

## Remark

- The order of authors is written according to your input order. The first author is not necessarily the speaker. If the talk have two or more authors, then the speaker is underlined.
- The mark  $\flat$  means the presentation by using only the whiteboard (blackboard). If you talk by using your PC/tablet, no mark is written.
- The mark  $\star$  means emeritus professor.
- The number on the right side of the title implies the time of talk (minutes). There are some talks whose limited time is shortened due to various reasons. Your kind understanding is appreciated.

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# Foundation of Mathematics and History of Mathematics

March 24th (Fri)

## 9:00–11:30

01-01-0001

- 1 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) The essential concept in a study of the mathematical physics by Laplace, Gauss and Poisson ..... 15

01-01-0002

- 2 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) The mathematical newness of the new theory of the capillary action by Poisson ..... 15

01-01-0004

- 3 Noriko Tanaka (Toyota Nishi High School) An autobiographical note by Paul Lévy ..... 15

01-01-0006

- 4 Michiyo Nakane Joseph Fourier's course of analysis and his algebraic analysis ..... 15

01-99-0001

- 5 Tanaka Shotaro <sup>b</sup> Representations of  $(3k-2)^q$ ,  $\Sigma^n(3k-2)^q$  &  $\Sigma^\infty(3k-2)^q x^{k-1}$  by Suida ..... 15

01-01-0012

- 6 Katsushi Waki (Yamagata Univ.) Construction of WASAN data base with graphic search capability .... 15  
Takuma Tsuchihashi (Meiji Univ.)

01-01-0023

- 7 Tsukane Ogawa (Yokkaichi Univ.) Mathematical philosophy of Aida Yasuaki ..... 15

01-01-0026

- 8 Mitsuo Morimoto (Yokkaichi Univ./Sophia Univ.\*) On Volume 12 of the Taisei Sankei and the Tetsujutsu Sankei ..... 15

01-01-0021

- 9 Makoto Tamura (Osaka Sangyo Univ.) On the order of problems of the "Shu" housed at Yuelu Academy .... 15

## 11:30–12:00 Mathematics History Team Meeting

## 14:15–16:40

01-01-0015

- 10 Shuhei Masumoto (Univ. of Tokyo) On a generalized Fraïssé limit construction ..... 15

01-01-0025

- 11 Keita Yokoyama (JAIST) König's lemma for a tree which has at most finitely many paths in reverse mathematics ..... 15

01-01-0020

- 12 Kota Takeuchi (Univ. of Tsukuba) On the number of independent strict orders ..... 10  
Akito Tsuboi (Univ. of Tsukuba)

01-01-0017

- 13 Koichiro Ikeda (Hosei Univ.) A remark on small stable theories ..... 15

01-01-0016

- 14 Hirotaka Kikyo (Kobe Univ.) On simplicity of the automorphism groups of  $\mathbf{K}_f$ 's ..... 15

01-01-0013

- 15 Daisuke Ikegami (Tokyo Denki Univ.) On supercompactness of  $\omega_1$  ..... 15

01-01-0014

- 16 Hiroshi Sakai (Kobe Univ.) On possible order-types of uncountable linearly ordered structures ... 15

01-01-0010

- 17 Sakaé Fuchino (Kobe Univ.) Reflection theorems on non-existence of orthonormal bases of pre-Hilbert spaces ..... 15

01-01-0007

- 18 Masanao Ozawa (Nagoya Univ.) Conditional in quantum logic and Takeuti's quantum set theory: Conditionals satisfying the quantum transfer principle ..... 15

## March 25th (Sat)

**9:15–11:30**

01-99-0002

19 Takashi Oyabu <sup>b</sup> Representation, and other 5 talks ..... 5

01-01-0022

20 Yuki Mizusawa (Tokyo Metro. Univ.) 1-generic splittings of 2-c. e. degrees ..... 15

Koichiro Ban (Tokyo Metro. Univ.)

Toshio Suzuki (Tokyo Metro. Univ.)

01-01-0003

21 Kenshi Miyabe (Meiji Univ.) Can one compute a more random set uniformly? ..... 15

01-01-0009

22 Kohtaro Tadaki (Chubu Univ.) A refinement of quantum mechanics by algorithmic randomness II:  
Discrete spectrum ..... 15

01-01-0024

23 Toshihiko Kurata (Hosei Univ.) Decomposition of higher-order sequentiality ..... 15

01-01-0008

24 Taishi Kurahashi On partial disjunction properties and existence properties of theories of  
(Kisarazu Nat. Coll. of Tech.) arithmetic containing PA ..... 15

01-01-0019

25 Sohei Iwata (Nagoya Univ.) Arithmetical completeness theorem of LP (Logic of Proofs) ..... 15

Taishi Kurahashi

(Kisarazu Nat. Coll. of Tech.)

01-01-0005

26 Takahiro Seki (Niigata Univ.) Craig's interpolation theorem for some non-associative substructural  
logics ..... 15

01-01-0018

27 Nobu-Yuki Suzuki (Shizuoka Univ.) Some omniscience principles as axiom schemata in intermediate predi-  
cate logics ..... 15**11:30–12:00 Research Section Assembly****13:15–14:15 Talk Invited by Section on Foundation and History of Mathematics**

01-02-0001

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

# Algebra

March 24th (Fri)

## 9:30–11:45

- [02-01-0007](#)  
1 Shigeru Iitaka (Gakushuin Univ.\*) On Euler's perfect numbers ..... 10
- [02-01-0008](#)  
2 Daisuke Shiomi (Yamagata Univ.) Irreducible Fibonacci polynomials and Lucas polynomials over finite  
Hidetaka Kitayama (Wakayama Univ.) fields ..... 10
- [02-01-0011](#)  
3 Soichi Ikeda (Shibaura Inst. of Tech.) On the functional relations for Euler–Zagier multiple zeta-functions .. 10  
Kaneaki Matsuoka (Nagoya Univ.)
- [02-01-0013](#)  
4 Makoto Minamide (Yamaguchi Univ.) On the functional equations for  $\zeta(s)\zeta''(s)$  and  $\zeta'(s)\zeta''(s)$  ..... 10  
Jun Furuya  
(Hamamatsu Univ. School of Medicine)  
Yoshio Tanigawa
- [02-01-0014](#)  
5 Wataru Takeda (Kyoto Univ.) Visible lattice points and the Extended Riemann Hypothesis ..... 15
- [02-01-0015](#)  
6 Shota Inoue (Nagoya Univ.) The Riesz mean of the Möbius function ..... 10
- [02-01-0037](#)  
7 Ade Irma Suriajaya (Nagoya Univ.) Distribution of zeros of the first derivative of Dirichlet  $L$ -functions ... 15  
Hirotaka Akatsuka  
(Otaru Univ. of Commerce)
- [02-01-0001](#)  
8 Tomomi Ozawa (Tohoku Univ.) Classical weight one Hilbert cusp forms in a Hida family ..... 15
- [02-01-0028](#)  
9 Kohta Gejima (Osaka Univ.) An explicit formula of the unramified Shintani functions for  $(\mathbf{GSp}_4, \mathbf{GL}_2 \times \mathbf{GL}_1, \mathbf{GL}_2)$  ..... 15

## 14:25–17:00

- [02-01-0017](#)  
10 Toru Komatsu (Tokyo Univ. of Sci.) On a family of imaginary quadratic fields whose ideal class groups have  
Yasuhiro Kishi (Aichi Univ. of Edu.) 3-rank at least three ..... 15
- [02-01-0032](#)  
11 Akiko Ito (Kanagawa Univ.)<sup>b</sup> On the divisibility of the class numbers of imaginary quadratic fields  
 $\mathbb{Q}(\sqrt{2^{2s}3^{2t} - k^n})$  ..... 10
- [02-01-0022](#)  
12 Ryojun Ito (Chiba Univ.) The Beilinson conjectures for CM elliptic curves via hypergeometric  
functions ..... 15
- [02-01-0031](#)  
13 Yoshiyasu Ozeki (Kanagawa Univ.) Lattices in crystalline representations and iterated extensions ..... 10
- [02-01-0006](#)  
14 Yuri Yatagawa (Univ. of Tokyo) Wild ramification of constructible sheaves and the direct images ..... 15
- [02-01-0045](#)  
15 Yasuhiro Terakado (Univ. of Tokyo) The determinant and the discriminant of a complete intersection of even  
dimension ..... 15
- [02-01-0048](#)  
16 Aiichi Yamasaki (Kyoto Univ.) Relation modules of dihedral groups ..... 15  
Akinari Hoshi (Niigata Univ.)  
Ming-chang Kang (Nat. Taiwan Univ.)
- [02-01-0055](#)  
17 Akinari Hoshi (Niigata Univ.) Degree three unramified cohomology groups (II) ..... 15  
Ming-chang Kang (Nat. Taiwan Univ.)  
Aiichi Yamasaki (Kyoto Univ.)
- [02-01-0057](#)  
18 Akinari Hoshi (Niigata Univ.) Multiplicative invariant fields of dimension  $\leq 6$  ..... 15  
Ming-chang Kang (Nat. Taiwan Univ.)  
Aiichi Yamasaki (Kyoto Univ.)

## March 25th (Sat)

**9:00–12:00**

02-01-0016

- 19 Takahiro Hasebe (Hokkaido Univ.) Classifying posets by order quasisymmetric functions ..... 15  
 Shuhei Tsujie (Hokkaido Univ.)

02-01-0021

- 20 Nobuhiro Higuchi On specializations of minimal  $p$ -divisible groups ..... 15  
 (Yokohama Nat. Univ.)  
 Shushi Harashita  
 (Yokohama Nat. Univ.)

02-01-0027

- 21 Shuhei Nakamura (Nihon Univ.) An automorphism of order 2 in relation to the McLaughlin simple group  
Ryuji Sasaki (Nihon Univ.) ..... 10

02-01-0049

- 22 Taro Sakurai (Chiba Univ.) When is an element of the Jennings basis central?: A relation to some  
 Morita invariants ..... 15

02-01-0023

- 23 Shuhei Kamioka (Kyoto Univ.) A multiplicative partition function for symmetric plane partitions .... 15  
Kazuhiro Morii (Kyoto Univ.)

