

2016 Mathematical Society of Japan

AUTUMN MEETING

Dates: September 15th (Thu)–18th (Sun), 2016

Venue: Senriyama Campus, Kansai University
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Mathematical Society of Japan
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	I Bldg. 3 1F 3101	II Bldg. 3 2F 3201	III Bldg. 3 4F 3401	IV Bldg. 3 4F 3402	V Bldg. 4 B1F 4001	VI Bldg. 4 B1F 4002	VII Bldg. 4 2F 4201	VIII Bldg. 4 2F 4202	IX Bldg. 4 3F 4301	
15th (Thu)	Algebra 9:30–11:45 14:15–15:45	Functional Equations 9:15–12:00 14:15–16:15	Topology 9:50–12:00 15:30–17:20	Functional Analysis 14:15–16:15	Applied Mathematics 10:00–12:00 14:15–15:30	Infinite Analysis 10:15–12:00 14:15–15:15	Statistics and Probability 9:15–12:00 14:15–15:00	Complex Analysis 9:00–11:45 14:15–16:55	Geometry 9:30–11:40 14:15–15:40	
	Featured Invited Talks					13:00–14:00				
	Invited Talk 16:00–17:00	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15	Invited Talk 16:30–17:30	Invited Talk 16:30–17:30	Invited Talk 15:30–16:30	Invited Talks 15:15–16:15 16:30–17:30	Invited Talk 17:00–18:00	Invited Talks 15:50–16:50 17:00–18:00	
16th (Fri)	Algebra 9:20–12:00	Functional Equations 9:00–12:00		Functional Analysis 9:15–12:00	Applied Mathematics 10:00–11:30 13:15–14:00	Infinite Analysis 10:15–11:45	Statistics and Probability 9:00–11:40	Complex Analysis 9:30–11:45	Geometry 9:30–10:00	
	Invited Talk 13:00–14:00	Invited Talk 13:00–14:00		Invited Talk 13:00–14:00		Invited Talk 13:00–14:00		Invited Talk 13:00–14:00	Invited Talks 10:30–11:30 13:00–14:00	
	MSJ Prizes Presentation (BIG Hall 100) (14:30–15:00)									
	Plenary Talks (BIG Hall 100) MSJ Autumn Prize Winner (15:10–16:10)									
	Shigefumi Mori (Kyoto Univ.) (16:25–17:25)									
Official Party (Mediapark “RINPUKAN”) (18:00–20:00)										
17th (Sat)	Algebra 9:20–11:15 14:20–15:15	Functional Equations 9:15–12:00 14:15–16:15	Topology 9:50–12:00 15:30–17:15	Functional Analysis 9:15–12:00 14:15–16:15	Applied Mathematics 10:00–11:35 14:15–15:30	Real Analysis 9:30–11:45 14:15–16:00	Statistics and Probability 9:15–12:00 14:15–15:00	Found. of Math. and History of Math. 9:30–11:20 14:15–16:00	Geometry 9:30–11:40 14:15–16:50	
	Featured Invited Talks					13:00–14:00				
	Invited Talks 15:30–16:30 16:40–17:40	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15	Invited Talk 16:30–17:30	Invited Talk 15:50–16:50	Invited Talk 16:20–17:20	Invited Talks 15:15–16:15 16:30–17:30	Invited Talk 16:15–17:15	Invited Talk 17:00–18:00	
18th (Sun)	Algebra 9:30–11:45 14:15–15:45	Functional Equations 9:15–12:00 14:15–16:15	Topology 9:50–12:00		Applied Mathematics 10:00–12:00 14:15–16:05	Real Analysis 9:30–12:00 14:15–15:15	Statistics and Probability 9:15–12:00	Found. of Math. and History of Math. 9:30–11:20 14:15–16:00		
	Featured Invited Talks					13:00–14:00				
		Invited Talk 16:30–17:30			Invited Talk 16:30–17:30	Invited Talk 15:30–16:30				

Plenary Talks

September 16th (Fri) BIG Hall 100

MSJ Autumn Prize Winner	(15:10–16:10)
70th Anniversary Lecture		
Shigefumi Mori (Kyoto Univ./Kyoto Univ.)	Rational curves on algebraic varieties —minimal models and extremal rays—	(16:25–17:25)

Featured Invited Talks

September 15th (Thu)

Conference Room II

Guest Talk from Taiwan Mathematical Society

Tai-Chia Lin (Nat. Taiwan Univ.)	Analysis of Poisson–Nernst–Planck type equations and its applications	(13:00–14:00)
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Conference Room VII

70th Anniversary Lecture

Takashi Kumagai (Kyoto Univ.)	Anomalous diffusions on disordered media	(13:00–14:00)
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Conference Room IX

70th Anniversary Lecture

Kenji Fukaya (Simons Center for Geometry and Physics, SUNY)	Present status of the proof of homological Mirror symmetry	(13:00–14:00)
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September 17th (Sat)

Conference Room I

70th Anniversary Lecture

Toshiyuki Kobayashi (Univ. of Tokyo/Univ. of Tokyo)	Birth of new branching problems	(13:00–14:00)
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Conference Room IX

70th Anniversary Lecture

Tohru Eguchi (Rikkyo Univ.)	String theory and moonshine phenomenon	(13:00–14:00)
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September 18th (Sun)

Conference Room I

70th Anniversary Lecture

Kazuya Kato (Univ. of Chicago) ^b	On recent developments in Number Theory	(13:00–14:00)
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Conference Room II

70th Anniversary Lecture

Hitoshi Ishii (Waseda Univ.)	Viscosity solutions and asymptotic problems	(13:00–14:00)
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Talks Invited by Research Sections and Special Session

September 15th (Thu)

Algebra (Conference Room I)

- Satoshi Naito (Tokyo Tech) Character formula for Demazure submodules of level-zero extremal weight modules and a specialization of Macdonald polynomials (16:00–17:00)

Geometry (Conference Room IX)

- Kei Kondo (Yamaguchi Univ.) Non-smooth analysis and differentiable sphere theorems ... (15:50–16:50)
- Nicola Gigli (SISSA) Nonsmooth differential geometry (17:00–18:00)

Complex Analysis (Conference Room VIII)

- Yu Kawakami (Kanazawa Univ.) Geometric interpretation of value-distribution-theoretic property for the Gauss map of complete minimal surfaces (17:00–18:00)

Functional Equations (Conference Room II)

- Tomoyuki Tanigawa (Kumamoto Univ.) Regular variation and asymptotic behavior of solutions of differential equations (16:30–17:30)

Functional Analysis (Conference Room IV)

- Susumu Yamazaki (Nihon Univ.) Pseudodifferential operators of infinite order and symbols in the analytic category (16:30–17:30)

Statistics and Probability (Conference Room VII)

- Xiang-Dong Li (AMSS, Chinese Acad. of Sci.) W-entropy formulas on super Ricci flows and Langevin deformation on Wasserstein space over Riemannian manifolds (15:15–16:15)
- Naoki Kubota (Nihon Univ.) Large deviation principle for random walks in random environments and Lyapunov exponents (16:30–17:30)

Applied Mathematics (Conference Room V)

- Chie Nara (Meiji Univ.) Kelvin's conjecture and space-fillers with minimal surface area —Unfolding of doubly covered polyhedra and soap film experiments— (16:30–17:30)

Topology (Conference Room III)

- Hisaaki Endo (Tokyo Tech) Topology of Lefschetz fibrations (14:15–15:15)

Infinite Analysis (Conference Room VI)

- Kohei Motegi (Tokyo Univ. of Marine Sci. and Tech.) Partition functions of integrable lattice models and symmetric polynomials (15:30–16:30)

September 16th (Fri)

Algebra (Conference Room I)

- Yoshiyuki Kimura (Kobe Univ.) Quantum unipotent subgroups and dual canonical bases .. (13:00–14:00)

Geometry and Topology (Conference Room IX)

Award Lecture for the 2016 MSJ Geometry Prize

Teruhiko Soma (Tokyo Metro. Univ.) Geometry and topology of irreducible 3-manifolds (10:30–11:30)

Award Lecture for the 2016 MSJ Geometry Prize

Shigeharu Takayama (Univ. of Tokyo) Complex geometry of the canonical bundle (13:00–14:00)

Complex Analysis (Conference Room VIII)

Shin-ichi Matsumura (Tohoku Univ.) On generalizations of the Kodaira vanishing theorem by transcendental methods (13:00–14:00)

Functional Equations (Conference Room II)

Toru Wakasa (Kyushu Inst. of Tech.) Linearized eigenvalue problems associated with 1 dimensional front/pulse type steady states (13:00–14:00)

Functional Analysis (Conference Room IV)

Shuhei Wada (Kisarazu Nat. Coll. of Tech.) Topics in the theory of operator monotone functions (13:00–14:00)

Infinite Analysis (Conference Room VI)Tatsuyuki Hikita (Kyoto Univ.)^b On the cohomology of conical symplectic resolutions (13:00–14:00)

September 17th (Sat)

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

Taishi Kurahashi (Kisarazu Nat. Coll. of Tech.) On the incompleteness theorems and provability predicates (16:15–17:15)

Algebra (Conference Room I)Takuya Yamauchi (Tohoku Univ.) Serre conjecture for GSp_4 and weight reduction theorem (15:30–16:30)Takeshi Saito (Univ. of Tokyo)^b Characteristic cycle of an ℓ -adic sheaf (16:40–17:40)**Geometry** (Conference Room IX)

Satoshi Ishiwata (Yamagata Univ.) Heat kernel estimates on connected sums (17:00–18:00)

Functional Equations (Conference Room II)Atsuhide Ishida (Tokyo Univ. of Sci.)^b Direct and inverse problems of quantum scattering in time-dependent electric fields (16:30–17:30)**Real Analysis** (Conference Room VI)

Akihiko Miyachi (Tokyo Woman's Christian Univ.) Hardy space estimates for multidimensional Hausdorff operators (16:20–17:20)

Functional Analysis (Conference Room IV)

Yoshiki Oshima (Univ. of Tokyo)* Unitary representations of real reductive Lie groups and orbit method (16:30–17:30)

Statistics and Probability (Conference Room VII)

- Nobumichi Shutoh (Kobe Univ.) Linear discriminant analysis and some tests based on monotone missing data (15:15–16:15)
- Teppei Ogihara (Inst. of Stat. Math./JST PRESTO) Statistical analysis for diffusion processes with noisy, non-synchronous observations (16:30–17:30)

Applied Mathematics (Conference Room V)

- Ichiro Hasuo (Univ. of Tokyo) Modern abstract mathematics at work: Category theory and logic disentangling complex structures in computer systems (15:50–16:50)

Topology (Conference Room III)

- John Parker (Univ. of Duhram) Non-arithmetic lattices (14:15–15:15)

September 18th (Sun)

Functional Equations (Conference Room II)

- Masaya Maeda (Chiba Univ.) On orbital instability of excited states of nonlinear Schrödinger equations (16:30–17:30)

Real Analysis (Conference Room VI)

- Hiroshi Matsuzawa (Numazu Nat. Coll. of Tech.) Spreading speed and asymptotic profile of the free boundary problems of nonlinear diffusion equations (15:30–16:30)

Applied Mathematics (Conference Room V)

- Takahito Kashiwabara (Univ. of Tokyo) On L^∞ -type error estimates and discrete Green's functions in the finite element method (16:30–17:30)

Open Lectures for Citizens

Date: September 19th (Mon) 13:00–15:30

Venue: Bldg. 3, 2F Rm. 3201

Sponsored by: Mathematical Society of Japan

Co-sponsored by: Kansai University

Program: Opening Speech (13:00–13:10)

Motoko Kotani (President of MSJ/Tohoku Univ.)

Lecture 1

Nobumasa Sugimoto (Kansai Univ./Emeritus Prof. of Osaka Univ.)

On differential and integral calculus of non-integer order (13:10–14:10)

70th Anniversary Lecture

Toshikazu Sunada (Meiji Univ./Emeritus Prof. of Tohoku Univ.)

