woman's Christian Univ.) Yoshiyuki Ohyama (Tokyo Woman's Christian Univ.)	A lattice of virtual knots by crossing changes	15
14:15–16:30			
10	<u>Kengo Kawamura</u> (Osaka City Univ.) Teruhisa Kadokami (East China Normal Univ.)	Tabulation of the clasp number of prime knots with up to 10 crossings	15
11	Hideo Takioka (Osaka City Univ.)	The cable Γ -polynomials of mutant knots	10
12	<u>Takuji Nakamura</u> (Osaka Electro-Comm. Univ.) Yasutaka Nakanishi (Kobe Univ.) Shin Satoh (Kobe Univ.)	On the number of colors in effective Fox 9-colorings for knots	10
13	Migiwa Sakurai (Tokyo Woman's Christian Univ.)	A polynomial invariant and the forbidden move of virtual knots	10
14	Keiji Tagami (Tokyo Tech)	A categorification of the Miyazawa polynomial	10
15	<u>Kenichi Shimizu</u> (Nagoya Univ.) Taiki Shibata (Univ. of Tsukuba)	New examples of handlebody-TQFTs	15
16	<u>Yusuke Takimura</u> (Waseda Univ.) ^b Noboru Ito (Waseda Univ.)	(1, 2) homotopy on knot projections	10
17	<u>Yusuke Takimura</u> (Waseda Univ.) ^b Noboru Ito (Waseda Univ.) Kouki Taniyama (Waseda Univ.)	Strong and weak (1, 3) homotopies on knot projections	15

- 18 Takefumi Nosaka (Kyushu Univ.) Longitudes in SL_2 -representations of link groups and Milnor–Witt K_2 -groups of fields 15

17:00–18:00 Talk invited by Topology Section

- Takefumi Nosaka (Kyushu Univ.) Low dimensional topological invariants of bilinear forms from quandle theory

March 16th (Sun) Conference Room IV

9:30–11:45

- 19 Shin Kiriki (Tokai Univ.) Blenders in center unstable Hénon-like families: with an application to
Lorenzo J. Díaz (PUC-Rio) heterodimensional bifurcations 15
Katsutoshi Shinohara (JST FIRST)
- 20 Kentaro Saji (Kobe Univ.)* Isotopy of Morin singularities 10
- 21 Tetsuya Itoh (Kyoto Univ.) Overtwisted disc in planar open books 10
Keiko Kawamuro (Univ. Iowa)
- 22 Takahiro Oba (Tokyo Tech) Stein fillings of homology spheres with planar open books 10
- 23 Kouichi Yasui (Hiroshima Univ.) Partial twists and exotic Stein fillings 15
- 24 Takuya Ukida (Tokyo Tech) PALF structure on Akbulut–Yasui plugs and plug twist 10
- 25 Ryoma Kobayashi (Tokyo Univ. of Sci.) Lefschetz fibrations with a (-1) -section and finitely presented groups
Naoyuki Monden (Tokyo Univ. of Sci.) 15
- 26 Shota Murakami (Keio Univ.) Deformation equivalence classes of surfaces with $b_1 = 1$ and $b_2 = 0$
..... 10
- 27 Takuya Sakasai (Univ. of Tokyo) Orthogonal decomposition of the Sp-invariant part of the symplectic
Masaaki Suzuki (Meiji Univ.) derivation Lie algebra 15
Shigeyuki Morita
(Univ. of Tokyo*/Tokyo Tech*)

13:30–14:30 Talk invited by Topology Section

- Taro Yoshino (Univ. of Tokyo)^b On topological blowups

March 17th (Mon) Conference Room IV

10:00–12:00

- 28 Katsuhisa Koshino (Univ. of Tsukuba)* A hypograph space and its compactification 15
Katsuro Sakai (Kanagawa Univ.)
Hanbiao Yang (Univ. of Tsukuba)
- 29 Ryoma Kobayashi (Tokyo Univ. of Sci.) L-S categories of vector bundles over projective spaces 15
- 30 Tadayuki Haraguchi About introduction and geraldization of a model structure on the cate-
(Internat. Pacific Univ.) gory of numerically generated spaces 15
- 31 Yasuhiro Momose (Shinshu Univ.) On quasi-schemoids and the Baues–Wirsching cohomology 15
Yasuhide Numata (Shinshu Univ.)
- 32 Syunji Moriya (Kyoto Univ.) On semi-direct product of little n -cubes spaces 15

33	Syunji Moriya (Kyoto Univ.)	Homology of long knots and multiplicative formality	15
34	Toshiyuki Miyauchi (Fukuoka Univ.) Juno Mukai (Shinshu Univ.*)	Determination of the 2-primary components in 32-stem unstable homotopy groups of spheres	10

14:15–15:15

35	Yoshinobu Kamishima (Tokyo Metro. Univ.) Akira Tanaka (Tokyo Metro. Univ.)	Complex contact structure on nilmanifolds	10
36	Yusuke Suyama (Osaka City Univ.)	Rotation number of primitive vector sequences	10
37	Yusuke Suyama (Osaka City Univ.)	Examples of toric manifolds which are not quasitoric manifolds	10
38	Miho Hatanaka (Osaka City Univ.)	Gluing construction of topological toric manifolds	15