02-01-0040

- 24 Hiroshi Naruse (Univ. of Yamanashi) Algebraic proof and applications for the generating function formula of  
 generalized Hall–Littlewood functions ..... 10

02-01-0012

- 25 Tomonori Hashikawa (Tohoku Univ.) On conformal designs of minimal conformal weight spaces of SVOAs  
 ..... 10

02-01-0046

- 26 Toshiyuki Abe (Ehime Univ.) On a construction of vertex operator algebras having group-like fusion  
Ching Hung Lam (Academia Sinica) ..... 10  
Hironichi Yamada (Hitotsubashi Univ.)

02-01-0050

- 27 Kazuya Kawasetsu (Academia Sinica) Modular linear differential equations of fourth order and minimal  $\mathcal{W}$ -  
Yuichi Sakai algebras ..... 10

02-01-0051

- 28 Tomoyuki Arakawa (Kyoto Univ.) Quasi-lisse vertex algebras and modular linear differential equations  
Kazuya Kawasetsu (Academia Sinica) ..... 10

02-01-0058

- 29 Tomoyuki Arakawa (Kyoto Univ.) Orbifolds and cosets of minimal  $\mathcal{W}$ -algebras ..... 10  
Thomas Creutzig (Univ. of Alberta)  
Kazuya Kawasetsu (Academia Sinica)  
Andrew R. Linshaw (Univ. of Denver)

02-01-0059

- 30 Kazuya Kawasetsu (Academia Sinica)  $\mathbb{Z}_2$ -orbifold construction associated with  $(-1)$ -isometry and uniqueness  
Ching Hung Lam (Academia Sinica) of holomorphic vertex operator algebras of central charge 24 ..... 10  
Xingjun Lin (Univ. of Tsukuba)

02-01-0052

- 31 Naoki Genra (Kyoto Univ.) Wakimoto representations for  $\mathcal{W}$ -algebras ..... 15

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

02-02-0002

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

## March 26th (Sun)

**9:15–12:00**

02-01-0005

- 32 So Okada (Oyama Nat. Coll. of Tech.) BCOV rings on elliptic curves and the Dedekind eta function via mero-  
 morphic ambiguity ..... 5

<a href="#">02-01-0019</a>			
33	<u>Momonari Kudo</u> (Kyushu Univ.) Shushi Harashita (Yokohama Nat. Univ.)	Superspecial curves of genus 4 in small characteristic	15
<a href="#">02-01-0036</a>			
34	Makoto Enokizono (Osaka Univ.)	Upper bounds on the slope of certain fibered surfaces	15
<a href="#">02-01-0041</a>			
35	Shinya Kitagawa (Gifu Nat. Coll. of Tech.)	Examples of genus two fibrations with no sections on rational surfaces II	15
<a href="#">02-01-0053</a>			
36	Kenta Watanabe (Nihon Univ.)	An example of a certain indecomposable Lazarsfeld–Mukai bundle	10
<a href="#">02-01-0025</a>			
37	Tomohiro Iwami (Kyushu Inst. of Tech.) <sup>b</sup>	Quasi-thin property for the Cremona group of rank 3 and its application to a rationality of 3-folds with a pencil of rational curves	15
<a href="#">02-01-0042</a>			
38	Tetsuya Ando (Chiba Univ.)	Semialgebraic varieties and symmetric inequalities of degree four with four variables	15
<a href="#">02-01-0047</a>			
39	Takeshi Torii (Okayama Univ.) <u>Kazunori Nakamoto</u> (Univ. of Yamanashi)	On the moduli of subalgebras of the full matrix ring of degree 3 (Part I)	15
<a href="#">02-01-0026</a>			
40	Yoshifumi Tsuchimoto (Kochi Univ.)	Non commutative complex projective varieties	15
<a href="#">02-01-0004</a>			
41	Yusuke Suyama (Osaka City Univ.)	Toric Fano varieties associated to finite simple graphs	10

**14:30–15:30 Award Lecture for the 2017 MSJ Algebra Prize**

<a href="#">02-02-0004</a>	Masanobu Kaneko (Kyushu Univ.)	On multiple zeta values	
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**15:40–16:40 Award Lecture for the 2017 MSJ Algebra Prize**

<a href="#">02-02-0003</a>	Mitsuyasu Hashimoto (Okayama Univ.)	Commutative algebra and invariant theory	
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**16:50–17:50 Award Lecture for the 2017 MSJ Algebra Prize**

<a href="#">02-02-0001</a>	Toshiyuki Katsura (Hosei Univ.)	Algebraic geometry in positive characteristic	
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March 27th (Mon)

**9:15–12:00**

<a href="#">02-01-0035</a>			
42	Makoto Sakurai	Beilinson’s regulator and chiral algebras’ regularization by OPEs	15
<a href="#">02-01-0029</a>			
43	Shinichi Tajima (Univ. of Tsukuba) Katsuyoshi Ohara (Kanazawa Univ.) <u>Akira Terui</u> (Univ. of Tsukuba)	Improvement of efficiency of an algorithm for calculating eigenvectors of matrices with parallelized Horner’s rule for matrices	15
<a href="#">02-01-0030</a>			
44	Shinichi Tajima (Univ. of Tsukuba) Katsuyoshi Ohara (Kanazawa Univ.) <u>Akira Terui</u> (Univ. of Tsukuba)	Calculating matrix inverse by the extended Horner’s rule with pseudo minimal polynomial	15
<a href="#">02-01-0039</a>			
45	<u>Hidefumi Ohsugi</u> (Kwansei Gakuin Univ.) Takayuki Hibi (Osaka Univ.)	A Gröbner basis characterization for chordal comparability graphs	15
<a href="#">02-01-0034</a>			
46	<u>Akiyoshi Tsuchiya</u> (Osaka Univ.) Takayuki Hibi (Osaka Univ.)	Facets and normality of Gorenstein Fano polytopes	15
<a href="#">02-01-0018</a>			
47	Akiyoshi Tsuchiya (Osaka Univ.)	Gorenstein simplices with finite abelian groups generated by few elements	15

<a href="#">02-01-0054</a>			
48	Kazunori Matsuda (Osaka Univ.)	Non-Koszul quadratic Gorenstein toric rings	15
<a href="#">02-01-0043</a>			
49	Naoki Taniguchi (Meiji Univ.)	On the almost Gorenstein property of determinantal rings	15
<a href="#">02-01-0003</a>			
50	Yūji Kamoi (Meiji Univ.) <sup>b</sup>	On Gorenstein diagonal subrings of multi-graded rings	5
<a href="#">02-01-0002</a>			
51	Yūji Kamoi (Meiji Univ.) <sup>b</sup>	On Rees algebras defined by Heneke–Ulrich ideals	10
<b>14:15–16:00</b>			
<a href="#">02-01-0044</a>			
52	Kohsuke Shibata (Univ. of Tokyo)	Rational singularities, $\omega$ -multiplier ideals and cores of ideals	10
<a href="#">02-01-0038</a>			
53	Mitsuhiro Miyazaki (Kyoto Univ. of Edu.)	Actions of special linear groups to tensors of indeterminates and standard property of a certain Ehrhart ring	15
<a href="#">02-01-0009</a>			
54	<u>Masamitsu Shimakura</u> (Tokyo Univ. of Sci.) Katsunori Sanada (Tokyo Univ. of Sci.)	On the Hochschild cohomology ring of integral cyclic algebras	10
<a href="#">02-01-0010</a>			
55	Ayako Itaba (Shizuoka Univ.)	3-dimensional quadratic Artin–Schelter regular algebras and superpotentials	15
<a href="#">02-01-0020</a>			
56	Michio Yoshiwaki (Shizuoka Univ./Osaka City Univ.)	Relative derived dimensions for cotilting modules 2	15
<a href="#">02-01-0024</a>			
57	Izuru Mori (Shizuoka Univ.) <u>Kenta Ueyama</u> (Hirosaki Univ.)	3-dimensional noetherian cubic Calabi–Yau algebras	15

# Geometry

March 24th (Fri)

## 9:45–11:45

- [03-01-0031](#)  
1 Tatsuya Yamashita (Hokkaido Univ.) Localizations of derivations in  $C^\infty$ -schemes ..... 15
- [03-01-0019](#)  
2 Yuya Takeuchi (Univ. of Tokyo)  $Q$ -prime curvature and Sasakian  $\eta$ -Einstein manifolds ..... 15
- [03-01-0014](#)  
3 Kotaro Kawai (Univ. of Tokyo) Second order deformations of associative submanifolds in nearly parallel  $G_2$ -manifolds ..... 15
- [03-01-0028](#)  
4 Hiroshi Sawai (Numazu Nat. Coll. of Tech.) Locally conformal Kähler structures on solvmanifolds ..... 15
- [03-01-0032](#)  
5 Ryosuke Nomura (Univ. of Tokyo) The positivity of the canonical bundle of compact Kähler manifold with negative holomorphic sectional curvature ..... 15
- [03-01-0015](#)  
6 Satoshi Nakamura (Tohoku Univ.) On the logarithmic Chow semistability of polarized toric manifolds ... 15
- [03-01-0004](#)  
7 Kota Hattori (Keio Univ.)<sup>b</sup> On the moduli space of the tangent cones at infinity of a complete Ricci-flat manifold ..... 15