Development and perspective of mathematics (14:30–15:30)

Web Page: <http://mathsoc.jp/en/meeting/kansai16sept/>

Foundation of Mathematics and History of Mathematics

September 17th (Sat) Conference Room VIII

9:30–11:20

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|---|---|---|----|
| 1 | Makoto Tamura (Osaka Sangyo Univ.) | Indeterminate equation in “Shu” housed at Yuelu Academy | 15 |
| 2 | Shunzi Horiguchi
(Niigata Sangyo Univ.) | Handwriting analysis of Chinese characters in the Koutaku Hosoi work
Hiden Chiiki Zuhou Daizensyo and Koutaku Hosoi autograph 1000
characters of ten bodies | 15 |
| 3 | Mitsuo Morimoto
(Yokkaichi Univ./Sophia Univ.*) | Volume 12 (Geometric Quantities) of the <i>Taisei Sankei</i> and the <i>Tetsu-
jutsu Sankei</i> | 15 |
| 4 | Shigeru Jochi (Osaka Kyoiku Univ.) | The evaluation of the questions on the mathematical votive tablets by
AIDA Yasuaki | 15 |
| 5 | Shigeru Masuda
(Res. Workshop of Classical Fluid Dynamics) | The contributions by Lagrange, Laplace and Legendre to the mathe-
matical ground of heat theory | 15 |
| 6 | Shigeru Masuda
(Res. Workshop of Classical Fluid Dynamics) | The mathematical digressions in the heat theories come from Fourier
and Poisson | 15 |

11:30–12:00 Mathematics History Team Meeting

14:15–16:00

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| 7 | Shotaro Tanaka | Representations of k^p and $\Sigma^k n^p$ by suida | 15 |
| 8 | Ken Saito (Osaka Pref. Univ.) | Syntactic analysis of the whole text of Euclid’s <i>Elements</i> | 15 |
| 9 | Michiyo Nakane | Algebra and analysis vs. algebraic analysis in 18th century | 15 |
| 10 | Yoshihiro Abe (Kanagawa Univ.) | The extent of the ideals over $\mathcal{P}_R\lambda$ below the bounded ideal in the
Rudin–Keisler ordering | 15 |
| 11 | Teruyuki Yorioka (Shizuoka Univ.) | Properties of ccc forcings related to von Neumann’s problem on measure
algebras | 15 |
| 12 | Toshimichi Usuba (Waseda Univ.) | Set-theoretic geology without AC | 15 |

16:15–17:15 Talk Invited by Section on Foundation and History of Mathematics

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| Taishi Kurahashi
(Kisarazu Nat. Coll. of Tech.) | On the incompleteness theorems and provability predicates |
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September 18th (Sun) Conference Room VIII

9:30–11:20

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|----|-----------------------------------|---|----|
| 13 | Takashi Oyabu | The mathematical principle of the natural philosophy | 5 |
| 14 | Nobu-Yuki Suzuki (Shizuoka Univ.) | Weak variants of disjunction and existence properties in intermediate
predicate logics | 15 |
| 15 | Kyohei Yokomizo (Nihon Univ.) | A Separable Axiomatization of the Gabbay–de Jongh Logics | 15 |
| 16 | Tatsuya Shimura (Nihon Univ.) | An example of formulas with a strong form of disjunction property
. | 15 |

17	Ryo Kashima (Tokyo Tech)	On intuitionistic (and intermediate) second order propositional logics	15
18	Koichiro Ikeda (Hosei Univ.)	A remark on full amalgamation property	15
19	Akito Tsuboi (Univ. of Tsukuba) Makoto Yanagawa (Univ. of Tsukuba)	Uncountable ω -categorical theories	10

11:30–12:00 Research Section Assembly**14:15–16:00**

20	Toshio Suzuki (Tokyo Metro. Univ.)	Separation of parallel advice and serial advice on real-time deterministic context-free languages	15
21	Kenshi Miyabe (Meiji Univ.)	On computability of reals on the space where the triangle inequality does not hold	15
22	Kohtaro Tadaki (Chubu Univ.)	An operational characterization of the notion of probability by algorithmic randomness III	15
23	Kenetsu Fujita (Gunma Univ.)	On the Church–Rosser theorem	15
24	Satoru Kuroda (Gunma Pref. Women’s Univ.)	A formal system of Sprague–Grundy theory	15
25	Keita Yokoyama (JAIST)	On the proof-theoretic strength of Ramsey’s theorem for pairs	15

Algebra

September 15th (Thu) Conference Room I

9:30–11:45

1	Hideto Asashiba (Shizuoka Univ.) Ken Nakashima (Shizuoka Univ.) Michio Yoshiwaki (Shizuoka Univ./Osaka City Univ.)	Decomposition theory of modules: the case of Kronecker algebra	15
2	Kenta Ueyama (Hirosaki Univ.)	Graded endomorphism algebras of cluster tilting modules	10
3	Yuta Kozakai (Tokyo Univ. of Sci.) Naoko Kunugi (Tokyo Univ. of Sci.)	On two-sided tilting complexes for Brauer tree algebras	10
4	Sota Asai (Nagoya Univ.)	bricks and 2-term simple-minded collections	15
5	Shigeto Kawata (Osaka City Univ.)*	Auslander–Reiten components and vertecies for group rings	10
6	Kenichi Shimizu (Shibaura Inst. of Tech.)	Indicators of finite tensor categories	15
7	Hideto Asashiba (Shizuoka Univ.)	Quiver presentations of smash products of categories and coverings of Brauer graph algebras	15
8	Hideto Asashiba (Shizuoka Univ.)	A simple application of a 2-categorical covering theory to a construction of triangulated orbit categories	15

14:15–15:45

- 9 Yoshitomo Baba (Osaka Kyoiku Univ.) On i -pairs of two-sided Harada rings 15
- 10 Yugen Takegahara (Muroran Inst. of Tech.) Multiplicative induction for monomial Burnside rings 15
- 11 Shuhei Kamioka (Kyoto Univ.) Product formulae for skew plane partitions and the discrete two-dimensional Toda molecule 15
- 12 Naoki Genra (Kyoto Univ.) Screening operators for W -algebras 10
- 13 Shunsuke Tsuchioka (Univ. of Tokyo) On a general Schur partition theorem 15
Masaki Watanabe (Univ. of Tokyo)

16:00–17:00 Talk Invited by Algebra Section

- Satoshi Naito (Tokyo Tech) Character formula for Demazure submodules of level-zero extremal weight modules and a specialization of Macdonald polynomials

September 16th (Fri) Conference Room I

9:20–12:00

- 14 Haruhisa Nakajima (J. F. Oberlin Univ.) * Pseudo-reflections of stable regular actions of finite central extensions of algebraic tori in free characteristics 10
- 15 Akiyoshi Tsuchiya (Osaka Univ.) On the sign patterns of the coefficients of Hilbert polynomials 10
- 16 Akiyoshi Tsuchiya (Osaka Univ.) Flat δ -vectors and their Ehrhart polynomials 15
Takayuki Hibi (Osaka Univ.)
- 17 Akihiro Higashitani (Kyoto Sangyo Univ.) Non-level semi-standard graded Cohen–Macaulay domains with h -vectors (h_0, h_1, h_2) 15
Kohji Yanagawa (Kansai Univ.)
- 18 Kazunori Matsuda (Osaka Univ.) * Toric rings and ideals of stable set polytopes 15
Hidefumi Ohsugi (Kwansei Gakuin Univ.)
Kazuki Shibata (Rikkyo Univ.)
- 19 Ryota Okazaki (Fukuoka Univ. of Edu.) On construction of \mathbb{Z} -graded finite free resolutions of finitely generated \mathbb{Z} -graded modules over a polynomial ring 10
- 20 Tadahito Harima (Niigata Univ.) * The EGH conjecture and the Sperner property of complete intersections 10
Akihito Wachi (Hokkaido Univ. of Edu.)
Junzo Watanabe (Tokai Univ.)*
- 21 Akihito Wachi (Hokkaido Univ. of Edu.) The Strong Lefschetz property of zero-dimensional complete intersection with the action of the symmetric group 15
Tadahito Harima (Niigata Univ.)
Junzo Watanabe (Tokai Univ.)*
- 22 Futoshi Hayasaka (Hokkaido Univ. of Edu.) * A formula for the associated Buchsbaum–Rim multiplicity of a direct sum of cyclic modules 10
- 23 Hiraku Kawanoue (Kyoto Univ.)^b On embedded resolution for surfaces 15

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

- Yoshiyuki Kimura (Kobe Univ.) Quantum unipotent subgroups and dual canonical bases

September 17th (Sat) Conference Room I

9:20–11:15

- 24 Shigeru Iitaka (Gakushuin Univ.*) On Euler's perfect numbers 10
- 25 Genki Shibukawa (Osaka Univ.) Modified higher order Fibonacci and Lucas numbers 10
- 26 Takao Komatsu (Wuhan Univ.) Incomplete multi-poly-Bernoulli numbers 15
- 27 Yoshitaka Sasaki On sum formula for generalized poly-Bernoulli numbers 10
(Osaka Univ. of Health and Sport Sci.)
Ohno Yasuo (Tohoku Univ.)
- 28 Kazuhito Kozuka * On power sums for lattice points in certain rational polytopes and
(Miyakonojo Nat. Coll. of Tech.) multiple Dedekind sums 15
- 29 Takashi Miyagawa (Nagoya Univ.)* Mean values of the Barnes zeta-function 10
- 30 Makoto Minamide (Yamaguchi Univ.)* On the approximate functional equation for $\zeta'(s)^2$ 10
Jun Furuya
(Hamamatsu Univ. School of Medicine)
Yoshio Tanigawa
- 31 Maki Nakasuji (Sophia Univ.) Jacobi–Trudi type formula for Schur multiple zeta functions 10
Ouamporn Phuksuwan(
(Chulalongkorn Univ.)

11:30–12:00 Research Section Assembly**14:20–15:15**

- 32 Fumitake Hyodo Formal power series of Hecke rings associated with some Lie algebras
(Kawasaki Univ. of Med. Welfare) 15
- 33 Yuichi Shimada (Nagoya Univ.) Modularity lifting and Oda's conjecture for Hilbert modular varieties
..... 10
- 34 Hiroyasu Miyazaki (Univ. of Tokyo) An invariance property of higher Chow groups with modulus and its
applications 15

15:30–16:30 Talk Invited by Algebra Section

Takuya Yamauchi (Tohoku Univ.) Serre conjecture for GSp_4 and weight reduction theorem

16:40–17:40 Talk Invited by Algebra Section

Takeshi Saito (Univ. of Tokyo)^b Characteristic cycle of an ℓ -adic sheaf

September 18th (Sun) Conference Room I

9:30–11:45

- 35 Tomohiro Iwami (Kyushu Inst. of Tech.)* Construction of deformation family of semistable extremal neighbor-
hoods via framed form fans 15
- 36 Khulan Tumenbayar Examples of Zariski pairs for arrangements of line-conic-irreducible with
(Tokyo Metro. Univ.) 2 nodes and 1 cusp 15
- 37 Hirokazu Nasu (Tokai Univ.) Obstructions to deforming curves lying on a $K3$ surface in a Fano 3-fold
..... 15

38	Kiwamu Watanabe (Saitama Univ.) [*]	A characterization of symplectic Grassmannians	15
39	Ryo Kawaguchi (Nara Medical Univ.)	The volume of integral convex polytopes and the sectional genus of polarized varieties	15
40	Sho Ejiri (Univ. of Tokyo)	Positivity of anti-canonical divisors and F -purity of fibers	15
41	Sachio Ohkawa (Univ. of Tokyo)	On log Cartier transform of higher level	15
14:15–15:45			
42	Kazunori Nakamoto (Univ. of Yamanashi) ^b	Two-dimensional traceless representations in characteristic 2	15
43	Wahei Hara (Waseda Univ.)	Rouquier dimension and Orlov spectrum of singular varieties	15
44	Kohei Kikuta (Osaka Univ.)	On categorical entropy of triangulated categories	15
45	Yoshifumi Tsuchimoto (Kochi Univ.)	Dolbeault complex of non commutative projective varieties	15