15:45–16:45 Talk invited by Topology Section

Megumi Harada (McMaster Univ.)* Okounkov bodies and toric degenerations

Infinite Analysis

March 17th (Mon) Conference Room VIII

10:00–11:30

1	Diogo Kendy Matsumoto (Waseda Univ.)	Idempotent Yang–Baxter Maps	10
2	Tetsuya Itoh (Kyoto Univ.)	Generic quantum braid representations and Garside theory	15
3	Takuya Matsumoto (Utrecht Univ.) Alexander Molev (Univ. of Sydney)	The Drinfeld realization of the Yangian algebra associated with the centrally extended $\mathfrak{sl}(2 2)$ Lie superalgebra	15
4	HiroYuki Yamane (Univ. of Toyama)* Saeid Azam (Univ. of Isfahan) Malihe Yousofzadeh (Univ. of Isfahan)	Irreducible representations of generalized quantized algebras	15
5	Yoshihiro Takeyama (Univ. of Tsukuba)	A discrete analogue of periodic delta Bose gas and affine Hecke algebra	15

14:15–15:00

6	Tatsuya Hayashi (Aoyama Gakuin Univ.)	Non-symmetric commuting differential operators	15
7	Kanehisa Takasaki (Kyoto Univ.)	Generalized Ablowitz–Ladik hierarchy in topological string theory	20

15:15–16:15 Talk invited by Infinite Analysis Special Session

Todor Eliseev Milanov (Univ. of Tokyo) Hirota bilinear equations in singularity theory

March 18th (Tue) Conference Room VIII

10:00–11:30

- | | | | |
|----|--|--|----|
| 8 | <u>Kohei Motegi</u>
(Okayama Inst. for Quant. Phy.)
Kazumitsu Sakai (Univ. of Tokyo) | Integrable models and Grothendieck polynomials | 15 |
| 9 | Genki Shibukawa (Kyushu Univ.) | Multivariate circular Jacobi polynomials | 20 |
| 10 | Takeshi Morita (Osaka Univ.) | A connection formula of a divergent basic hypergeometric function
${}_3\varphi_0(a_1, a_2, a_3; -; q, x)$ | 15 |
| 11 | <u>Atsuo Kuniba</u> (Univ. of Tokyo)
Masato Okado (Osaka City Univ.) | Tetrahedron equation and quantum R matrices for q -oscillator representations | 15 |
| 12 | Mitsuru Shibayama (Osaka Univ.) | Non-integrability criterion for homogeneous Hamiltonian systems via blowing-up technique of singularities | 15 |

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

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|--|----------------------------|--|--|
| | Takao Suzuki (Kinki Univ.) | Higher order Painlevé system, rigid system and hypergeometric function | |
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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.

Collaborative works are presented by the underlined authors. The talks with * mark are presented through document camera, while b marks denote presentations on whiteboards. 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 program@mathsoc.jp.

Each conference room is equipped with a whiteboard, a document camera, and a projector for PC presentation. You are asked to use your own PC 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 printed sheets for the document camera in case your PC does not fit to the projector.

Information for Participants

The campus is generally non-smoking area. Smokers are kindly asked to smoke only in designated areas.

There is no parking area for visitors in the campus.

Students Cafeteria is closed during the meeting. Participants are kindly asked to bring lunch with them since there are not so many restaurants in the proximity of Gakushuin University.

Official Party

Time: March 16th (Sun), 18:00–20:00

Venue: Central Bldg., 12F Faculty Lounge “Mejiro Club”

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

Directions

2014 MSJ ANNUAL MEETING

Dates : March 15th (Sat)–18th (Tue), 2014

Venue : Gakushuin University

Mejiro 1–5–1, Toshima-ku, Tokyo 171-8588

Contact to : Department of Mathematics, Faculty of Sciences, Gakushuin University

Mejiro 1–5–1, Toshima-ku, Tokyo 171-8588

E-mail gakushuin14mar@mathsoc.jp

Phone +81 (0) 90 1791 3483 (During session)

Web Site : <http://mathsoc.jp/en/meeting/gakushuin14mar/>

Conference Rooms

	Place	Research Sections
Conference Room I	West Bldg. No. 5, Rm. 201	Algebra, Featured Invited Talk
Conference Room II	West Bldg. No. 5, Rm. 202	Functional Analysis
Conference Room III	West Bldg. No. 5, Rm. 302	Foundation of Mathematics and History of Mathematics, Real Analysis
Conference Room IV	West Bldg. No. 5, Rm. 303	Topology
Conference Room V	West Bldg. No. 2, Rm. 201	Functional Equations, Featured Invited Talk
Conference Room VI	West Bldg. No. 2, Rm. 301	Statistics and Probability
Conference Room VII	West Bldg. No. 2, Rm. 302	Geometry, Featured Invited Talk
Conference Room VIII	West Bldg. No. 2, Rm. 401	Complex Analysis, Infinite Analysis
Conference Room IX	West Bldg. No. 2, Rm. 402	Applied Mathematics
Plenary Talks	West Bldg. No. 5, Rm. 201 (Conference Room I)	
Open Lectures for Citizens	West Bldg. No. 5, B1	

Other Rooms

Extended Abstracts and Membership	West Bldg. No. 2, Rm. 405
Discussion Rooms	West Bldg. No. 5, Rm. 301
Book Display and Sale	West Bldg. No. 5, Rm. 203/204/205/304/305/306
Executive Committee, MSJ President	West Bldg. No. 5, Rm. 505
Official Party	Central Bldg., 12F Faculty Lounge “Mejiro Club”