## 14:15–16:10

- [03-01-0003](#)  
8 Naoyuki Koike (Tokyo Univ. of Sci.) Collapse of the mean curvature flow for a certain kind of invariant hypersurface in a Hilbert space ..... 15
- [03-01-0017](#)  
9 Toru Kajigaya (Osaka City Univ.) Reductions of minimal Lagrangian submanifolds with symmetries ... 15
- [03-01-0007](#)  
10 Shintaro Akamine (Kyushu Univ.) Behavior of Gaussian curvature of timelike minimal surfaces with singularities ..... 15
- [03-01-0030](#)  
11 Isami Koga (Kyushu Univ.)  
Yasuyuki Nagatomo (Meiji Univ.) Equivariant holomorphic embeddings from the complex projective line into a complex Grassmannian of 2-planes ..... 15
- [03-01-0018](#)  
12 Shigeo Kawai (Saga Univ.\*)  
Nobumitsu Nakauchi (Yamaguchi Univ.) On the stationary maps of a functional related to pullbacks of metrics ..... 15
- [03-01-0001](#)  
13 Makoto Sakaki (Hiroasaki Univ.)<sup>b</sup> Ruled surfaces with bi-null curves and marginally trapped surfaces ... 10
- [03-01-0011](#)  
14 Yoshio Agaoka (Hiroshima Univ.)  
Takahiro Hashinaga (Kitakyushu Nat. Coll. of Tech.) A necessary and sufficient condition for a 3-dimensional Riemannian manifold to be locally a submanifold of the 4-dimensional Euclidean space ..... 15

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

- [03-02-0002](#)  
Atsufumi Honda (Miyakonojo Nat. Coll. of Tech.) Geometry of positive semi-definite metrics and isometric realization problem

March 25th (Sat)

## 9:20–11:30

- [03-01-0021](#)  
15 Dounnu Sasaki (Waseda Univ.) Extension of intersection number and subset currents on surfaces ... 15
- [03-01-0024](#)  
16 Motoko Kato (Univ. of Tokyo) Embeddings of right-angled Artin groups into higher-dimensional Thompson groups ..... 10



<a href="#">03-01-0027</a>	17 <a href="#">Johannes Jaerisch</a> (Shimane Univ.) Katsuhiko Matsuzaki (Waseda Univ.)	Growth and cogrowth of normal subgroups of a free group . . . . .	15
<a href="#">03-01-0022</a>	18 Kazuyoshi Watanabe (Tohoku Univ.)	Combinatorial differential form and Gauss–Bonnet theorem . . . . .	10
<a href="#">03-01-0013</a>	19 Taiki Yamada (Tohoku Univ.) <sup>b</sup>	Curvature dimension inequality on directed graphs . . . . .	10
<a href="#">03-01-0010</a>	20 Homare Tadano (Osaka Univ.)	Cheeger–Gromov–Taylor type compactness theorems via Bakry–Émery and modified Ricci curvatures . . . . .	15
<a href="#">03-01-0035</a>	21 Mitsuhiro Itoh (Univ. of Tsukuba) <a href="#">Hiroyasu Satoh</a> (Nippon Inst. of Tech.)	Hessian of Busemann function and rank of geodesics on Hadamard manifolds . . . . .	10
<a href="#">03-01-0026</a>	22 Tetsuya Nagano (Univ. of Nagasaki)	Branching of geodesic at one point in Finsler space . . . . .	15
<a href="#">03-01-0029</a>	23 Nobuhiro Innami (Niigata Univ.)	On the nearest cut point . . . . .	15

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

<a href="#">03-02-0001</a>	Yu Kitabepu (Kumamoto Univ.) <sup>b</sup>	On regular sets in metric measure spaces	
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March 26th (Sun)

**9:50–11:40**

<a href="#">03-01-0008</a>	24 <a href="#">Qing Song Shi</a> (Nagoya Inst. of Tech.) Toshiaki Adachi (Nagoya Inst. of Tech.)	Comparison theorems on trajectory-harps II . . . . .	10
<a href="#">03-01-0009</a>	25 <a href="#">Qing Song Shi</a> (Nagoya Inst. of Tech.) Toshiaki Adachi (Nagoya Inst. of Tech.)	Asymptotic behavior of trajectories on Hadamard Kähler manifolds . .	10
<a href="#">03-01-0005</a>	26 Tomoya Nakamura (Waseda Univ.)	Pseudo-Poisson Nijenhuis manifolds . . . . .	15
<a href="#">03-01-0012</a>	27 <a href="#">Noriaki Ikeda</a> (Ritsumeikan Univ.) Marc Heller (Tohoku Univ.) Satoshi Watamura (Tohoku Univ.)	A Courant algebroid on a Poisson manifold and applications to T- duality . . . . .	15
<a href="#">03-01-0020</a>	28 Akifumi Sako (Tokyo Univ. of Sci.)	Formulation and exact solution of matricial $\Phi_2^3$ quantum field theory . . . . .	15
<a href="#">03-01-0016</a>	29 Shigehiro Sakata (Univ. of Miyazaki)	Characterization of symmetry of a convex body with radial centers . . . . .	15
<a href="#">03-01-0033</a>	30 Jun O’Hara (Chiba Univ.)	Characterization of unit balls by regularized Riesz energy . . . . .	15

**14:15–15:35**

<a href="#">03-01-0036</a>	31 Yoshinori Tanimura (Univ. of Tokyo)	On the flexibility of Clifford–Klein forms whose translation groups are solvable Lie groups whose Lie algebras are graded . . . . .	15
<a href="#">03-01-0034</a>	32 <a href="#">Daisuke Tarama</a> (Ritsumeikan Univ.) Wolfram Bauer (Univ. Hannover)	Integrability of geodesic flow on step-two nilpotent Lie groups of H-type with respect to a left-invariant metric . . . . .	10
<a href="#">03-01-0002</a>	33 Kaoru Ikeda (Keio Univ.) <sup>b</sup>	Gauss decompositions of the semisimple Lie groups and the fundamental groups of the flag variety . . . . .	15
<a href="#">03-01-0006</a>	34 Hiroyuki Tasaki (Univ. of Tsukuba)	Sequences of maximal antipodal sets in oriented real Grassmann mani- folds . . . . .	15
<a href="#">03-01-0025</a>	35 <a href="#">Yusuke Sakane</a> (Osaka Univ.*) Andreas Arvanitoyeorgos (Univ. of Patras) Marina Statha (Univ. of Patras)	On homogeneous Einstein metrics on $SU(n)$ . . . . .	15

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

[03-02-0003](#)

Takayuki Okuda (Hiroshima Univ.)<sup>b</sup> Pairs of totally geodesic submanifolds in Riemannian symmetric spaces without common geodesics

# Complex Analysis

March 24th (Fri)

## 9:20–11:50

04-01-0001

- 1 Saburoou Saitoh <sup>b</sup> The general sampling theory by using reproducing kernels ..... 15  
 (Gunma Univ.\*/Inst. of Reproducing Kernels)  
 Hiroshi Fujiwara (Kyoto Univ.)

04-01-0002

- 2 Saburoou Saitoh <sup>b</sup>  $\log 0 = \log \infty = 0$  and applications ..... 15  
 (Gunma Univ.\*/Inst. of Reproducing Kernels)  
 Hiroshi Michiwaki (NejiLaw Inc.)

04-01-0009

- 3 Shigeyoshi Owa (Yamato Univ.) Analytic functions concerning with some subordinations ..... 15  
 Junichi Nishiwaki (Setsunan Univ.)

04-01-0005

- 4 Hirokazu Shimauchi Numerical solution of the radial Loewner equation ..... 15  
 (Yamanashi Eiwa Coll.)  
 Ikkei Hotta (Yamaguchi Univ.)

04-01-0018

- 5 Junghun Lee (Nagoya Univ.)  $J$ -Stability of expanding rational map in non-Archimedean dynamics  
 ..... 10

04-01-0011

- 6 Yoshikazu Yamagishi (Ryukoku Univ.) Disk packings on logarithmic spiral lattices ..... 10  
 Takamichi Sushida (Hokkaido Univ.)

04-01-0023

- 7 Masashi Kisaka (Kyoto Univ.) Abundance of semihyperbolic dynamics in the boundary of the Man-  
 delbrot set ..... 15  
 Tomoki Kawahira (Tokyo Tech)

04-01-0019

- 8 Takanori Matsuno An application of strongly branched coverings ..... 10  
 (Osaka Pref. Univ. Coll. of Tech.)

04-01-0020

- 9 Takanori Matsuno A remark on Hurwitz groups ..... 10  
 (Osaka Pref. Univ. Coll. of Tech.)

04-01-0003

- 10 Hiroshige Shiga (Tokyo Tech) On holomorphic motions and the extension problem ..... 15

## 14:15–16:05

04-01-0006

- 11 Katsusuke Nabeshima Computing parametric Bernstein-Sato ideals and holonomic D-modules  
 ..... 15  
 (Tokushima Univ.)  
 Katsuyoshi Ohara (Kanazawa Univ.)  
 Shinichi Tajima (Univ. of Tsukuba)

04-01-0024

- 12 Katsuyoshi Ohara (Kanazawa Univ.) An algorithm for computing Grothendieck local residues II ..... 15  
 Shinichi Tajima (Univ. of Tsukuba)

04-01-0017

- 13 Takafumi Shibuta (Kyushu Univ.) Computing invariants of isolated singularities using Matlis duality ..... 15  
 Shinichi Tajima (Univ. of Tsukuba)

04-01-0012

- 14 Cho-Ho Chu Bloch functions on bounded symmetric domains ..... 15  
 (Queen Mary Univ. of London)  
 Hidetaka Hamada  
 (Kyushu Sangyo Univ.)  
 Tatsuhiro Honda  
 (Hiroshima Inst. of Tech.)  
 Gabriela Kohr (Babeş-Bolyai Univ.)

04-01-0013

- 15 Cho-Ho Chu (Queen Mary Univ. of London) Composition operators between Bloch spaces on bounded symmetric domains ..... 15
- Hidetaka Hamada (Kyushu Sangyo Univ.)
- Tatsuhiko Honda (Hiroshima Inst. of Tech.)
- Gabriela Kohr (Babeş-Bolyai Univ.)

04-01-0014

- 16 Hidetaka Hamada (Kyushu Sangyo Univ.) Weighted composition operators from  $H^\infty$  to the Bloch space of bounded symmetric domains ..... 15

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

04-02-0001

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

March 25th (Sat)

**9:40–11:50**

04-01-0008

- 17 Makoto Abe (Hiroshima Univ.) Strong disk property for domains in open Riemann surfaces ..... 10
- Gou Nakamura (Aichi Inst. of Tech.)