Geometry

September 15th (Thu) Conference Room IX

9:30–11:40

1	Keita Kunikawa (Nagoya Univ.) ^b	Rigidity of eternal solutions to Lagrangian mean curvature flow	15
2	Naoyuki Koike (Tokyo Univ. of Sci.)	Long time behavior of the volume-preserving mean curvature flow for tubes in rank one symmetric spaces of non-compact type	15
3	Hiroshi Konno (Meiji Univ.)	Examples of Lagrangian mean curvature flows via torus actions	15
4	Ryosuke Takahashi (Tohoku Univ.)	Bergman iteration and C^∞ -convergence towards Kähler–Ricci flow	10
5	Masaya Kawamura (Tokyo Metro. Univ.)	On the non-existence of static pluriclosed metrics on non-Kähler minimal complex surfaces	15
6	Ryosuke Nomura (Univ. of Tokyo)	Blow-up behavior of the scalar curvature along the conical Kähler–Ricci flow	15
7	Ryosuke Nomura (Univ. of Tokyo)	Schwarz lemma for cone metrics	15
8	Takumi Yokota (Kyoto Univ.)	Convex functions and p -barycenter on CAT(1)-spaces of small radii	10

14:15–15:40

9	Homare Tadano (Osaka Univ.)	Remark on lower diameter bounds for compact Ricci solitons	15
10	Homare Tadano (Osaka Univ.)	Some Ambrose and Galloway type theorems via Bakry–Émery and modified Ricci curvatures	15
11	Homare Tadano (Osaka Univ.)	Diameter bounds, gap theorems and Hitchin–Thorpe inequalities for compact quasi-Einstein manifolds	15
12	Youhei Sakurai (Univ. of Tsukuba)	Rigidity phenomena in manifolds with boundary under a lower weighted Ricci curvature bound	15
13	Nobuhiro Inami (Niigata Univ.)	Parallel axiom and differentiability of Busemann functions	15

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

Kei Kondo (Yamaguchi Univ.) Non-smooth analysis and differentiable sphere theorems

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

Nicola Gigli (SISSA) Nonsmooth differential geometry

September 16th (Fri) Conference Room IX

9:30–10:00

- 14 Yuuji Tanaka (Nagoya Univ.) A construction of $Spin(7)$ -instantons 15
- 15 Kazushi Kobayashi (Chiba Univ.) On the structure of exact triangles consisting of holomorphic vector bundles on high dimensional complex tori 15

10:10–10:25 Presentation Ceremony for the 2016 MSJ Geometry Prize**10:30–11:30 Award Lecture for the 2016 MSJ Geometry Prize**

Teruhiko Soma (Tokyo Metro. Univ.) Geometry and topology of irreducible 3-manifolds

13:00–14:00 Award Lecture for the 2016 MSJ Geometry Prize

Shigeharu Takayama (Univ. of Tokyo) Complex geometry of the canonical bundle

September 17th (Sat) Conference Room IX

9:30–11:40

- 16 Saburo Saitoh * Division by zero $z/0=0$ in Euclidean spaces 15
(Gunma Univ.*/Inst. of Reproducing Kernels)
Hiroshi Michiwaki (NejiLaw Inc.)
Hiroshi Okumura (Yamato Univ.)
- 17 Saburo Saitoh * Matrices and division by zero $z/0=0$ 15
(Gunma Univ.*/Inst. of Reproducing Kernels)
Tutomu Matsuura (Gunma Univ.)
- 18 Udo Hertrich-Jeromin * Minimal Darboux transformations 10
(Vienna Univ. of Tech.)
Atsufumi Honda
(Miyakonojo Nat. Coll. of Tech.)
- 19 Yuta Ogata (Kobe Univ.) Duality between cuspidal butterflies and cuspidal S_1 singularities on maxfaces 15
Keisuke Teramoto (Kobe Univ.)
- 20 Katsuhiro Moriya (Univ. of Tsukuba) The Weierstrass representation for surfaces in Euclidean space of arbitrary dimension 15
- 21 Kazuyuki Hasegawa (Kanazawa Univ.) A quaternionic invariant for an inclusive immersion 10
- 22 Kazuyuki Hasegawa (Kanazawa Univ.) A quaternionic Willmore immersion 10
- 23 Kouhei Miura (Tokyo Univ. of Sci.) Superextremal spacelike surfaces in a pseudo-Riemannian space form and a characterization of Boruvka hyperbolic planes 10
- 24 Qing Song Shi (Nagoya Inst. of Tech.)* Comparison theorems on trajectory-harps 10
Toshiaki Adachi (Nagoya Inst. of Tech.)

14:15–16:50

- 25 Yuichiro Taketomi (Hiroshima Univ.) On a Riemannian submanifold whose slice representation has no nonzero fixed point 15
- 26 Kotaro Kawai (Univ. of Tokyo) Frölicher–Nijenhuis bracket and geometry of G_2 -and Spin(7)-manifolds
 Hông Vân Lê (CAS) 15
 Lorenz Schwachhöfer (TU Dortmund)
- 27 Akira Kubo (Hiroshima Shudo Univ.) Totally geodesic complex curves in Hermitian symmetric spaces 15
 Takayuki Okuda (Hiroshima Univ.)
 Hiroshi Tamaru (Hiroshima Univ.)
- 28 Shinji Ohno (Osaka City Univ.) A construction of biharmonic homogeneous hypersurfaces in compact
 Lie groups 15
 Takashi Sakai (Tokyo Metro. Univ.)
 Hajime Urakawa (Tohoku Univ.*)
- 29 Makiko Tanaka (Tokyo Univ. of Sci.) Maximal antipodal subgroups of the automorphism groups of classical
 compact Lie algebras 15
 Hiroyuki Tasaki (Univ. of Tsukuba)
- 30 Makiko Tanaka (Tokyo Univ. of Sci.) Maximal antipodal subgroups of the compact Lie group G_2 of excep-
 tional type 15
 Hiroyuki Tasaki (Univ. of Tsukuba)
 Osami Yasukura (Univ. of Fukui)
- 31 Kurando Baba (Tokyo Univ. of Sci.) A duality between semisimple pseudo-Riemannian symmetric pairs and
 compact symmetric triads 15
 Osamu Ikawa (Kyoto Inst. Tech.)
 Atsumu Sasaki (Tokai Univ.)
- 32 Kurando Baba (Tokyo Univ. of Sci.) An alternative proof for semisimple pseudo-Riemannian symmetric pairs
 from the viewpoint of compact symmetric triads 15
 Osamu Ikawa (Kyoto Inst. Tech.)
 Atsumu Sasaki (Tokai Univ.)
- 33 Oleksii Leontiev (Univ. of Tokyo)^b Symmetry breaking operators of indefinite orthogonal groups $O(p, q)$
 Kobayashi Toshiyuki 15
 (Univ. of Tokyo/Univ. of Tokyo)

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

- Satoshi Ishiwata (Yamagata Univ.) Heat kernel estimates on connected sums

Complex Analysis

September 15th (Thu) Conference Room VIII

9:00–11:45

- 1 Shigeyoshi Owa (Yamato Univ.) A new general idea for starlike and convex functions 15
 Hari M. Srivastava (Univ. of Victoria)
Toshio Hayami (Setsunan Univ.)
 Kazuo Kuroki
 (Osaka Univ. of Health and Sport Sci.)

- 2 Narufumi Tsuboi (JSOL Co.) The defects of Hadamard gap series in the unit disk which is of small order 15
- 3 Saburoou Saitoh * Solutions of Tikhonov functional equations and applications to multiplication operators on Szegő spaces 15
(Gunma Univ.*/Inst. of Reproducing Kernels)
L. P. Castro (Univ. of Aveiro)
A. Yamada (Tokyo Gakugei Univ.)
- 4 Saburoou Saitoh * Division by zero $z/0=0$ in complex analysis (draft) 15
(Gunma Univ.*/Inst. of Reproducing Kernels)
Masako Takagi
(Inst. of Reproducing Kernels)
- 5 Rikio Yoneda (Kanazawa Univ.)* Composition operators on the weighted Bloch space, the weighted Dirichlet spaces, and BMOA with closed range 10
- 6 Fumi-Yuki Maeda (Hiroshima Univ.)* Sobolev's inequalities on non-homogeneous central Herz–Morrey–Musielak–Orlicz spaces 15
Yoshihiro Mizuta (Hiroshima Univ.)*
Takao Ohno (Oita Univ.)
Tetsu Shimomura (Hiroshima Univ.)
- 7 Yoshihiro Mizuta (Hiroshima Univ.)* Optimal estimates for the fractional Hardy operator 15
Aleš Nekvinda (Czech Tech. Univ.)
Tetsu Shimomura (Hiroshima Univ.)
- 8 Masaharu Nishio (Osaka City Univ.)^b Polyharmonic Bergman spaces on half spaces 15
Katsunori Shimomura (Ibaraki Univ.)
- 9 Kentarou Itou (Meijo Univ.) Uniform convergence of Fourier series for weighted orthogonal polynomials 15
Ryozi Sakai (Meijo Univ.)
Noriaki Suzuki (Meijo Univ.)
- 10 Kiyoki Tanaka (Daido Univ.) Notes on the polyharmonic Bergman space on the unit ball 15
- 14:15–16:55**
- 11 Hiroki Sumi (Osaka Univ.) Finding roots of any polynomials by random relaxed Newton's methods 15
- 12 Shizuo Nakane Stretching rays for cubic polynomials 15
(Tokyo Polytechnic Univ.)
- 13 Masanori Amano (Tokyo Tech) The estimation of the Teichmüller distance by the new coordinate 15
- 14 Hideki Miyachi (Osaka Univ.) Extremal length and the period matrices of branched covering spaces for associated quadratic differentials 15
- 15 Masahiro Yanagishita Curvatures of Weil–Peterson metric on square integrable Teichüller space 15
(Yamaguchi Univ.)
- 16 Hiroki Fujino (Nagoya Univ.) Quasisymmetric embedding of the integer set and its quasiconformal extension 15
- 17 Katsusuke Nabeshima Computing μ^* -sequences of hypersurface isolated singularities via parametric local cohomology systems 15
(Univ. of Tokushima)
Shinichi Tajima (Univ. of Tsukuba)
- 18 Katsusuke Nabeshima Parametric holonomic D-modules and b -functions of μ -constant deformations 15
(Univ. of Tokushima)
Shinichi Tajima (Univ. of Tsukuba)

- 19 Katsuyoshi Ohara (Kanazawa Univ.) An algorithm for computing Grothendieck local residues in the case of
Tajima Shinichi (Univ. of Tsukuba) shape bases 15

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

- Yu Kawakami (Kanazawa Univ.) Geometric interpretation of value-distribution-theoretic property for the
 Gauss map of complete minimal surfaces

September 16th (Fri) Conference Room VIII

9:30–11:45

- 20 Masakazu Shiba (Hiroshima Univ.*) Conformal embeddings of an open Riemann surface into closed ones of
Hiroshi Yamaguchi (Shiga Univ.*) the same genus —The range of the period matrices— 15
- 21 Sachiko Hamano (Osaka City Univ.) Variation of the moduli disk for an open Riemann surface of positive
Masakazu Shiba (Hiroshima Univ.*) finite genus 15
Hiroshi Yamaguchi (Shiga Univ.*)
- 22 Shigeki Matsutani Jacobi inversion formulae for a trigonal curve $y^3 = x^2k(x)$ 15
 (Sasebo Nat. Coll. of Tech.)
Jiryo Komeda (Kanagawa Inst. of Tech.)
Emma Previato (Boston Univ.)
- 23 Takashi Umeno (Kyushu Sangyo Univ.) Two examples of arithmetic toroidal groups 15
- 24 Takayuki Koike (Kyoto Univ.)* Ueda theory for compact curves with nodes 15
- 25 Atsushi Atsuji (Keio Univ.) Default function and Liouville type theorems 15
- 26 Genki Hosono (Univ. of Tokyo) Convergence along geodesics between toric plurisubharmonic functions
 10
- 27 Takeo Ohsawa (Nagoya Univ.)^b Runge's theorem on pseudoconvex Kähler manifolds 15

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

- Shin-ichi Matsumura (Tohoku Univ.) On generalizations of the Kodaira vanishing theorem by transcendental
 methods

Functional Equations

September 15th (Thu) Conference Room II

9:15–12:00

- 1 Masafumi Yoshino (Hiroshima Univ.) Moving singularity and monodromy of some Hamiltonian system 12
- 2 Shogo Yamanaka (Kyoto Univ.) Non-integrability of general differential equations with homo- and het-
Kazuyuki Yagasaki (Kyoto Univ.) eroclinic orbits 12
- 3 Mika TANDA (Kansai Med. Univ.) The relation between the confluent hypergeometric function and WKB
Toshinori Takahashi (Kinki Univ.) solutions 12
Takashi Aoki (Kinki Univ.)