04-01-0007

- 18 Tomohiro Okuma (Yamagata Univ.) Complex surface singularities with a fixed integral homology sphere link ..... 15

04-01-0004

- 19 Tatsuhiko Honda (Hiroshima Inst. of Tech.) Bonk's distortion theorem for locally biholomorphic mappings on bounded symmetric domains in  $\mathbb{C}^n$  ..... 15
- Cho-Ho Chu (Queen Mary, Univ. of London)
- Hidetaka Hamada (Kyushu Sangyo Univ.)
- Gabriela Kohr (Babeş-Bolyai Univ.)

04-01-0010

- 20 Kouhei Izuchi (Yamaguchi Univ.) Cyclicity of reproducing kernels in weighted Hardy spaces over the bidisk ..... 15

04-01-0015

- 21 Akio Kodama (Kanazawa Univ.)<sup>b</sup> On proper holomorphic self-mappings of generalized complex ellipsoids and generalized Hartogs triangles ..... 15

04-01-0022

- 22 Atsushi Yamamori (Academia Sinica) On automorphisms of quasi-circular domains fixing the origin in  $\mathbb{C}^2$  ..... 10
- Liyou Zhang (Capital Normal Univ.)

04-01-0021

- 23 Genki Hosono (Univ. of Tokyo) On minimal singular metrics of line bundles whose stable base locus admits holomorphic tubular neighborhoods ..... 15
- Takayuki Koike (Kyoto Univ.)

04-01-0016

- 24 Kazuko Matsumoto (Tokyo Univ. of Sci.) Takeuchi's equality for the Levi form of the Fubini-Study distance to complex submanifolds in  $\mathbb{C}\mathbb{P}^n$  ..... 15

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

04-02-0002

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

## Functional Equations

March 24th (Fri)

### 9:30–12:00

- 05-01-0011  
1 Ichiro Tsukamoto (Toyo Univ.)<sup>b</sup> Asymptotic behaviour of positive solutions of  $x'' = t^{\alpha\lambda-2}x^{1+\alpha}$  in the remaining cases ..... 10
- 05-01-0012  
2 Yoshiaki Goto  
(Otaru Univ. of Commerce)  
Keiji Matsumoto (Hokkaido Univ.) Irreducibility of the monodromy representation of Lauricella's  $F_C$  ..... 12
- 05-01-0019  
3 Junya Nishiguchi (Kyoto Univ.) A necessary and sufficient condition for well-posedness of initial value problems of retarded functional differential equations ..... 12
- 05-01-0026  
4 Shogo Yamanaka (Kyoto Univ.) Local analytic integrability of Poincaré–Dulac normal forms ..... 12
- 05-01-0059  
5 Daiki Sugawara (Meiji Univ.)  
Hiroshi Watanabe (Meiji Univ.) An epidemic model of two kinds of type A influenza ..... 12
- 05-01-0009  
6 Seiji Saito (Doshisha Univ.)  
Satoshi Ito (Doshisha Univ.) Oscillatory theorems concerning linear and non-linear difference equations ..... 10
- 05-01-0010  
7 Seiji Saito (Doshisha Univ.)  
Synsuke Ikezoe (Doshisha Univ.)  
Kenta Nozue (Doshisha Univ.) Globally asymptotical stability of SI models concerning difference equations ..... 10
- 05-01-0004  
8 Tetsutaro Shibata (Hiroshima Univ.) Oscillatory bifurcation for semilinear ordinary differential equations .. 12
- 05-01-0005  
9 Saburoou Saitoh  
(Gunma Univ.\*/Inst. of Reproducing Kernels)<sup>b</sup>  
L. P. Castro (Univ. of Aveiro)  
M. M. Rodrigues (Univ. of Aveiro) A fundamental theorem on initial value problems by using the theory of reproducing kernels ..... 5
- 05-01-0006  
10 Saburoou Saitoh  
(Gunma Univ.\*/Inst. of Reproducing Kernels)<sup>b</sup>  
Sandra Pinelas (Academia Militar) Division by zero  $z/0=0$  and differential equations ..... 5

### 14:15–16:15

- 05-01-0057  
11 Takashi Kajiwara (Tokyo Metro. Univ.) Existence of a heteroclinic solution to the FitzHugh–Nagumo type reaction-diffusion system with heterogeneity ..... 12
- 05-01-0067  
12 Kazuyuki Yagasaki (Kyoto Univ.)  
Shotaro Yamazoe (Kyoto Univ.) Bifurcation of equilibria in infinite-dimensional Hamiltonian system and its application to nonlinear Schrödinger equation ..... 12
- 05-01-0035  
13 Megumi Sano (Osaka City Univ.)  
Futoshi Takahashi (Osaka City Univ.) Sublinear eigenvalue problems with singular weights related to the critical Hardy inequality ..... 10
- 05-01-0033  
14 Megumi Sano (Osaka City Univ.) Minimization problems related to generalized critical Hardy inequalities on a bounded domain ..... 12
- 05-01-0047  
15 Masato Hashizume (Osaka City Univ.) Minimization problem on the Hardy–Sobolev inequality in lower dimension case ..... 12
- 05-01-0065  
16 Toshiaki Yachimura (Tohoku Univ.) Singular perturbation of domains and two-phase eigenvalue problem ..... 12

- 05-01-0034  
17 Albert Rodríguez Mulet (Hokkaido Univ.) Eigenfrequencies of a thin straight elastic body ..... 12
- 05-01-0056  
18 Xiaojing Liu (Ibaraki Univ.) Improved Kato's inequalities involving  $p$ -Laplacian and their application  
Toshio Horiuchi (Ibaraki Univ.) ..... 12
- 05-01-0029  
19 Kenichiro Umezū (Ibaraki Univ.) Positivity for nontrivial nonnegative solutions of an indefinite sublinear  
Uriel Kaufmann (Univ. Nacional de Córdoba) problem ..... 12  
Humberto Ramos Quoirin (Univ. de Santiago de Chile)

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

- 05-02-0001  
Kazuki Hiroe (Josai Univ.) Around accessory parameters of linear ordinary differential equations

March 25th (Sat)

**9:30–12:00**

- 05-01-0068  
20 Shun Kodama Concentration phenomena of least energy solutions to several singularly  
perturbed elliptic problems with a totally degenerate potential ..... 12
- 05-01-0041  
21 Shoichi Hasegawa (Tohoku Univ.) Two critical exponents for a Hénon type equation on the hyperbolic  
space ..... 12
- 05-01-0066  
22 Satoshi Tanaka (Okayama Univ. of Sci.) Symmetry-breaking bifurcation for the one-dimensional Hénon equation  
..... 12
- 05-01-0064  
23 Motohiro Sobajima (Tokyo Univ. of Sci.) Kernel estimates for analytic semigroups generated by  $|x|^\alpha \Delta$  with lower  
order terms ..... 12  
Giorgio Metafune (Univ. of Salento)  
Chiara Spina (Univ. of Salento)
- 05-01-0025  
24 Yasuhito Miyamoto (Univ. of Tokyo) Generalized Joseph–Lundgren exponent and intersection properties for  
Kazune Takahashi (Univ. of Tokyo) supercritical quasilinear elliptic equations ..... 10
- 05-01-0014  
25 Yasuhiro Fujita (Univ. of Toyama) On a corresponding structure between a Hamilton–Jacobi equation and  
Norikazu Yamaguchi (Univ. of Toyama) the Takagi function ..... 12
- 05-01-0015  
26 Tokinaga Namba (Univ. of Tokyo) Hamilton–Jacobi equations with Caputo's time-fractional derivative .. 12  
Yoshikazu Giga (Univ. of Tokyo)
- 05-01-0046  
27 Hiro Yoshi Mitake (Hiroshima Univ.) The Selection problem for discount Hamilton–Jacobi equations: some  
Diogo A. Gomes (King Abdullah Univ. of Sci. and Tech.) non-convex cases ..... 12  
Hung V. Tran (Univ. of Wisconsin-Madison)
- 05-01-0052  
28 Hiro Yoshi Mitake (Hiroshima Univ.) The selection problem for discount Hamilton–Jacobi equations: rate of  
Kohei Soga (Keio Univ.) convergence ..... 12

**13:30–14:30 Award Lecture for the 2016 MSJ Analysis Prize**

- 05-02-0002  
Shigeaki Koike (Tohoku Univ.) ABP maximum principle for  $L^p$ -viscosity solutions of fully nonlinear  
equations and its applications

March 26th (Sun)

**9:30–12:00**

- 05-01-0007  
29 Tatsu-Hiko Miura (Univ. of Tokyo) Zero width limit of the heat equation on moving thin domains . . . . . 12
- 05-01-0024  
30 Junichi Harada (Akita Univ.) Boundary behavior for solutions of the heat equation with a nonlinear boundary condition . . . . . 10
- 05-01-0001  
31 Masaaki Mizukami (Tokyo Univ. of Sci.) Boundedness and asymptotic stability in a fully parabolic two-species chemotaxis-competition model . . . . . 12
- 05-01-0022  
32 Takayoshi Ogawa (Tohoku Univ.)  
Hirosi Wakui (Tohoku Univ.) Non-uniform bound and non-existence for time global solutions to a degenerate drift-diffusion equation with the mass critical exponent . . . 12
- 05-01-0054  
33 Keisuke Takasao (Univ. of Tokyo) Existence of weak solution and monotonicity formula for volume preserving mean curvature flow . . . . . 10
- 05-01-0016  
34 Takashi Suzuki (Osaka Univ.) Reaction diffusion systems on (fundamental) chemical processes of multi-species: homogenization of the renormalized solution . . . . . 5
- 05-01-0017  
35 Takashi Suzuki (Osaka Univ.) Global-in-time behavior of the solution to a parabolic equation with non-local term derived from the Gierer–Meinhardt system . . . . . 5
- 05-01-0013  
36 Toshitaka Nagai  
Tetsuya Yamada (Fukui Nat. Coll. of Tech.) Global existence of solutions to the Cauchy problem of an attraction-repulsion chemotaxis system in  $\mathbb{R}^2$  . . . . . 12
- 05-01-0031  
37 Hajime Koba (Osaka Univ.) On conservative forms and conservation laws of compressible fluid systems on an evolving surface . . . . . 12
- 05-01-0020  
38 Hirotada Honda (NTT/Keio Univ.)  
Atusi Tani (Keio Univ.\*) On existence of stationary solution to Kuramoto–Sakaguchi equation . . . . . 12