- 4 Naoto Yamaoka (Osaka Pref. Univ.) Oscillation criteria for linear dynamic equations on time scales 10
- 5 Junya Nishiguchi (Kyoto Univ.) Well-posedness of initial value problems of differential equations with unbounded delays 12
- 6 Hiroyuki Usami (Gifu Univ.)* Asymptotic forms of slowly decaying solutions of a Lanchester-type model 12
- 7 Pati Doi (Osaka Pref. Univ.) Oscillation criteria for a difference system with two delays 10
Hideaki Matsunaga (Osaka Pref. Univ.)
- 8 Tatsuki Mori (East China Normal Univ.) Exact solution of stationary problem for a cell polarization model 12
Kousuke Kuto (Univ. of Electro-Comm.)
Tohru Tsujikawa (Univ. of Miyazaki)
Shoji Yotsutani (Ryukoku Univ.)
- 9 Kousuke Kuto (Univ. of Electro-Comm.) Secondary bifurcation and global solution structure for a one-dimensional stationary Allen–Cahn equation with nonlocal term 12
Tatsuki Mori (East China Normal Univ.)
Tohru Tsujikawa (Univ. of Miyazaki)
Shoji Yotsunani (Ryukoku Univ.)
- 10 Tetsutaro Shibata (Hiroshima Univ.) Asymptotic length of bifurcation curves related to inverse bifurcation problems 12
- 11 Kenji Kurogi (Hiroshima Univ.) Counterexample to the 1-summability of a divergent formal solution to some linear partial differential equations 12
- 12 Yoshihiko Mitsumatsu (Chuo Univ.) Schröder’s equation on the half-line 12
Tomohiro Horiuchi (Chuo Univ.)
- 14:15–16:15**
- 13 Marco Squassina (Univ. of Verona) Uniqueness of limit flow for quasi-linear parabolic equations 10
Tatsuya Watanabe (Kyoto Sangyo Univ.)
- 14 Mathieu Colin (Univ. of Bordeaux) Orbital stability of standing waves for the nonlinear Schrödinger equation coupled with the Maxwell equation 10
Tatsuya Watanabe (Kyoto Sangyo Univ.)
- 15 Yukinori Komiya (Saga Univ.) Existence of infinitely many solutions for the (p, q) -Laplace equation 12
Ryuji Kajikiya (Saga Univ.)
- 16 Hiroko Yamamoto (Meiji Univ.) Concentration phenomenon in stationary solution of a spatially heterogeneous semilinear Neumann problem 12
- 17 Masataka Shibata (Tokyo Tech) Uniqueness of positive solutions for a class of quasilinear elliptic equations 12
Shinji Adachi (Shizuoka Univ.)
Tatsuya Watanabe (Kyoto Sangyo Univ.)
- 18 Masato Hashizume (Osaka City Univ.)^b Asymptotic behavior of the least-energy solutions of a semilinear elliptic equation with the Hardy–Sobolev critical exponent 10

15 Functional Equations

- 19 Takashi Suzuki (Osaka Univ.) A priori bounds for superlinear elliptic equations with semidefinite
Yohei Toyota (Osaka Univ.) nonlinearity 12
Yūki Naito (Ehime Univ.)
- 20 Shigeaki Koike (Tohoku Univ.) Fully nonlinear elliptic equations with sublinear growth in Du 12
Takahiro Kosugi (Tohoku Univ.)
- 21 Masaki Ohnuma (Univ. of Tokushima)* A strong comparison principle for semicontinuous solutions of the pre-
Shigeru Sakaguchi (Tohoku Univ.) scribed mean curvature equation 12

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

- Tomoyuki Tanigawa (Kumamoto Univ.) Regular variation and asymptotic behavior of solutions of differential
equations

September 16th (Fri) Conference Room II

9:00–12:00

- 22 Yusuke Yamauchi On a regularity theorem for rectangular domain 10
(Hiroshima Inst. of Tech.)
Mitsuharu Ôtani (Waseda Univ.)
Tetsuya Koyama
(Hiroshima Inst. of Tech.)
- 23 Kunihiro Usuba (Tokyo Univ. of Sci.) Regularity results up to the boundary for minimizers of $p(x)$ -energy
with $p(x) > 1$ 12
- 24 Hiroya Ito (Univ. of Electro-Comm.) Spherical functions for the Lamé operator 12
Shuichi Jimbo (Hokkaido Univ.)
Naofumi Honda (Hokkaido Univ.)
- 25 Xiaojing Liu (Ibaraki Univ.) Remarks on Kato's inequality when $\Delta_p u$ is a measure 12
Horiuchi Toshio (Ibaraki Univ.)
- 26 Kohji Ohtsuka Shape optimization of singular points in boundary value problems 12
(Hiroshima Kokusai Gakuin Univ.)
- 27 Takashi Kagaya (Tokyo Tech) A fixed contact angle condition for varifolds 10
Yoshihiro Tonegawa (Tokyo Tech)
- 28 Takashi Suzuki (Osaka Univ.) Lotka–Volterra systems with periodic orbits 5
Yoshio Yamada (Waseda Univ.)
- 29 Takashi Suzuki (Osaka Univ.) Dissipative reaction diffusion systems with quadratic growth 5
Yoshio Yamada (Waseda Univ.)
- 30 Ryuji Kajikiya (Saga Univ.) Stability of stationary solutions for sublinear parabolic equations 12
- 31 Yohei Fujishima (Shizuoka Univ.) Blow-up set of type I blowing up solutions for nonlinear parabolic
Kazuhiro Ishige (Tohoku Univ.) systems 12
Hiroki Maekawa (Tohoku Univ.)
- 32 Kazuhiro Ishige (Tohoku Univ.) Heat equation with a nonlinear boundary condition and growing initial
Ryuichi Sato (Tohoku Univ.) data 12
- 33 Yukihiro Seki (Kyushu Univ.)* Type II blow-up mechanisms in a semilinear heat equation with critical
Joseph–Lundgren exponent 12

- 34 Yasuhiro Fujita (Univ. of Toyama) On lower estimate of gradients of solutions to uniformly parabolic equations 12
- 35 Shigeru Sakaguchi (Tohoku Univ.) * Two-phase heat conductors with a stationary isothermic surface 12

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

- Toru Wakasa (Kyushu Inst. of Tech.) Linearized eigenvalue problems associated with 1 dimensional front/pulse type steady states

September 17th (Sat) Conference Room II

9:15–12:00

- 36 Shuichi Jimbo (Hokkaido Univ.) * Y-shaped graph and a time entire solution to a semilinear parabolic equation 12
Yoshihiro Takazawa
- 37 Naoto Kajiwara (Univ. of Tokyo) Resolvent estimates for bidomain operators 12
Yoshikazu Giga (Univ. of Tokyo)
- 38 Masaaki Mizukami Asymptotic stability in a two-species chemotaxis system with any chemical diffusion 10
(Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
- 39 Masaaki Mizukami Boundedness and asymptotic stability in a two-species chemotaxis-competition model of parabolic-parabolic-elliptic type 10
(Tokyo Univ. of Sci.)
Tobias Black (Paderborn Univ.)
Johannes Lankeit (Paderborn Univ.)
- 40 Toshikazu Kuniya (Kobe Univ.) Construction of Lyapunov functions for an SIR epidemic model with diffusion terms and space-dependent coefficients 12
Jinliang Wang (Heilongjiang Univ.)
- 41 Yusuke Sugiyama (Tokyo Univ. of Sci.) Degeneracy in finite time of a parameterized quasilinear wave equation 12
- 42 Mamoru Okamoto (Shinshu Univ.) Well-posedness and ill-posedness of the Cauchy problem for the dimensional reduced Chern–Simons–Dirac system 10
Machihara Shuji (Saitama Univ.)
- 43 Isao Kato (Nagoya Univ.) * Well-posedness and scattering for the Cauchy problem of the Klein–Gordon–Zakharov system in four and more spatial dimensions 10
- 44 Kunio Hidano (Mie Univ.) * Regularity and global existence of small solutions to systems of quasilinear wave equations in $2D$ with multiple speeds 12
- 45 Masahiro Ikeda (Kyoto Univ.) * The Cauchy problem for the nonlinear damped wave equation with slowly decaying data 10
Takahisa Inui (Kyoto Univ.)
Yuta Wakasugi (Nagoya Univ.)
- 46 Hiroyuki Takamura * Blow-up for semilinear wave equations with scale invariant damping and super Fujita exponent 10
(Future Univ.-Hakodate)
Kyouhei Wakasa
(Muroran Inst. of Tech.)
- 47 Kyouhei Wakasa * Global regularity for supercritical nonlinear dissipative wave equations in $3D$ 10
(Muroran Inst. of Tech.)
Borislav Yordanov (Hokkaido Univ.)
- 48 Itsuko Hashimoto * Asymptotic behavior of radially symmetric solutions for quasilinear hyperbolic fluid model 10
(Toyama Nat. Coll. of Tech.)
Hideo Kozono (Waseda Univ.)

14:15–16:15

- 49 Masaru Ikehata (Hiroshima Univ.) On finding an obstacle with the Leontovich boundary condition via the time domain enclosure method 12
- 50 Fumihiko Hirosawa (Yamaguchi Univ.) Energy estimates for the Cauchy problem of Klein–Gordon type equation with time dependent potential 12
Wanderley Nunes do Nascimento (Univ. of Campinas)
- 51 Shota Sakamoto (Kyoto Univ.) A solution of the Boltzmann equation with initial datum in a Chemin–Lerner space 12
Yoshinori Morimoto (Kyoto Univ.)
- 52 Yuki Kimura (Tohoku Univ.) Asymptotic profile of a solution to thermoelastic equations in three space dimension 12
- 53 Naofumi Mori (Kyushu Univ.) The asymptotic behavior of a nonlinear version of the Timoshenko–Cattaneo system 12
Reinhard Racke (Univ. of Konstanz)
- 54 Tetu Makino (Yamaguchi Univ.)* Application of the Nash–Moser(–Schwartz) theorem to gas dynamics 12
- 55 Tsubasa Itoh (Tokyo Tech) The growth of the vorticity gradient for the two-dimensional Euler flows on domains with cusps 12
- 56 Abulizi Aihaiti (Kyushu Univ.) Large time behavior of solutions to the compressible Navier–Stokes equations in an infinite layer under slip boundary condition 12
Shouta Enomoto (Kyushu Univ.)
Yoshiyuki Kagei (Kyushu Univ.)
- 57 Yoshiyuki Kagei (Kyushu Univ.) On the spectrum for artificial compressible system 12
Takaaki Nishida (Kyoto Univ.)
Yuka Teramoto (Kyushu Univ.)

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

- Atsuhide Ishida (Tokyo Univ. of Sci.)^b Direct and inverse problems of quantum scattering in time-dependent electric fields

September 18th (Sun) Conference Room II

9:15–12:00

- 58 Noboru Chikami (Tohoku Univ.) On the global existence and time decay estimates in critical spaces for the Navier–Stokes–Poisson system 12
Raphaël Danchin (Univ. Paris-Est)
- 59 Hirokazu Saito (Waseda Univ.) Global solvability of the Navier–Stokes equations with a free surface in the maximal L_p - L_q regularity class 12
- 60 Hajime Koba (Osaka Univ.) On $L^{3,\infty}$ and L^∞ -stability of the Navier–Stokes system on exterior domains 12
- 61 Ken Abe (Kyoto Univ.) Exterior Navier–Stokes flows for bounded data 10
- 62 Mitsuo Higaki (Kyoto Univ.) On Navier–Stokes flows around a rotating obstacle in two-dimensions 10
Yasunori Maekawa (Kyoto Univ.)
Yuu Nakahara (Tohoku Univ.)
- 63 Yasunori Maekawa (Kyoto Univ.) Gevrey stability of Prandtl expansions for 2D Navier–Stokes flows 10
David Gerard-Varet (Univ. Paris VII)
Nader Masmoudi (New York Univ.)

- 64 Yoshihiro Shibata (Waseda Univ.) Global well-posedness of unsteady motion of viscous incompressible capillary liquid bounded by a free surface 10
- 65 Yoshihiro Shibata (Waseda Univ.) On the free boundary problem for the Navier-Stokes equations in the exterior domain case. 10
- 66 Taisuke Yoneyama (Tokyo Univ. of Sci.) Consideration of wave operator for Schrödinger equation with variable coefficients 12
- 67 Haruya Mizutani (Osaka Univ.) Resolvent estimates for scaling-critical Schrödinger operators and applications 12
Jean-Marc Bouclet
(Univ. Paul Sabatier)
- 68 Wataru Ichinose (Shinshu Univ.) On the Cauchy problem for the Schrödinger equations with polynomially growing potentials in the spatial direction 10
Takayoshi Aoki (Shinshu Univ.)
- 69 Wataru Ichinose (Shinshu Univ.) The Feynman path integral for the Schrödinger equations with polynomially growing potentials in the spatial direction 10
- 14:15–16:15**
- 70 Yutaka Kamimura Inverse scattering method by an energy dependent Schrödinger equation 12
(Tokyo Univ. of Marine Sci. and Tech.)
- 71 Satoshi Masaki (Osaka Univ.) Existence of a minimal blowup solution to mass-subcritical nonlinear Schrödinger equation of which flow has a compactness property 10
- 72 Rowan Killip (UCLA) Equivalence of critical weighted bounds and scattering for mass-subcritical nonlinear Schrödinger equation: 10
Jason Murphy (UC Berkeley)
Satoshi Masaki (Osaka Univ.)
Monica Visan (UCLA)
- 73 Noriyoshi Fukaya (Tokyo Univ. of Sci.) Instability of solitary waves for a generalized derivative nonlinear Schrödinger equation in a borderline case 12
- 74 Masahito Ohta (Tokyo Univ. of Sci.) Strong instability of standing waves for nonlinear Schrödinger equations with harmonic potential 10
- 75 Yohei Yamazaki (Osaka City Univ.) Stability for line solitary waves of Zakharov–Kuznetsov equation 10
- 76 Takahisa Inui (Kyoto Univ.) Global dynamics of solutions with group invariance for the nonlinear Schrödinger equation 10
- 77 Nobu Kishimoto (Kyoto Univ.) Weak dispersion limit for nonlinear Schrödinger equations with higher order corrections 12
- 78 Hayato Miyazaki Global behavior of solutions of generalized Gross–Pitaevskii equation 12
(Tsuyama Nat. Coll. of Tech.)
Satoshi Masaki (Osaka Univ.)
- 16:30–17:30 Talk Invited by Functional Equations Section**
- Masaya Maeda (Chiba Univ.) On orbital instability of excited states of nonlinear Schrödinger equations
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Real Analysis

September 17th (Sat) Conference Room VI

9:30–11:45

- 1 Yoshifumi Ito (Univ. of Tokushima)* Development of L^p -calculus 15
- 2 Yoshifumi Ito (Univ. of Tokushima)* Fourier Transformation of L^p_{loc} -functions 15
- 3 Yasuhiro Fujita (Univ. of Toyama) On the set where a generalized Takagi function takes its maximum
Yusuke Saito (Univ. of Toyama) 15
- 4 Shin-ya Matsushita (Akita Pref. Univ.) On convergence of the alternating direction method of multipliers 15
Li Xu (Akita Pref. Univ.)
- 5 Fumiaki Kohsaka (Tokai Univ.) Approximation of minimizers of convex functions in Hadamard spaces
..... 15
- 6 Koji Aoyama (Chiba Univ.) Approximation of zeros of accretive operators in a Banach space 15
- 7 Sachiko Atsushiba Common acute points, fixed points and convergence theorems for non-
(Univ. of Yamanashi) linear mappings 15
- 8 Tomonari Suzuki Ćirić's and Bogin's fixed point theorems 15
(Kyushu Inst. of Tech.)

14:15–16:00

- 9 Kazuya Otsubo (Bon Agency Co.) Fourier spherical partial sum in four-dimension. 15
Shigehiko Kuratsubo (Hirosaki Univ.)*
Eiichi Nakai (Ibaraki Univ.)
Shoichi Fujima (Ibaraki Univ.)
- 10 Takeshi Iida A note on the Fefferman–Stein inequality on Morrey spaces 15
(Fukushima Nat. Coll. of Tech.)
Shohei Nakamura (Tokyo Metro. Univ.)
- 11 Hiroki Saito Abstract dyadic cubes, maximal operators and Hausdorff content 15
(Kogakuin Univ./Tokyo Metro. Univ.)
Hitoshi Tanaka
(Tsukuba Univ. of Tech.)
Toshikazu Watanabe
(Tokyo Univ. of Information Sci.)
- 12 Kenichi Mitani (Okayama Pref. Univ.) On the von Neumann–Jordan constant of Banaś–Frączek space 15
Kichisuke Saito (Niigata Univ.)
Yasuji Takahashi
(Okayama Pref. Univ.)*
- 13 Aoi Honda (Kyushu Inst. of Tech.) Shilkret–Sugeno type integral for a subadditive monotone measure and
Yoshiaki Okazaki its L_p space 15
(Fuzzy Logic Systems Inst.)
- 14 Jun Kawabe (Shinshu Univ.) Monotone convergence theorems for nonlinear integrals 15

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

Akihiko Miyachi Hardy space estimates for multidimensional Hausdorff operators
(Tokyo Woman's Christian Univ.)

September 18th (Sun) Conference Room VI

9:30–12:00

- 15 Toshiyuki Suzuki (Kanagawa Univ.) Abstract semilinear Schrödinger equations with nonautonomous terms 15
- 16 Takanori Kuroda (Waseda Univ.) Solvability of complex Ginzburg–Landau equations with non-dissipative
Mitsuharu Ôtani (Waseda Univ.) terms 15
- 17 Shun Uchida (Waseda Univ.) Right-differentiability for solution of some evolution equation with non-
Mitsuharu Ôtani (Waseda Univ.) monotone perturbation 15
- 18 Kentarou Yoshii (Tokyo Univ. of Sci.) An embedding estimate for the repulsive Hamiltonian in L^p 15
Motohiro Sobajima
(Tokyo Univ. of Sci.)
- 19 Kota Kumazaki On a mathematical model for moisture transport in porous media
(Tomakomai Nat. Coll. of Tech.) involving adsorption phenomenon 15
- 20 Akio Ito Existence of weak solutions for mathematical model of brewing process
Yusuke Murase (Meijo Univ.) of Japanese Sake with stirring effect 15
- 21 Takeshi Fukao (Kyoto Univ. of Edu.) Degenerate parabolic equations as asymptotic limits of Cahn–Hilliard
Pierluigi Colli (Pavia Univ.) equations 15
- 22 Ryota Nakayashiki (Chiba Univ.) Quasilinear parabolic variational inequalities subject to dynamic bound-
Ken Shirakawa (Chiba Univ.) ary condition 15
Pierluigi Colli (Univ. Pavia)
Gianni Gilardi (Univ. Pavia)
- 23 Noriaki Yamazaki (Kanagawa Univ.) Stability criteria for numerical experiments of Allen–Cahn equations
Tomoyuki Suzuki (Kanagawa Univ.) with constraint via Yosida approximation 15
Keisuke Takasao (Univ. of Tokyo)

14:15–15:15

- 24 Hiroshi Watanabe (Oita Univ.) Nonlocal strongly degenerate parabolic system with variable coefficients
..... 15
- 25 Ken Shirakawa (Chiba Univ.) Optimal control problems involving one-dimensional models of grain
Noriaki Yamazaki (Kanagawa Univ.) boundary motions 15
- 26 Akio Ito Asymptotic behavior of a global-in-time solution to a tumor invasion
model of Chaplain–Anderson type with quasi-variational structure ... 15
- 27 Toyohiko Aiki (Japan Women's Univ.) Large time behavior of solutions to the model describing change of mass
Adrian Muntean (Karlstad Univ.) of colloids 15

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

Hiroshi Matsuzawa Spreading speed and asymptotic profile of the free boundary problems
(Numazu Nat. Coll. of Tech.) of nonlinear diffusion equations

Functional Analysis

September 15th (Thu) Conference Room IV

14:15–16:15

- 1 Hiroyuki Yamagishi (Tokyo Metropolitan Coll. of Indus. Tech.)
Yoshinori Kametaka (Osaka Univ.*) The best constant of Sobolev inequality corresponding to Schrödinger operator with square-well potential 15
- 2 Akito Suzuki (Shinshu Univ.)
Toru Fuda (Hokkaido Univ.)
Daiju Funakawa (Hokkaido Univ.) Localization of a one-dimensional split-step quantum walk 15
- 3 Hiromichi Ohno (Shinshu Univ.) Unitary equivalence of one-dimensional quantum walks 15
- 4 Yoritaka Iwata (Tokyo Tech/Shibaura Inst. of Tech.)^b Characterization of infinitesimal generators of invertible evolution families 15
- 5 Yukihide Tadano (Univ. of Tokyo) Long-range scattering for discrete Schrödinger operators 15
- 6 Fumio Hiroshima (Kyushu Univ.) Spectrum of discrete Schrödinger operators on lattice 10
- 7 Fumio Hiroshima (Kyushu Univ.) Time operators associated with Schrödinger operators 15

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

- Susumu Yamazaki (Nihon Univ.) Pseudodifferential operators of infinite order and symbols in the analytic category

September 16th (Fri) Conference Room IV

9:15–12:00

- 8 Imam Nugraha Albania (Chiba Univ.)
Kosuke Kanemitsu (Chiba Univ.)
Masaru Nagisa (Chiba Univ.) The order of some functions related to their positive definiteness 15
- 9 Yoichi Udagawa (Tokyo Univ. of Sci.) Operator monotonicity of 2-parameter family of functions 10
- 10 Hiroshi Isa (Maebashi Inst. of Tech.)
Masatoshi Ito (Maebashi Inst. of Tech.)
Eizaburo Kamei
Hiroaki Tohyama (Maebashi Inst. of Tech.)
Masayuki Watanabe (Maebashi Inst. of Tech.) Velocity and acceleration at a point of the path $A \#_{t,r} B$ 15
- 11 Masatoshi Ito (Maebashi Inst. of Tech.) Estimations of power difference mean by Heron mean 15
- 12 Yuki Seo (Osaka Kyoiku Univ.) Operator power means and the information monotonicity 10
- 13 Hiroyuki Osaka (Ritsumeikan Univ.)
Yukihiro Tsurumi (Ritsumeikan Univ.)
Shuhei Wada (Kisarazu Nat. Coll. of Tech.) Generalized reverse Cauchy inequality and applications to operator means 15
- 14 Junichi Fujii (Osaka Kyoiku Univ.) Around Jones–Wenzl projections 15

- 15 Mitsuru Uchiyama (Ritsumeikan Univ.) Positive linear maps on C^* -algebras and rigid functions 15
- 16 Kei Ji Izuchi (Niigata Univ.)* Topological properties of path connected components in spaces of
Yuko Izuchi weighted composition operators into L^∞ 15
Shūichi Ohno (Nippon Inst. of Tech.)