**14:15–16:15**

- 05-01-0060  
39 Naoki Tsuge (Gifu Univ.) Isentropic gas flow in the nozzle . . . . . 12
- 05-01-0061  
40 Mamoru Okamoto (Shinshu Univ.) Asymptotic behavior of solutions to the short-pulse equation . . . . . 10
- 05-01-0008  
41 Tetu Makino (Yamaguchi Univ.\*)  
Juhi Jang (Univ. Southern California) Slowly rotating axisymmetric solutions of Euler–Poisson equations . . . 12
- 05-01-0058  
42 Hirokazu Saito (Waseda Univ.) Compressible fluid model of Korteweg type with free boundary condition: model problem . . . . . 12
- 05-01-0032  
43 Yuka Teramoto (Kyushu Univ.) On the stability of bifurcating solutions of the artificial compressible system . . . . . 12
- 05-01-0040  
44 Kyouhei Wakasa (Muroran Inst. of Tech.)  
Borislav Yordanov (Hokkaido Univ.) On the energy decay for dissipative nonlinear wave equations in one space dimension . . . . . 10
- 05-01-0051  
45 Takuto Imai (Future Univ. Hakodate)  
Hiroyuki Takamura (Future Univ. Hakodate)  
Kyouhei Wakasa (Muroran Inst. of Tech.)  
Masakazu Kato (Muroran Inst. of Tech.) The sharp lower bound of the lifespan of solutions to semilinear wave equations with low power in two space dimensions . . . . . 12

- 05-01-0028  
46 Yuta Wakasugi (Nagoya Univ.) Diffusion phenomena for the wave equation with space-dependent damp-  
Motohiro Sobajima ing in an exterior domain ..... 10  
(Tokyo Univ. of Sci.)

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

- 05-02-0003  
Hisashi Nishiyama (Wakayama Univ.) Diffusion phenomena for damped wave equations

March 27th (Mon)

**9:15–12:00**

- 05-01-0050  
47 Shouta Enomoto (Kyushu Univ.) Stability of space-time periodic states to the compressible Navier–Stokes  
Yoshiyuki Kagei (Kyushu Univ.) equation in an infinite layer ..... 12  
Mohamad Nor Azlan
- 05-01-0049  
48 Abulizi Aihaiti (Kyushu Univ.) Large time behavior of solutions to the compressible Navier–Stokes  
Yoshiyuki Kagei (Kyushu Univ.) equations in a cylinder under the slip boundary condition ..... 12
- 05-01-0055  
49 Paolo Marenmonti (Second Univ. Naples) Global existence of solutions to 2-D Navier–Stokes flow with non-  
Senjo Shimizu (Kyoto Univ.) decaying initial data in exterior domains ..... 12
- 05-01-0030  
50 Hideo Kozono (Waseda Univ.) Strong solutions of the Navier–Stokes equations based on the maximal  
Senjo Shimizu (Kyoto Univ.) Lorentz regularity theorem in Besov spaces ..... 12
- 05-01-0002  
51 Ken Abe (Kyoto Univ.) Global well-posedness of the two-dimensional exterior Navier–Stokes  
equations for non-decaying data ..... 10
- 05-01-0045  
52 Takahiro Okabe (Hirosaki Univ.) Time periodic strong solutions to the incompressible Navier–Stokes  
Yohei Tsutsui (Shinshu Univ.) equations with external forces of non-divergence form ..... 12
- 05-01-0043  
53 Kengo Nakai (Tokyo Tech) Direction of vorticity and a refined blow-up criterion for the Navier–  
Stokes equations with fractional Laplacian ..... 12
- 05-01-0044  
54 Kengo Nakai (Tokyo Tech) Disturbance of the direction vector of vorticity in Hatakeyama–Kambe  
Yoshitaka Saiki (Hitotsubashi Univ.) turbulence model ..... 12  
Tsuyoshi Yoneda (Univ. of Tokyo)
- 05-01-0037  
55 Misaki Hirata (Tokyo Univ. of Sci.) Global existence and boundedness in a 2D two-species chemotaxis-  
Shunsuke Kurima (Tokyo Univ. of Sci.) Navier–Stokes system with logistic source ..... 12  
Masaaki Mizukami  
(Tokyo Univ. of Sci.)  
Tomomi Yokota (Tokyo Univ. of Sci.)
- 05-01-0048  
56 Hideo Kozono (Waseda Univ.) Existence and uniqueness theorem on mild solutions to the Keller–Segel  
Yoshie Sugiyama (Kyushu Univ.) system coupled with the Navier–Stokes fluid ..... 12  
Masanari Miura (Kyushu Univ.)
- 05-01-0021  
57 Yoshihiro Shibata (Waseda Univ.) On  $L_p$ - $L_q$  decay estimate for Stokes equations with free boundary con-  
dition in an exterior domain ..... 10
- 05-01-0023  
58 Yoshihiro Shibata (Waseda Univ.) Global wellposedness for the free boundary problem of the Navier–  
Stokes equations in an exterior domain ..... 10



**14:15–16:15**

05-01-0063

59 Teppei Kobayasi (Meiji Univ.) The Green matrix and the Green formulas of the Stokes equations for a half space ..... 12

05-01-0042

60 Ryosuke Hyakuna (Waseda Univ.) Well-posedness of the Hartree type equation ..... 10

05-01-0036

61 Gaku Hoshino (Waseda Univ.) Leibniz rule for pseudo-conformal generator and its application to analytic smoothing effect for non pseudo-conformally invariant nonlinear Schrödinger equations ..... 12

05-01-0018

62 Masayuki Hayashi (Waseda Univ.) Takahisa Inui (Kyoto Univ.) Noriyoshi Fukaya (Tokyo Univ. of Sci.) Global well-posedness for a generalized derivative nonlinear Schrödinger equation ..... 12

05-01-0003

63 Hideaki Sunagawa (Osaka Univ.) Chunhua Li (Yanbian Univ.) Remarks on derivative nonlinear Schrödinger systems with multiple masses ..... 12

05-01-0027

64 Toshiyuki Suzuki (Kanagawa Univ./Kogakuin Univ.) Contraction of wave operators for nonlinear Schrödinger equations of  $L^2$ -super-critical cases with inverse-square potentials ..... 12

05-01-0039

65 Sojiro Murai (Tokyo Metropolitan Coll. of Indus. Tech.) Strichartz estimates for wave equation with magnetic potential in exterior domain ..... 10

05-01-0062

66 Hayato Miyazaki (Tsuyama Nat. Coll. of Tech.) Satoshi Masaki (Osaka Univ.) Long range scattering for nonlinear Schrödinger equations with critical homogeneous nonlinearity ..... 12

05-01-0038

67 Satoshi Masaki (Osaka Univ.) Jun-ichi Segata (Tohoku Univ.) Modified scattering for the gauge-invariant quadratic nonlinear Klein–Gordon equation in two dimensions ..... 12

**16:30–17:30 Award Lecture for the 2016 MSJ Analysis Prize**

05-02-0004

Soichiro Katayama (Osaka Univ.) Global existence and asymptotic behavior for systems of nonlinear wave equations

# Real Analysis

March 26th (Sun)

## 9:00–11:55

06-01-0011

- 1 Yoshifumi Ito (Tokushima Univ.\*) Axiomatic method of measure and integration (I). In the case of Jordan measure ..... 15

06-01-0013

- 2 Yoshifumi Ito (Tokushima Univ.\*) Axiomatic method of measure and integration (II). In the case of Riemann integral ..... 15

06-01-0014

- 3 Shigehiro Sakata (Univ. of Miyazaki) Strict power concavity of a convolution ..... 15

06-01-0005

- 4 Nobusumi Sagara (Hosei Univ.) Relaxation and purification for nonconvex variational problems in dual Banach spaces: The minimization principle in saturated measure spaces ..... 15

06-01-0036

- 5 Ryoichi Kunisada (Waseda Univ.) Finitely additive measures and additive property ..... 12

06-01-0025

- 6 Toshiharu Kawasaki  
(Nihon Univ./Tamagawa Univ.) On the principal value of Henstock–Kurzweil integral ..... 15

06-01-0033

- 7 Aoi Honda (Kyushu Inst. of Tech.)  
Yoshiaki Okazaki  
(Fuzzy Logic Systems Inst.) Nondiscrete inclusion-exclusion integral ..... 15

06-01-0043

- 8 Shin-ya Matsushita (Akita Pref. Univ.) On the convergence of the Krasnosel'skii–Mann iteration ..... 15

06-01-0026

- 9 Sachiko Atsushiba  
(Univ. of Yamanashi) Convergence theorems for a family of nonlinear mappings related to hybrid mappings ..... 15

06-01-0040

- 10 Tomonari Suzuki  
(Kyushu Inst. of Tech.) Yet another generalization of the Banach contraction principle ..... 15

06-01-0002

- 11 Takeshi Iida  
(Fukushima Nat. Coll. of Tech.) The Pérez inequality on weighted Morrey spaces ..... 15

## 14:15–16:50

06-01-0003

- 12 Jayson Mesitas Cunanan  
(Shinshu Univ.)  
Youhei Tsutsui (Shinshu Univ.) Trace theorems on Wiener amalgam spaces ..... 10

06-01-0029

- 13 Takeshi Iida<sup>b</sup>  
(Fukushima Nat. Coll. of Tech.)  
Yoshihiro Sawano (Tokyo Metro. Univ.)  
Hitoshi Tanaka  
(Tsukuba Univ. of Tech.) Decompositions of Morrey spaces ..... 15

06-01-0031

- 14 Denny Iwanal Hakim<sup>b</sup>  
(Tokyo Metro. Univ.)  
Yoshihiro Sawano (Tokyo Metro. Univ.) Complex interpolation of Morrey spaces ..... 15

06-01-0032

- 15 Shohei Nakamura (Tokyo Metro. Univ.)<sup>b</sup>  
Yoshihiro Sawano (Tokyo Metro. Univ.) Fourier transform and Morrey spaces ..... 15

06-01-0017

- 16 Gaku Sadasue (Osaka Kyoiku Univ.)  
Eiichi Nakai (Ibaraki Univ.) Characterizations of boundedness for generalized fractional integrals on martingale Morrey spaces ..... 15

- 06-01-0016  
17 Yukino Tomizawa (Chuo Univ.) Geometric constants of rotation invariant norms ..... 15  
Ken-Ichi Mitani (Okayama Pref. Univ.)  
Kichi-Suke Saito (Niigata Univ.\*)  
Ryotaro Tanaka (Kyushu Univ.)
- 06-01-0020  
18 Ryotaro Tanaka (Kyushu Univ.) On properties of extreme points of von Neumann algebras and its application to Tingley's problem ..... 15
- 06-01-0012  
19 Hiroyasu Mizuguchi (Niigata Univ.) The difference between two orthogonality notions in Radon planes ... 15
- 06-01-0006  
20 Kichi-Suke Saito (Niigata Univ.) Matrix norm of James constant and its applications ..... 15  
Naoto Komuro  
(Hokkaido Univ. of Edu.)  
Ryotaro Tanaka (Kyushu Univ.)
- 06-01-0045  
21 Mikio Kato (Kyushu Inst. of Tech.\*) Some recent results on direct sums of Banach spaces ..... 15  
Takayuki Tamura (Chiba Univ.)