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

- Shuhei Wada Topics in the theory of operator monotone functions
(Kisarazu Nat. Coll. of Tech.)

September 17th (Sat) Conference Room IV

9:15–12:00

- 17 Masatoshi Enomoto Unbounded strongly irreducible operators and Hilbert representations
Yasuo Watatani (Kyushu Univ.) of Kronecker quivers 15
- 18 Takahiro Sudo (Univ. of Ryukyus) Classification of topological manifolds by the Euler characteristic and
the K-theory ranks of C^* -algebras 15
- 19 Yuhei Suzuki (Chiba Univ.) Elementary constructions of non-discrete C^* -simple groups 15
- 20 Yuhei Suzuki (Chiba Univ.) Construction of minimal skew products of amenable minimal dynamical
systems 15
- 21 Takuya Takeishi (Kyoto Univ.) Primitive ideals and K-theoretic approach to Bost–Connes systems ... 10
- 22 Norio Nawata (Osaka Kyoiku Univ.) Examples of simple stably projectionless C^* -algebras with non-zero
pairings 15
- 23 Tsuyoshi Kajiwara (Okayama Univ.) Ideals of the cores of the C^* -algebras associated with self-similar maps
Yasuo Watatani (Kyushu Univ.) with higher dimensional sets of branched points 15
- 24 Kengo Matsumoto * Strong Morita equivalence vs. strong shift equivalence 15
(Joetsu Univ. of Edu.)

14:15–16:15

- 25 Shuhei Masumoto (Univ. of Tokyo) The Jiang–Su algebra and Fraïssé theory 15
- 26 Yusuke Isono (Kyoto Univ.) On fundamental groups of tensor product II_1 factors 15
- 27 Yoshikata Kida (Univ. of Tokyo) Stable actions and central group-extensions 15
- 28 Narutaka Ozawa (Kyoto Univ.) A functional analysis proof of Gromov’s polynomial growth theorem
..... 15
- 29 Junko Inoue (Tottori Univ.) Holomorphically induced representations of certain exponential solvable
Lie groups 15
- 30 Taito Tauchi (Univ. of Tokyo)^b Dimension of the space of intertwining operators from degenerate prin-
cipal series representations 15
- 31 Toshiyuki Kobayashi The classification and explicit construction of symmetry breaking oper-
(Univ. of Tokyo/Univ. of Tokyo) ators for differential forms on spheres 15
Toshihisa Kubo (Ryukoku Univ.)
Micheal Pevzner
(Univ. de Reims-Champagne-Ardenne)

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

Yoshiki Oshima (Univ. of Tokyo)* Unitary representations of real reductive Lie groups and orbit method

Statistics and Probability

September 15th (Thu) Conference Room VII

9:15–12:00

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|----|--|---|----|
| 1 | Mamoru Tanaka (Tohoku Univ.) | A percolation on directed graphs | 10 |
| 2 | Akira Sakai (Hokkaido Univ.) | The lace expansion for the nearest-neighbor models on the BCC lattice | 15 |
| 3 | Jean-Dominique Deuschel
(Tech. Univ. Berlin)
Ryoki Fukushima (Kyoto Univ.) | Quenched tail estimate for the random walk in random scenery | 10 |
| 4 | Yosuke Kawamoto (Kyushu Univ.) | Density preservation of infinite-dimensional interacting Brownian motions | 15 |
| 5 | Yuu Hariya (Tohoku Univ.) | A pathwise interpretation of the Gorin–Shkolnikov identity | 10 |
| 6 | Takahiro Tsuchiya (Univ. of Aizu)
Hiroya Hashimoto
(Nagoya Med. Center) | A SDE with the Cantor diffusion coefficient and a generalized Nakao–Le Gall condition | 15 |
| 7 | Dai Taguchi (Ritsumeikan Univ.)
Hoang-Long Ngo
(Hanoi Nat. Univ. of Edu.) | Euler–Maruyama scheme for SDEs with discontinuous diffusion coefficient | 15 |
| 8 | Hideyasu Yamashita
(Aichi Gakuin Univ.) | A Wong–Zakai-type theorem for a Yang–Mills theory on \mathbb{R}^2 | 15 |
| 9 | Yu Ito (Kyoto Sangyo Univ.) | Integration of controlled rough paths via fractional calculus | 15 |
| 10 | Kiyoyuki Hoshino (Osaka Pref. Univ.)
Tetsuya Kazumi (Osaka Pref. Univ.) | Identification of noncausal Wiener functionals from SFC | 10 |
| 11 | Shigeyoshi Ogawa (Ritsumeikan Univ.)
Hideaki Uemura (Aichi Univ. of Edu.) | On a reconstruction of random function from its SFCs | 5 |

14:15–15:00

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|----|-------------------------------------|---|----|
| 12 | Masaaki Tsuchiya (Kanazawa Univ.)* | On a characterization of the temporal homogeneity of additive processes | 10 |
| 13 | Masaki Wada (Tohoku Univ.) | Limit theorems for fundamental solutions of Schrödinger operators . . . | 15 |
| 14 | Shunsuke Kaji (Kyushu Sangyo Univ.) | First passage problems over increasing boundaries for Lévy processes with exponentially decayed Lévy measures | 15 |

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

- Xiang-Dong Li (AMSS, Chinese Acad. of Sci.) W-entropy formulas on super Ricci flows and Langevin deformation on Wasserstein space over Riemannian manifolds

16:30–17:30 Talk Invited by Statistics and Probability Section

- Naoki Kubota (Nihon Univ.) Large deviation principle for random walks in random environments and Lyapunov exponents

September 16th (Fri) Conference Room VII

9:00–11:40

- 15 Ryo Shimizu (Hiroshima Univ.) A Baxter-type inequality for stationary processes and its application to bootstrap 15
 Akihiko Inoue (Hiroshima Univ.)
 Yukio Kasahara (Hokkaido Univ.)
- 16 Yusuke Nakamura (Hiroshima Univ.) Semimartingale representation of moving-average type stationary-increment processes by innovation processes 15
 Akihiko Inoue (Hiroshima Univ.)
- 17 Yumiharu Nakano (Tokyo Tech) Approximating nonlinear filter by radial basis functions 15
- 18 Tomoki Inoue (Ehime Univ.) Invariant measures of random maps and the first return maps 15
- 19 Johannes Jaerisch (Shimane Univ.) Cusp-winding process for some hyperbolic surfaces with cusps 15
 Marc Kesseböhmer (Univ. Bremen)
 Sara Munday (Univ. di Bologna)
- 20 Hiroki Takahashi (Keio Univ.) On the removal of freezing phase transition of the Chebyshev quadratic maps 15
- 21 Naoto Shimaru (Okayama Univ. of Sci.) On the leading digit of a^n 10
 Yoshiyuki Mori (Okayama Univ. of Sci.)
 Keizo Takashima (Okayama Univ. of Sci.)
- 22 Naoto Shimaru (Okayama Univ. of Sci.) On the behavior of irrational rotations 10
 Keizo Takashima (Okayama Univ. of Sci.)
- 23 Naoto Shimaru (Okayama Univ. of Sci.) On discrepancy of irrational rotations 10
 Keizo Takashima (Okayama Univ. of Sci.)
- 24 Katusi Fukuyama (Kobe Univ.) A metric discrepancy result with given speed 5
 István Berkes (Graz Tech. Univ.)
 Nishimura Takuya (Hitachi, Ltd.)
- 25 Akimichi Takemura (Shiga Univ.) Relation between the rate of convergence of strong law of large numbers and the rate of concentration of Bayesian prior in game-theoretic probability 15
 Ryosuke Sato (Univ. of Tokyo)
 Kenshi Miyabe (Meiji Univ.)

11:40–12:10 Research Section Assembly

September 17th (Sat) Conference Room VII

9:15–12:00

- 26 Masayuki Horiguchi (Kanagawa Univ.) A prior detection procedure on a sequential sampling problem 15

- 27 Masahide Kuwada (Int. Inst. for Nat. Sci.) Characteristics of balanced third-order designs of resolution $R^*({10, 01})$ with $N < \nu(m)$ and $NSV_2 = 0$ for 3^m factorials 15
Yoshifumi Hyodo (Okayama Univ. of Sci./Int. Inst. for Nat. Sci.)
Hiromu Yumiba (Int. Inst. for Nat. Sci.)
- 28 Kazuki Matsubara (ChuoGakuin Univ.) Cyclically near-resolvable splitting-balanced block designs 15
Sanpei Kageyama (Tokyo Univ. of Sci.)
- 29 Kiyoshi Inoue (Seikei Univ.) On sooner and later waiting time distributions associated with simple patterns in a sequence of bivariate trials 10
Sigeo Aki (Kansai Univ.)
- 30 Hisashi Johno (Univ. of Yamanashi) Decision tree-based calculation of the overlap between probability distributions 15
Nakamoto Kazunori (Univ. of Yamanashi)
- 31 Kiyotaka Iki (Tokyo Univ. of Sci.) Double symmetric multivariate density function and its decomposition 10
Sadao Tomizawa (Tokyo Univ. of Sci.)
- 32 Yusuke Saigusa (Tokyo Univ. of Sci.) Linear quasi point-symmetry model and decomposition of point-symmetry for multi-way contingency tables 10
Kouji Tahata (Tokyo Univ. of Sci.)
Sadao Tomizawa (Tokyo Univ. of Sci.)
- 33 Tomoyuki Nakagawa (Hiroshima Univ.) Rubust Bayesian estimation based on γ -divergence 15
Shintaro Hashimoto (Hiroshima Univ.)
- 34 Koji Tsukuda (Univ. of Tokyo) Maximum likelihood estimation for the large parameter of the Ewens sampling formula 15
- 35 Yoshihiko Maesono (Kyushu Univ.) Kernel type estimators of a conditional density and its application to regression 10
Taku Moriyama (Kyushu Univ.)

12:10–12:30 Presentation Ceremony for the 2016 MSJ Analysis Prize**14:15–15:00**

- 36 Masashi Hyodo (Osaka Pref. Univ.) Simultaneous testing of the mean vector and the covariance matrix for high-dimensional data 15
Takahiro Nishiyama (Senshu Univ.)
- 37 Hirokazu Yanagihara (Hiroshima Univ.) A convergence rate of a probability of selecting the true model by a consistent C_p -type criterion in multivariate linear regression models .. 15
- 38 Yasunori Fujikoshi (Hiroshima Univ.*) Strong consistency of estimation criteria AIC and BIC for dimensionality in high-dimensional principal component analysis 15

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

- Nobumichi Shutoh (Kobe Univ.) Linear discriminant analysis and some tests based on monotone missing data

16:30–17:30 Talk Invited by Statistics and Probability Section

- Tepei Ogihara (Inst. of Stat. Math./JST PRESTO) Statistical analysis for diffusion processes with noisy, nonsynchronous observations

September 18th (Sun) Conference Room VII

9:15–12:00

39	<u>Hideaki Nagahata</u> (Waseda Univ.) Masanobu Taniguchi (Waseda Univ.)	Numerical results of analysis of variance for multivariate time series	10
40	<u>Yujie Xue</u> (Waseda Univ.) Yan Liu (Waseda Univ.) Taniguchi Masanobu (Waseda Univ.)	Robust interpolation problem in L^p	10
41	<u>Yoshiyuki Tanida</u> (Waseda Univ.) Masanobu Taniguchi (Waseda Univ.)	Asymptotic theory for estimation problem of Whittle functional in high-dimensional time series.	10
42	Yan Liu (Waseda Univ.)	Quantile tests in frequency domain for sinusoid models	15
43	<u>Kou Fujimori</u> (Waseda Univ.) Yoichi Nishiyama (Waseda Univ.)	The l_q consistency of the Dantzig selector for Cox's proportional hazards model	10
44	Fumiya Akashi (Waseda Univ.)	L_1 -based empirical likelihood approach for testing problem of regression models with singular design matrix	15
45	<u>Kazuyoshi Yata</u> (Univ. of Tsukuba) Makoto Aoshima (Univ. of Tsukuba)	High-dimensional classifiers for the strongly spiked models	15
46	Aki Ishii (Univ. of Tsukuba)	A two-sample test for high dimensional data via the cross-data-matrix methodology	15
47	<u>Ayaka Yagi</u> (Tokyo Univ. of Sci.) Takashi Seo (Tokyo Univ. of Sci.)	On the LRT statistic for covariance matrix with monotone missing data	15
48	Shoichi Sasabuchi (Kyushu Univ.)	On some properties and comparison of test statistics for homogeneity of regression coefficient vectors under synchronized order restrictions	10

Applied Mathematics

September 15th (Thu) Conference Room V

10:00–12:00

1	<u>Iwao Sato</u> (Oyama Nat. Coll. of Tech.) Hideo Mitsunashi (Utsunomiya Univ.) Hideaki Morita (Muroran Inst. of Tech.)	A matrix-weighted zeta function of a graph	15
2	<u>Shunichi Maezawa</u> (Shibaura Inst. of Tech.) Ryota Matsubara (Shibaura Inst. of Tech.) Haruhide Matsuda (Shibaura Inst. of Tech.)	Fan-type condition for a graph to be a k -leaf-connected	15
3	Zhi Xian Zhao (Tokyo Univ. of Sci.)	Forbidden triples generating a finite set of 4-connected graphs	10

- 4 Raiji Mukae On tree-tree quadrangulations 15
(Miyakonojo Nat. Coll. of Tech.)
Terukazu Sano
(Kisarazu Nat. Coll. of Tech.)
- 5 Kazuhide Hirohata Chorded pancyclic graphs 15
(Ibaraki Nat. Coll. of Tech.)
Ronald J. Gould (Emory Univ.)
Megan Cream (Spelman Coll.)
- 6 Shohei Satake (Nagoya Univ.) A construction of N -e.c. tournaments 15
- 7 Akihiro Higashitani Classification of lattice simplices with small degrees 15
(Kyoto Sangyo Univ.)
Johannes Hofscheier
(Otto-von-Guericke-Univ. Magdeburg)
- 8 Kenta Ozeki On HISTs in cubic graphs 15
(Nat. Inst. of Information/JST ERATO)
Arthur Hoffmann-Ostenhof
(Technical Univ. of Vienna)

14:15–15:30

- 9 Kaname Matsue (Inst. of Stat. Math.) On eigenpairs of quantum walk models 15
Osamu Ogurisu (Kanazawa Univ.)
Etsuo Segawa (Tohoku Univ.)
- 10 Etsuo Segawa (Tohoku Univ.) Sensitivity of quantum walks to edge 15
Hideaki Obuse (Hokkaido Univ.)
- 11 Takashi Komatsu One-dimensional three-state Fourier walk 15
(Yokohama Nat. Univ.)
Takako Endo
(Monash Univ./Ochanomizu Univ.)
Hikari Kawai (Yokohama Nat. Univ.)
Norio Konno (Yokohama Nat. Univ.)
Seiya Yoshida (Yokohama Nat. Univ.)
- 12 Takashi Komatsu Fourier walk on the two-dimensional torus 10
(Yokohama Nat. Univ.)
Norio Konno (Yokohama Nat. Univ.)

16:30–17:30 Talk Invited by Applied Mathematics Section

- Chie Nara (Meiji Univ.) Kelvin's conjecture and space-fillers with minimal surface area —
Unfolding of doubly covered polyhedra and soap film experiments—

September 16th (Fri) Conference Room V

10:00–11:30

- 13 Kazuhiko Ushio Balanced C_3 -foil designs and related designs 15
- 14 Kohei Yamada (Nagoya Univ.) On λ -fold factorizations of cyclic groups 15
Miwako Mishima (Gifu Univ.)
Junya Satoh (Nagoya Univ.)
Masakazu Jimbo (Chubu Univ.)

15	<u>Shoko Chisaki</u> (Tokyo Univ. of Sci.) Nobuko Miyamoto (Tokyo Univ. of Sci.)	Computational results for optimal difference systems of sets	10
16	Tomoko Adachi (Toho Univ.)	A cyclic labeling of bipartite graph	10
17	<u>Norihiro Nakashima</u> (Tokyo Denki Univ.) Hajime Matsui (Toyota Tech. Inst.)	A reduction of the computational complexity of the algebraic geometry codes defined by Garcia and Stichtenoth	15
13:15–14:00			
18	Shinya Fujita (Yokohama City Univ.)	Some results on properly colored cycles in edge-colored graphs II	10
19	<u>Morimasa Tsuchiya</u> (Tokai Univ.) Shinichiro Tashiro (Tokai Univ.) Kazutaka Ikeda (Tokai Univ.)	On strict-double-bound numbers of graphs with cut vertices	10
20	<u>Akira Saito</u> (Nihon Univ.) Michael D. Plummer (Vanderbilt Univ.)	Toughness, binding number and restricted matching extension	15

September 17th (Sat) Conference Room V

10:00–11:35

21	<u>Yushi Nakaya</u> (Kwansei Gakuin High School) Ryohei Miyadera (Kwansei Gakuin High School)	Grundy numbers of impartial three dimensional chocolate bar games	15
22	<u>Masaji Watanabe</u> (Okayama Univ.) Fusako Kawai (Kyoto Inst. Tech.)	Numerical techniques for inverse analysis in study of microbial depolymerization processes	15
23	<u>Aoi Honda</u> (Kyushu Inst. of Tech.) Yoshiaki Okazaki (Fuzzy Logic Systems Inst.)	Inclusion-exclusion integral and t-norm based data analysis model construction	15
24	Takeshi Gotoda (Kyoto Univ.)	Global solvability of regularized 2D Euler equations in Radon measure space	15
25	<u>Koichi Anada</u> (Waseda Univ. Senior High School) Tetsuya Ishiwata (Shibaura Inst. of Tech.)	Backward self similar solutions for a quasi-linear parabolic equations	15

14:15–15:30

26	<u>Syunsuke Kobayashi</u> (Meiji Univ.) Takashi Sakamoto (Meiji Univ.)	Hopf and Hopf–Pitchfork bifurcation in an integro-differential reaction-diffusion system	15
27	Kazuyuki Yagasaki (Kyoto Univ.) <u>Shotaro Yamazoe</u> (Kyoto Univ.)	Pitchfork bifurcation and linear stability of solitary waves for coupled nonlinear Schrödinger equations	10
28	Kazuyuki Yagasaki (Kyoto Univ.)	Heteroclinic motions in periodic perturbations of conservative systems	15
29	Hideto Asashiba (Shizuoka Univ.) Emerson G. Escobar (Tohoku Univ.) Yasuaki Hiraoka (Tohoku Univ.) <u>Hiroshi Takeuchi</u> (Tohoku Univ.)	Matrix method for persistence modules on commutative ladders of finite type	15

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

Ichiro Hasuo (Univ. of Tokyo) Modern abstract mathematics at work: Category theory and logic disentangling complex structures in computer systems

September 18th (Sun) Conference Room V

10:00–12:00

- 30 Shunzi Horiguchi (Niigata Sangyo Univ.) Extended complex Newton's method and the formulas to compare the convergences 10
- 31 Shunzi Horiguchi (Niigata Sangyo Univ.) Numerical calculations to compare the convergences of the extended complex Newton's method 10
- 32 George Miyake (Ube Nat. Coll. of Tech.) A computational method for stationary solutions in nonlinear dynamical systems 15
Yuji Katsuta (Ube Nat. Coll. of Tech.)
- 33 Fuminori Sakaguchi (Univ. of Fukui) Reduction of computational quantity in an integer-type algorithm for differential equations by means of 1-norm minimization 15
- 34 Koya Sakakibara (Univ. of Tokyo) Mathematical analysis of the method of fundamental solutions for bi-harmonic equation using Almansi-type decomposition 15
- 35 Yoshitaka Watanabe (Kyushu Univ.) Validated constructive error estimations for bi-harmonic problems .. 15
Takehiko Kinoshita (Kyoto Univ.)
Kyushu Univ. (Kyushu Univ.)
- 36 Kaname Matsue (Inst. of Stat. Math.) Rigorous numerics of tubular neighborhoods of slow manifolds 15

14:15–16:05

- 37 Tomoya Kemmochi (Univ. of Tokyo) Error analysis for the finite element approximation of parabolic equations via maximal regularity and fractional powers of operators 15
Norikazu Saito (Univ. of Tokyo)
- 38 Takuya Tsuchiya (Ehime Univ.) Error analysis of Lagrange interpolation on tetrahedrons 15
Kenta Kobayashi (Hitotsubashi Univ.)
- 39 Shinya Uchiumi (Waseda Univ.) A Lagrange–Galerkin scheme with the grad-div stabilization and a locally linearized velocity for the Oseen problem 15
Masahisa Tabata (Waseda Univ.)
- 40 Yoshiki Sugitani (Univ. of Tokyo) A remark on the mathematical formulation for the immersed boundary method 15
Norikazu Saito (Univ. of Tokyo)
- 41 Guanyu Zhou (Univ. of Tokyo) The conservative finite volume scheme on Voronoi mesh for the chemotaxis model 15
- 42 Hiroshi Fujiwara (Kyoto Univ.) Numerical analysis of the 2D stationary radiative transport equation by a semi-discrete upwind finite volume method 15
Nobuyuki Higashimori (Kyoto Univ.)

16:30–17:30 Talk Invited by Applied Mathematics Section

Takahito Kashiwabara (Univ. of Tokyo) On L^∞ -type error estimates and discrete Green's functions in the finite element method

Topology

September 15th (Thu) Conference Room III

9:50–12:00

- | | | |
|---|---|---|
| 1 | Genki Omori (Tokyo Tech) | A normal generating set for the handlebody subgroup of the Torelli group 15 |
| 2 | Takahiro Yamamoto (Kyushu Sangyo Univ.) | Number of singularities of stable maps on surfaces 15 |
| 3 | Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.) | On a normal generating set for the Torelli group of a compact non-orientable surface 15 |
| 4 | Takuya Sakasai (Univ. of Tokyo)
Masaaki Suzuki (Meiji Univ.)
Shigeyuki Morita (Univ. of Tokyo*/Tokyo Tech*) | An abelian quotient of the symplectic derivation Lie algebra of the free Lie algebra 15 |
| 5 | Shunsuke Ichiki (Yokohama Nat. Univ.)
Takashi Nishimura (Yokohama Nat. Univ.) | Generalized distance-squared mappings of \mathbb{R}^{n+1} into \mathbb{R}^{2n+1} 15 |
| 6 | Huhe Han (Yokohama Nat. Univ.)
Takashi Nishimura (Yokohama Nat. Univ.) | Self-dual Wulff shapes and spherical convex bodies of constant width $\pi/2$ 15 |
| 7 | Motoo Tange (Univ. of Tsukuba) | Infinite order corks 15 |
| 8 | Hokuto Konno (Univ. of Tokyo) | High-dimensional wall crossing and gluing in Seiberg–Witten theory 15 |

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

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|---------------------------|----------------------------------|
| Hisaaki Endo (Tokyo Tech) | Topology of Lefschetz fibrations |
|---------------------------|----------------------------------|