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

- 06-02-0002  
Kenjiro Yanagi (Josai Univ.) Entropy in classical or quantum information theory

March 27th (Mon)

**9:00–11:40**

- 06-01-0024  
22 Takanobu Hara (Tokyo Metro. Univ.) The Wolff potential estimate for solutions to elliptic equations with signed data ..... 15
- 06-01-0001  
23 Masaaki Mizukami <sup>b</sup> A unified method for boundedness in Keller–Segel systems with signal-dependent sensitivity ..... 15  
(Tokyo Univ. of Sci.)  
Tomomi Yokota (Tokyo Univ. of Sci.)
- 06-01-0004  
24 Shunsuke Kurima (Tokyo Univ. of Sci.) Existence of solutions to nonlinear diffusion equations and their approximations with error estimates ..... 15  
Tomomi Yokota (Tokyo Univ. of Sci.)
- 06-01-0023  
25 Takanori Kuroda (Waseda Univ.) Finite time blow-up for a Ginzburg–Landau equation without linear term ..... 15  
Mitsuharu Ôtani (Waseda Univ.)
- 06-01-0041  
26 Shun Uchida (Waseda Univ.) On the maximality of sum of maximal monotone operators in a Hilbert space ..... 15  
Mitsuharu Ôtani (Waseda Univ.)
- 06-01-0027  
27 Hiroki Sano (Shizuoka Univ.) Well-posedness for semilinear functional differential equations and its applications ..... 15  
Naoki Tanaka (Shizuoka Univ.)
- 06-01-0039  
28 Dai Noboriguchi Well-posedness of nonhomogeneous Dirichlet problem for stochastic scalar conservation laws ..... 10  
(Kushiro Nat. Coll. of Tech.)  
Kazuo Kobayasi (Waseda Univ.)
- 06-01-0037  
29 Yutaka Tsuzuki Solvability of Vlasov–Poisson systems with errors in magnetic field in a half-space ..... 15  
(Hiroshima Shudo Univ.)
- 06-01-0010  
30 Hiroshi Watanabe (Oita Univ.) Global solutions to nonlocal strongly degenerate parabolic systems with variable coefficients ..... 15
- 06-01-0034  
31 Makoto Nakamura (Yamagata Univ.) On the derivation of several second order partial differential equations from the Einstein equation ..... 10
- 06-01-0035  
32 Makoto Nakamura (Yamagata Univ.) On the nonrelativistic limit of a semilinear field equation in uniform and isotropic space ..... 10

**14:15–16:25**

06-01-0038

- 33 Risei Kano (Kochi Univ.) The existence of solutions for the perfect plasticity model ..... 15  
 Takeshi Fukao (Kyoto Univ. of Edu.)

06-01-0018

- 34 Ken Shirakawa (Chiba Univ.) Phase-field model of grain boundary motion including inhomogeneous  
 Hiroshi Watanabe (Oita Univ.) Dirichlet type boundary condition ..... 15  
 J. Salvador Moll (Univ. Valencia)

06-01-0019

- 35 Ryota Nakayashiki (Chiba Univ.) Allen–Cahn type equations involved in singular diffusions and dynamic  
 Ken Shirakawa (Chiba Univ.) boundary conditions ..... 15

06-01-0015

- 36 Takeshi Fukao (Kyoto Univ. of Edu.) A boundary control problem for GMS model ..... 15  
 Noriaki Yamazaki (Kanagawa Univ.)

06-01-0022

- 37 Hirokazu Komatsu (Kinki Univ.) An analysis of ordinary differential equations that describe non-weakly  
 Hiroyuki Nakajima (Kinki Univ.) reversible chemical reaction networks ..... 15

06-01-0009

- 38 Akio Ito Asymptotic stability of an equilibrium point for a biochemical reaction  
 Komatsu Hirokazu (Kinki Univ.) network constructed by cardiac hypertrophy factors ..... 15  
 Nakajima Hiroyuki (Kinki Univ.)

06-01-0042

- 39 Kota Kumazaki A free boundary problem describing adsorption phenomenon in porous  
 (Tomakomai Nat. Coll. of Tech.) materials ..... 15

06-01-0008

- 40 Toyohiko Aiki (Japan Women's Univ.) On existence and uniqueness for solutions of one-dimensional moisture  
 Sergey A. Timoshin transport equation appearing in concrete carbonation process ..... 15  
 (Siberian Branch Russian Acad. Sci.)

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

06-02-0003

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

# Functional Analysis

March 24th (Fri)

**14:15–16:00**

07-01-0004

- 1 Sohei Ashida (Kyoto Univ.) Exponential bound on the widths of molecular predissociation resonances ..... 15

07-01-0008

- 2 Hiroaki Niikuni (Maebashi Inst. of Tech.) On the spectra of periodic Schrödinger operators on a super carbon nanotube ..... 15

07-01-0012

- 3 Daichi Komori (Hokkaido Univ.) Intuitive representation of local cohomology groups ..... 15

07-01-0026

- 4 Hiroyuki Yamagishi (Tokyo Metropolitan Coll. of Indus. Tech.) The best constant of discrete Sobolev inequalities on C36 ..... 15  
Yoshinori Kametaka (Osaka Univ.\*)

07-01-0029

- 5 Toru Fuda (Hokkaido Univ.) Localization and eigenvalues of a multi-dimensional quantum walk with one-defect. .... 15  
Daiju Funakawa (Hokkaido Univ.)  
Akito Suzuki (Shinshu Univ.)

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

07-02-0002

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

March 25th (Sat)

**9:00–12:00**

07-01-0002

- 6 Chungchuan Chen (Nat. Taichung Univ. of Edu.) Topological dynamics on linear operators ..... 15

07-01-0028

- 7 Masaru Nagisa (Chiba Univ.) Operator monotone rational function and its application ..... 15

07-01-0017

- 8 Hiroaki Tohyama (Maebashi Inst. of Tech.) Relative operator entropies and operator valued divergences via divided difference ..... 15  
Hiroshi Isa (Maebashi Inst. of Tech.)  
Masatoshi Ito (Maebashi Inst. of Tech.)  
Eizaburo Kamei  
Masayuki Watanabe (Maebashi Inst. of Tech.)

07-01-0003

- 9 Yuki Seo (Osaka Kyoiku Univ.) An interpolation of Jensen's inequality and its applications to mean inequalities ..... 10

07-01-0021

- 10 Takeaki Yamazaki (Toyo Univ.) Some norm inequalities for matrix means ..... 10

07-01-0022

- 11 Junichi Fujii (Osaka Kyoiku Univ.) Around the manifold of the positive invertible operators ..... 15

07-01-0010

- 12 Rumi Shindo Togashi (Nagaoka Nat. Coll. of Tech.) Characterizations related to the products and the spectral radius for the real-algebra isomorphisms between unital semi-simple commutative Banach algebras ..... 15  
Miura Takeshi (Niigata Univ.)  
Honma Dai (Uchida Yoko IT Solutions Co.)

07-01-0019

- 13 Takeshi Miura (Niigata Univ.) Properties of isometries between function spaces ..... 15

07-01-0024	14	<u>Sin-Ei Takahasi</u> (Yamagata Univ.)* Takeshi Miura (Niigata Univ.) Hiroyuki Takagi (Shinshu Univ.) Junji Inoue (Hokkaido Univ.)*	A classification of semisimple commutative Banach algebras of type I .....	15
07-01-0013	15	Osamu Hatori (Niigata Univ.)	Hermitian operators on vector-valued Lipschitz algebras .....	15
07-01-0006	16	Osamu Hatori (Niigata Univ.)	Commutativity via gyrogroup operations .....	15

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

07-02-0001		Kazuhiro Kawamura (Univ. of Tsukuba)	Some Banach–Stone type theorems	
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March 26th (Sun)

**9:30–12:00**

07-01-0011	17	<u>Sakaé Fuchino</u> (Kobe Univ.)	Pre-Hilbert spaces without orthonormal bases .....	15
07-01-0005	18	Kengo Matsumoto (Joetsu Univ. of Edu.)	Relative Morita equivalence of C*-algebras and flow equivalence of topological Markov shifts .....	15
07-01-0009	19	<u>Yasuo Watatani</u> (Kyushu Univ.) Tsuyoshi Kajiwara (Okayama Univ.)	C*-algebras associated with complex dynamical systems or self-similar maps and their maximal abelian subalgebras and dimension groups of the cores .....	15
07-01-0014	20	<u>Tomohiro Kanda</u> (Kyushu Univ.) <sup>b</sup> Taku Matsui (Kyushu Univ.)	The existence and the uniqueness of regular KMS states on the resolvent CCR algebra .....	10
07-01-0016	21	Kei Hasegawa (Kyushu Univ.)	Bass–Serre trees of amalgamated free product C*-algebras .....	15
07-01-0007	22	Toshihiko Masuda (Kyushu Univ.)	Classification of Roberts actions of strongly amenable C*-tensor cate- gories on the injective factor of type III <sub>1</sub> .....	15
07-01-0018	23	Reiji Tomatsu (Hokkaido Univ.)	Continuous crossed product decomposition of an ultraproduct von Neu- mann algebras .....	15
07-01-0020	24	<u>Takahiro Hasebe</u> (Hokkaido Univ.) Marek Bozejko (Univ. of Wrocław) Wiktor Ejsmont (Wrocław Univ. of Econ.)	Fock space of type D .....	15