15:30–17:20

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|----|---|---|
| 9 | Hiraku Nozawa (Ritsumeikan Univ.) | Independent variation of secondary characteristic classes of Riemannian foliations 15 |
| 10 | Takahiro Oba (Tokyo Tech) | Higher dimensional contact manifolds with infinitely many Stein fillings 15 |
| 11 | Yoshihiko Mitsumatsu (Chuo Univ.)
Tomohiro Horiuchi (Chuo Univ.) | The automorphisms groups of Reeb components with complex leaves 15 |
| 12 | Kouichi Yasui (Hiroshima Univ.) | Contact 5-manifolds and smooth structures on Stein 4-manifolds 10 |
| 13 | Katsuhiko Kuribayashi (Shinshu Univ.)
Luc Menichi (Angers Univ.) | The dual loop coproduct on the loop cohomology of the classifying space of a Lie group 15 |
| 14 | Shun Wakatsuki (Univ. of Tokyo) | String topology on rational Gorenstein spaces 15 |
| 15 | Masaharu Morimoto (Okayama Univ.) | On limites of Mackey functors 15 |

September 16th (Fri) Conference Room IX

10:10–10:25 Presentation Ceremony for the 2016 MSJ Geometry Prize**10:30–11:30 Award Lecture for the 2016 MSJ Geometry Prize**

Teruhiko Soma (Tokyo Metro. Univ.) Geometry and topology of irreducible 3-manifolds

13:00–14:00 Award Lecture for the 2016 MSJ Geometry Prize

Shigeharu Takayama (Univ. of Tokyo) Complex geometry of the canonical bundle

September 17th (Sat) Conference Room III

9:50–12:00

- 16 Mitsunobu Tsutaya (Kyushu Univ.) * Finiteness of A_n -equivalence types of gauge groups 15
- 17 Tatsuya Arai (Tsukuba Univ. of Tech.) * The structure of dendrites constructed by pointwise P -expansive maps on the unit interval 10
- 18 Yukinobu Yajima (Kanagawa Univ.) C^* -embedding implies P -embedding in certain products 10
Yasushi Hirata (Kanagawa Univ.)
- 19 Takashi Shimomura Bratteli–Vershik representations on zero-dimensional homeomorphisms 10
(Nagoya Univ. of Economics)
- 20 Takashi Shimomura Expansiveness on finite rank Bratteli–Vershik homeomorphisms 10
(Nagoya Univ. of Economics)
- 21 Shosuke Omori (Waseda Univ.) A product space of $\{0,1\}$ and an abstract polycrystal 15
Tomoyuki Yamamoto (Waseda Univ.)
Akihiko Kitada (Waseda Univ.)
- 22 Shintaro Kuroki Cohomological non-rigidity of eight-dimensional complex projective towers 15
(Okayama Univ. of Sci.)
Dong Youp Suh (KAIST)
- 23 Hirokazu Nishinobu (Kochi Univ.) Rational cohomologies of classifying spaces for homogeneous spaces of small rank 10
Toshihiro Yamaguchi (Kochi Univ.)
- 24 Tadayuki Haraguchi A model structure of the category of diffeological spaces 15
(Oita Nat. Coll. of Tech.)
- 25 Naoya Suzuki The equivariant cohomology on a simplicial manifold 10
(Nat. Inst. of Tech., Akita Coll.)

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

John Parker (Univ. of Durham) Non-arithmetic lattices

15:30–17:15

- 26 Teruaki Kitano (Soka Univ.) $SL(2; \mathbb{R})$ -representations of a Brieskorn homology 3-sphere 10
Yoshikazu Yamaguchi (Akita Univ.)
- 27 Masaaki Suzuki (Meiji Univ.) Epimorphisms between 2-bridge knot groups and their crossing numbers 10
- 28 Takefumi Nosaka (Kyushu Univ.) On the fundamental relative 3-classes of knot group representations 15

32 Topology

29	Ken'ichi Yoshida (Univ. of Tokyo)	Union of 3-punctured spheres in a hyperbolic 3-manifold	15
30	Anh T. Tran (Univ. of Texas at Dallas) Yoshikazu Yamaguchi (Akita Univ.)	Asymptotic behavior of Reidmeister torsion for toroidal surgeries along twist knots	10
31	Takuya Katayama (Hiroshima Univ.)	RAAGs in knot groups	15
32	Yoshihiro Takeuchi (Aichi Univ. of Edu.) Misako Yokoyama (Shizuoka Univ.)	The w -Čech cohomology of orbifolds	10

September 18th (Sun) Conference Room III

9:50–12:00

33	Kodai Wada (Waseda Univ.)	A note on Milnor's link-homotopy invariants	10
34	Kodai Wada (Waseda Univ.) Natsuka Kobayashi (Tokyo Metropolitan Fujimori High School) Akira Yasuhara (Tsuda Coll.)	Milnor invariants of covering links	10
35	Yuka Kotorii (Univ. of Tokyo) Atsuhiko Mizusawa	Milnor invariant for handlebody-links	10
36	Nao Imoto (Nara Women's Univ.)	On an estimation of flat plumbing basket number of knots	10
37	Inasa Nakamura (Univ. of Tokyo)	Unbraiding 2-dimensional braids by an addition of 1-handles with chart loops	10
38	Ayumu Inoue (Aichi Univ. of Edu.) Ryo Shimizu (Okazakigakuen High School)	On a subspecies of region crossing change	10
39	Ryo Hanaki (Nara Univ. of Edu.)	On scannable properties of the original knot from a knot shadow	10
40	Noboru Ito (Univ. of Tokyo) Yusuke Takimura (Gakushuin Boys' Junior High School)	Any nontrivial knot projection with no triple chords has a monogon or bigon	10
41	Noboru Ito (Univ. of Tokyo)	Spaces of chord diagrams on spherical curves I	15
42	Eri Matsudo (Nihon Univ.) Kazuhiro Ichihara (Nihon Univ.)	Minimal coloring number for \mathbb{Z} -colorable links	10
43	Takuji Nakamura (Osaka Electro-Comm. Univ.) Yasutaka Nakanishi (Kobe Univ.) Shin Satoh (Kobe Univ.)	The minimum number of colors of Fox colorings for torus knots	10

Infinite Analysis

September 15th (Thu) Conference Room VI

10:15–12:00

- 1 Masahiko Ito (Tokyo Denki Univ.) An elliptic generalization of the Gustafson–Rakha summation formula
Masatoshi Noumi (Kobe Univ.) 15
- 2 Azusa Ikeda (Aoyama Gakuin Univ.) q -Painlevé systems of type A and their generalization 15
Tetsu Masuda (Aoyama Gakuin Univ.)
- 3 Tetsu Masuda (Aoyama Gakuin Univ.) Hypergeometric solutions to the q -Painlevé system of type $A_2^{(1)}$ and $A_3^{(1)}$
..... 15
- 4 Ryo Kamiya (Univ. of Tokyo) Quasi-integrable generalization of the two-dimensional discrete Toda
Masataka Kanki (Kansai Univ.) equation 15
Tetsuji Tokihiro (Univ. of Tokyo)
Takafumi Mase (Univ. of Tokyo)
- 5 Saburo Kakei (Rikkyo Univ.) Jeu de taquin slide and discrete 2-dimensional Toda equation 15
Shuhei Kamioka (Kyoto Univ.)
Yosuke Katayama (Rikkyo Univ.)
Yasuhiro Ohta (Kobe Univ.)
- 6 Hideshi Yamane Long-time asymptotics for the focusing integrable discrete nonlinear
(Kwansei Gakuin Univ.) Schrödinger equation 15

14:15–15:15

- 7 Atsushi Nobe (Chiba Univ.) Mutations of the cluster algebra of type $A_1^{(1)}$ and the discrete Toda
lattice 15
- 8 Toshiki Nakashima (Sophia Univ.) Affine geometric crystal of $A_n^{(1)}$ and limit of Kirillov–Reshetikhin perfect
Kailash C. Misra crystals 15
(North Carolina State Univ.)
- 9 Masato Okado (Osaka City Univ.) Bijection from paths to rigged configurations for type D 15
Reiho Sakamoto (Tokyo Univ. of Sci.)
Anne Schilling (UC Davis)
Travis Scrimshaw (Univ. of Minnesota)
- 10 Atsuo Kuniba (Univ. of Tokyo) Stochastic R matrix for $U_q(A_n^{(1)})$ 15
Vladimir Mangazeev
(Australia Nat. Univ.)
Shouya Maruyama (Univ. of Tokyo)
Masato Okado (Osaka City Univ.)

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

- Kohei Motegi Partition functions of integrable lattice models and symmetric polyno-
(Tokyo Univ. of Marine Sci. and Tech.) mials

September 16th (Fri) Conference Room VI

10:15–11:45

- 11 Taichiro Takagi (Nat. Defense Acad. of Japan) Generalized Wick theorems in conformal field theory and the Borchers identity 15
Takuma Yoshikawa (Nat. Defense Acad. of Japan)
- 12 Kanehisa Takasaki (Kinki Univ.) Quantum mirror curve of closed topological vertex and Kac–Schwarz operator of q -difference type 15
Toshio Nakatsu (Setsunan Univ.)
- 13 Ryosuke Kodera (Kyoto Univ.)* Cherednik algebras and quantized Coulomb branches 15
Hiraku Nakajima (Kyoto Univ.)
- 14 Takeshi Ikeda (Okayama Univ. of Sci.) Pieri rule for the K -theoretic P -functions 15
- 15 Ivan Ip (Kyoto Univ.) Positive representations of split real quantum groups 15

13:00–14:00 Talk Invited by Infinite Analysis Special Session

- Tatsuyuki Hikita (Kyoto Univ.)^b On the cohomology of conical symplectic resolutions
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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 * mark are presented through document camera, while b marks denote presentations on blackboard or whiteboard. The speakers with ★ marks are professors emeriti. If you find anything wrong in the program, do not hesitate to inform the Chair of Organizing Committee by sending e-mail to the address program16sept@mathsoc.jp. Collaborative works are presented by the underlined authors.

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

Information for Participants

Smoking is prohibited on campus. Smokers are kindly asked to smoke in designated smoking areas.

There is no parking area for visitors on campus.

You can take lunch at the restaurants in Mediapark “RINPUKAN”. There are two convenience stores on campus.

Official Party

Date: September 16th (Fri) 18:00–20:00

Venue: Mediapark “RINPUKAN” 2F Dining Hall Di-Noah

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

Directions

2016 MSJ AUTUMN MEETING

Dates : September 15th (Thu)–18th (Sun), 2016

Venue : Kansai University
3–3–35 Yamate-cho, Suita, Osaka 564-8680

Contact to : Kansai University
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Web Site : <http://mathsoc.jp/en/meeting/kansai16sept/>

Conference Rooms

	Place	Research Sections
Conference Room I	Bldg. 3, 1F Rm. 3101	Algebra, Featured Invited Talks
Conference Room II	Bldg. 3, 2F Rm. 3201	Functional Equations, Featured Invited Talks
Conference Room III	Bldg. 3, 4F Rm. 3401	Topology
Conference Room IV	Bldg. 3, 4F Rm. 3402	Functional Analysis
Conference Room V	Bldg. 4, B1F Rm. 4001	Applied Mathematics
Conference Room VI	Bldg. 4, B1F Rm. 4002	Infinite Analysis, Real Analysis
Conference Room VII	Bldg. 4, 2F Rm. 4201	Statistics and Probability, Featured Invited Talk
Conference Room VIII	Bldg. 4, 2F Rm. 4202	Complex Analysis, Foundation of Mathematics and History of Mathematics
Conference Room IX	Bldg. 4, 3F Rm. 4301	Geometry, Featured Invited Talks
Plenary Talks	BIG Hall 100	
Open Lectures for Citizens	Bldg. 3, 2F Rm. 3201 (Conference Room II)	

Other Rooms

Membership Fee & Extended Abstracts	Bldg. 4, 1F Rm. 4103
Discussion Rooms	Bldg. 3, 4F Rm. 3403/Bldg. 4, Foyer
Book Display and Sale	Bldg. 4, 1F Rm. 4101
Executive Committee, MSJ President	Bldg. 4, 1F Rm. 4102
Official Party	Mediapark “RINPUKAN” 2F Dining Hall Di-Noah