**14:15–16:15**

07-01-0025	25	<u>Yasumichi Matsuzawa</u> (Shinshu Univ.) <sup>b</sup> Hiroschi Ando (Chiba Univ.)	Groups of unitaries without property (FH) .....	15
07-01-0001	26	<u>Hiroschi Ando</u> (Chiba Univ.) Yasumichi Matsuzawa (Shinshu Univ.) Andreas Thom (TU Dresden) Asger Törnquist (Univ. Copenhagen)	Unitarizability, Maurey–Nikishin factorization and Polish groups of finite type .....	15
07-01-0027	27	Tatsuya Tsurii (Osaka Pref. Univ.)	Finite hypergroups and finite graphs .....	15
07-01-0023	28	<u>Hideyuki Ishi</u> (Nagoya Univ./JST PRESTO) Atsumi Ohara (Univ. of Fukui)	An invariant potential under a group action on a Hessian domain .....	15

07-01-0015

- 29 Hiroshi Oda (Takushoku Univ.) Spherical functions for small  $K$ -types ..... 15  
 Nobukazu Shimeno  
 (Kwansei Gakuin Univ.)

07-01-0030

- 30 Toshiyuki Kobayashi Symmetry breaking of conformal transformation group  $O(p, q)$  ..... 15  
 (Univ. of Tokyo/Univ. of Tokyo)  
Oleksii Leontiev (Univ. of Tokyo)

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

07-02-0003

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

## Statistics and Probability

March 24th (Fri)

### 9:45–12:00

- [08-01-0022](#)  
 1 Yong Moo Chung (Hiroshima Univ.) Quadratic maps with flat rate function ..... 15  
Hiroki Takahasi (Keio Univ.)  
Juan Rivera-Letelier (Univ. Rochester)
- [08-01-0006](#)  
 2 Isamu Dōku (Saitama Univ.) On the compact support of superprocess determined by a random  
 measure ..... 15
- [08-01-0009](#)  
 3 Shigeyoshi Ogawa (Ritsumeikan Univ.) On strong inversion formulas of the natural SFT ..... 10  
Hideaki Uemura (Aichi Univ. of Edu.)
- [08-01-0011](#)  
 4 Atsushi Takeuchi (Osaka City Univ.) Malliavin calculus for marked Hawkes processes ..... 15
- [08-01-0003](#)  
 5 Yuki Suzuki (Keio Univ.) A diffusion process with a contracted Brownian potential ..... 15
- [08-01-0024](#)  
 6 Dai Taguchi (Ritsumeikan Univ.) On the Euler–Poisson scheme for SDEs with positive jumps and Hölder  
 continuous coefficient ..... 10  
Libo Li (Univ. of New South Wales)
- [08-01-0025](#)  
 7 Hideo Nagai (Kansai Univ.) Large deviation control for quadratic semi-martingale functionals .... 15
- [08-01-0026](#)  
 8 Hideo Nagai (Kansai Univ.) Large deviation control under model uncertainty ..... 12

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

- [08-02-0002](#)  
Tomoyuki Ichiba Stochastic analysis for collision of Brownian particles  
 (Univ. of California, Santa Barbara)

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

- [08-02-0003](#)  
Tomohiro Sasamoto (Tokyo Tech) The KPZ equation and integrable stochastic interacting systems

March 25th (Sat)

### 9:50–11:30

- [08-01-0037](#)  
 9 Masayuki Horiguchi (Kanagawa Univ.) On a multivariate Bayesian control problem in Markov decision pro-  
 cesses ..... 15
- [08-01-0017](#)  
 10 Noboru Nomura (Kochi Univ.) Evaluation procedure of orthant probabilities with conditional distribu-  
 tion in subspaces ..... 10
- [08-99-0001](#)  
 11 Hayato Takahashi Recent progress on random sequences with respect to conditional prob-  
 abilities ..... 15
- [08-01-0016](#)  
 12 Yujie Xue (Waseda Univ.) Local Whittle likelihood approach for  $L^p$ -norm spectra ..... 10  
Taniguchi Masanobu (Waseda Univ.)
- [08-01-0032](#)  
 13 Fumiya Akashi (Waseda Univ.) Self-normalized and random weighting approach to likelihood ratio test  
Jianqing Fan (Princeton Univ.) for the model diagnostics of stable processes ..... 15
- [08-01-0033](#)  
 14 Fumiya Akashi (Waseda Univ.) Quantile regression-based self-normalized block sampling method for  
Shuyang Bai (Univ. of Georgia) linear regression model with dependent errors ..... 15  
Murad S. Taqqu (Boston Univ.)



08-01-0018

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

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

08-01-0036

- 16 Yan Liu (Waseda Univ.) A frequency domain bootstrap for irregularly spaced spatial data ..... 15  
Kun Chen  
(Southwestern Univ. of Finance and Economics)  
Ngai Hang Chan  
(Chinese Univ. of Hong Kong)  
Masanobu Taniguchi (Waseda Univ.)

08-01-0019

- 17 Yurie Tamura (Waseda Univ.) Asymptotic theory of sphericity test statistic for high-dimensional time  
Masanobu Taniguchi (Waseda Univ.) series ..... 10

08-01-0020

- 18 Yoshiyuki Tanida (Waseda Univ.) Asymptotic theory of Whittle estimator for high dimensional time series  
Masanobu Taniguchi (Waseda Univ.) ..... 10

08-01-0021

- 19 Kazuyoshi Yata (Univ. of Tsukuba) Consistency for high-dimensional eigenvectors ..... 15  
Makoto Aoshima (Univ. of Tsukuba)

## March 26th (Sun)

**9:50–12:00**

08-01-0029

- 20 Shuhei Mano (Inst. of Stat. Math.) Multiplicative measure on partitions and the A-hypergeometric system  
associated with the rational normal curve ..... 15

08-01-0028

- 21 Tomonari Sei (Univ. of Tokyo) Stein-type identity derived from coordinate-wise transformations ..... 15

08-01-0031

- 22 Tamio Koyama (Shiga Univ.) An integral formula for the powered sum of the independent, identically  
and normally distributed random variables ..... 15

08-01-0002

- 23 Yoshihiko Maesono (Kyushu Univ.) Modified gamma kernel density estimator ..... 10  
Rizky Reza Fauzi (Kyushu Univ.)

08-01-0005

- 24 Daisuke Nemoto (Tokyo Univ. of Sci.) Generalized diagonal exponent conditional symmetry model and de-  
composition for square contingency tables with ordered categories ..... 10  
Kiyotaka Iki (Tokyo Univ. of Sci.)  
Sadao Tomizawa (Tokyo Univ. of Sci.)

08-01-0010

- 25 Hiroshi Nakano (Tokyo Univ. of Sci.) Measure of departure from marginal homogeneity using marginal odds  
Kiyotaka Iki (Tokyo Univ. of Sci.) for square contingency tables with ordered categories ..... 10  
Sadao Tomizawa (Tokyo Univ. of Sci.)

08-01-0012

- 26 Norito Takeda (Tokyo Univ. of Sci.) Measure of departure from symmetry using cumulative probabilities for  
Kiyotaka Iki (Tokyo Univ. of Sci.) square contingency tables ..... 10  
Sadao Tomizawa (Tokyo Univ. of Sci.)

08-01-0014

- 27 Tomohisa Maruyama Decomposition of marginal homogeneity using model based on comple-  
(Tokyo Univ. of Sci.) mentary log-log transform for square contingency tables ..... 10  
Yusuke Saigusa (Tokyo Univ. of Sci.)  
Kouji Tahata (Tokyo Univ. of Sci.)  
Sadao Tomizawa (Tokyo Univ. of Sci.)

08-01-0027

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

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

08-02-0004

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

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

08-02-0001

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

March 27th (Mon)

**9:50–12:00**

08-01-0023

- 29 Jo Suzuki (Osaka Univ.) Mutual information estimation of continuous variables: Consistency ..... 15
- 08-01-0034  
 30 Shintaro Hashimoto (Hiroshima Univ.) Robust estimation of asymmetric location-scale family by using log-regularly varying function ..... 15
- 08-01-0013  
 31 Koji Tsukuda (Univ. of Tokyo) On Poisson approximations for the Ewens sampling formula with large parameters ..... 15
- 08-01-0015  
 32 Kou Fujimori (Waseda Univ.) The Dantzig selector for diffusion processes with covariates ..... 10  
Yoichi Nishiyama (Waseda Univ.)
- 08-01-0035  
 33 Hirofumi Wakaki (Hiroshima Univ.) On a model selection criterion for a linear mixed model ..... 15
- 08-01-0007  
 34 Masahide Kuwada Characteristics of balanced third-order designs of resolution  $R^*({10, 01})$  with  $N < \nu(m)$  and  $NSV_2 \geq 1$  for  $3^m$  factorials ..... 15  
Yoshifumi Hyodo  
 (Okayama Univ. of Sci./Int. Inst. for Nat. Sci.)  
Hiromu Yumiba (Int. Inst. for Nat. Sci.)
- 08-01-0008  
 35 Kazuki Matsubara (ChuoGakuin Univ.) Some existence of hierarchical 3-designs ..... 15  
Sanpei Kageyama (Tokyo Univ. of Sci.)
- 08-01-0030  
 36 Shoko Chisaki (Tokyo Univ. of Sci.) A recursive construction of difference systems of sets ..... 10  
Yui Kimura (Tokyo Univ. of Sci.)  
Nobuko Miyamoto (Tokyo Univ. of Sci.)

## Applied Mathematics

March 24th (Fri)

### 10:30–11:45

- [09-01-0001](#)  
1 Kazuhiko Ushio Balanced  $C_{10}$ -foil designs and related designs ..... 15
- [09-01-0029](#)  
2 Diogo Kendy Matsumoto Navigation groupoids and its application ..... 15  
(Shibaura Inst. of Tech.)
- [09-01-0017](#)  
3 Yutaro Sakamoto Hamilton cycles in double generalized Petersen graphs ..... 15  
(Univ. of Electro-Comm.)
- [09-01-0013](#)  
4 Kenta Noguchi (Tokyo Denki Univ.) 2-cell embeddings of optimal 1-planar graphs ..... 15

### 14:15–15:30

- [09-01-0033](#)  
5 Rachel Bass (Georgia Southern Univ.) Characterization of edge-colorings of complete graphs with forbidden  
Colton Magnant rainbow subgraphs ..... 10  
(Georgia Southern Univ.)  
Kenta Ozeki  
(Nat. Inst. of Information/JST ERATO)  
Brian Pyron (Georgia Southern Univ.)
- [09-01-0009](#)  
6 Shinya Fujita (Yokohama City Univ.) Partition problem on edge-colored graphs ..... 10
- [09-01-0005](#)  
7 Jun Fujisawa (Keio Univ.) Edge proximity conditions for matching extendability of graphs ..... 15  
Robert E. L. Aldred (Univ. of Otago)  
Akira Saito (Nihon Univ.)
- [09-01-0007](#)  
8 Chie Nara (Meiji Univ.) Continuous flattening of orthogonal polyhedra ..... 15  
Jin-ichi Itoh (Kumamoto Univ.)  
Erik D. Demaine (MIT)  
Martin L. Demaine (MIT)

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

- [09-02-0006](#)  
Ying Miao (Univ. of Tsukuba)<sup>b</sup> Combinatorics of Digital Fingerprinting

March 25th (Sat)

### 10:00–11:45

- [09-01-0006](#)  
9 Tomoya Machide Symmetric sum of regularized multiple zeta values and set partition  
(Nat. Inst. of Information/JST ERATO) ..... 15
- [09-01-0030](#)  
10 Hideo Mitsuhashi (Utsunomiya Univ.) Quaternionic second weighted zeta functions of finite graphs ..... 15  
Norio Konno (Yokohama Nat. Univ.)  
Iwao Sato (Oyama Nat. Coll. of Tech.)
- [09-01-0004](#)  
11 Iwao Sato (Oyama Nat. Coll. of Tech.) The spectra of the time evolution matrices of Szegedy walk and SQW  
Norio Konno (Yokohama Nat. Univ.) ..... 15  
Etsuo Segawa (Tohoku Univ.)
- [09-01-0032](#)  
12 Kei Saito (Yokohama Nat. Univ.) The quaternionic quantum walk on the one-dimensional lattice ..... 15

- 09-01-0018  
13 Takashi Komatsu (Yokohama Nat. Univ.) Stationary measures of three-state quantum walks on the one-dimensional integer lattice ..... 15  
Hikari Kawai (Yokohama Nat. Univ.)  
Norio Konno (Yokohama Nat. Univ.)  
Seiya Yoshida (Yokohama Nat. Univ.)
- 09-01-0021  
14 Akito Suzuki (Shinshu Univ.) Weak limit theorem for two-dimensional two-state quantum walks with position dependent coins ..... 15

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

March 26th (Sun)

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

- 09-02-0001  
Satoshi Murai (Osaka Univ.) Recent developments on face numbers of convex polytopes ..... 40
- 09-02-0002  
Akihiro Higashitani (Kyoto Sangyo Univ.) History and future of the theory of lattice polytopes ..... 40
- 09-02-0004  
Takayuki Hibi (Osaka Univ.) Let’s listen a trio of convex polytopes, commutative algebra and statistics ..... 40
- 14:15–16:30**
- 09-01-0034  
15 Masayuki Akamatsu (Japan Coast Guard Academy) Dual problem for bivariate function by perturbarion function ..... 15
- 09-01-0002  
16 Shunzi Horiguchi (Niigata Sangyo Univ.) Extended complex Newton’s method and Riemann surface, various formulas to compare convergences ..... 10
- 09-01-0035  
17 Fuminori Sakaguchi (Univ. of Fukui) On the hyperfunction components of extra solutions in an integer-type algorithm for ODEs ..... 15
- 09-01-0025  
18 Kohji Ohtsuka (Hiroshima Kokusai Gakuin Univ.) Examination about shape optimization of singular points in consideration of the shape sensitivity by gneralized J-integral ..... 15
- 09-01-0016  
19 Takehiko Kinoshita (Kyoto Univ.) Some remarks on the lower bounds of resolvent for compact operators  
Yoshitaka Watanabe (Kyushu Univ.) ..... 15  
Mitsuhiro T. Nakao (Kyushu Univ.)
- 09-01-0027  
20 Yuki Chiba (Univ. of Tokyo)  $L^\infty$  error estimates of discontinuous Galerkin methods for Poisson  
Norikazu Saito (Univ. of Tokyo) equation on non-convex polygonal domain ..... 15
- 09-01-0031  
21 Takuya Tsuchiya (Ehime Univ.) Approximating surface area by interpolations on triangulations ..... 15  
Kenta Kobayashi (Hitotsubashi Univ.)
- 09-01-0022  
22 Masahisa Tabata (Waseda Univ.) Convergence of the upwind-element choice scheme for the Navier–Stokes equations ..... 15

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

- 09-02-0005  
Norbert Pozar (Kanazawa Univ.) A level set approach to the crystalline mean curvature flow

## March 27th (Mon)

**9:30–11:30**

09-01-0012

- 23 Toshikazu Kuniya (Kobe Univ.) Mathematical analysis of an HIV model with infection-age-structure  
Jinliang Wang (Heilongjiang Univ.) and nonlinear incidence ..... 15  
Ran Zhang (Harbin Inst. of Tech.)

09-01-0024

- 24 Tetsuya Ishiwata Delay-induced blow-up in a limit-cycle oscillation model ..... 15  
 (Shibaura Inst. of Tech.)  
Emiko Ishiwata (Tokyo Univ. of Sci.)  
Yukihiko Nakata (Shimane Univ.)  
Katsuhiko Miki

09-01-0019

- 25 Kaname Matsue Quasi-Poincaré compactifications and blow-up solutions ..... 15  
 (Kyushu Univ./Kyushu Univ.)

09-01-0020

- 26 Kaname Matsue Compactifications, blow-up solutions and singular shock waves ..... 15  
 (Kyushu Univ./Kyushu Univ.)

09-01-0010

- 27 Takuya Tsuchiya (Waseda Univ.) Constructing of constraint preserving scheme for Einstein equations .. 15  
Gen Yoneda (Waseda Univ.)

09-01-0011

- 28 Ryosuke Urakawa (Waseda Univ.) Analyzing constraint propagation of Einstein equation on non-flat back-  
Takuya Tsuchiya (Waseda Univ.) ground ..... 15  
Gen Yoneda (Waseda Univ.)

09-01-0028

- 29 Hideki Murakawa (Kyushu Univ.) A linear method for nonlinear diffusion problems ..... 15

**14:15–16:20**

09-01-0036

- 30 Akane Kawaharada Empirical CA construction method for the viscous Burgers equation  
 (Kyoto Univ. of Edu.) and its characteristics ..... 15  
Tomoyuki Miyaji (Meiji Univ.)  
Naoto Nakano  
 (JST PRESTO/Hokkaido Univ.)

09-01-0014

- 31 Yuuki Shimizu (Kyoto Univ.) Vortex dynamics on a toroidal surface ..... 15  
Takashi Sakajo (Kyoto Univ.)

09-01-0008

- 32 Takeshi Gotoda (Kyoto Univ.) Numerical simulations of pattern formation in vortex sheet model .... 15  
Robert Krasny (Univ. of Michigan)

09-01-0026

- 33 Tomoyuki Miyaji (Meiji Univ.) Torus bifurcation to a rippling rectangular wave ..... 15  
Toshiyuki Ogawa (Meiji Univ.)  
Ayuki Sekisaka (Meiji Univ.)

09-01-0023

- 34 Ayuki Sekisaka (Meiji Univ.) Accumulation of eigenvalues for periodic boundary conditions ..... 15

09-01-0003

- 35 Sungrim Seirin Lee (Hiroshima Univ.) Pattern formation on asymmetric cell division and mathematical prob-  
 lems ..... 15

09-01-0015

- 36 Syunsuke Kobayashi (Meiji Univ.) Oscillatory hexagonal pattern in a 2-dimensional integro-differential  
Takashi Sakamoto (Meiji Univ.) reaction-diffusion system ..... 15

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

09-02-0003

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

# Topology

March 24th (Fri)

## 10:00–12:00

- 10-01-0037  
1 Yusuke Mizota (Kyushu Sangyo Univ.) Remarks on  $C^\infty$ -liftable vector fields ..... 15
- 10-01-0034  
2 Takashi Sano (Hokkai-Gakuen Univ.)  
Mahito Kobayashi (Akita Univ.)  
Minoru Yamamoto (Hirosaki Univ.) Panorama view for a polygon ..... 15
- 10-01-0032  
3 Yutaro Kabata (Hokkaido Univ.)  
Martín Barajas (ICMC-USP) Projection of crosscap ..... 15
- 10-01-0018  
4 Shunsuke Ichiki (Yokohama Nat. Univ.) Composing generic linearly perturbed mappings and immersions/injections ..... 15
- 10-01-0030  
5 Huhe Han (Yokohama Nat. Univ.)  
Takashi Nishimura  
(Yokohama Nat. Univ.) The Wulff construction for convex integrands ..... 15
- 10-01-0024  
6 Takahiro Yamamoto  
(Kyushu Sangyo Univ.)  
Osamu Saeki (Kyushu Univ.) Singular fibers of stable maps on manifold pairs and its applications ..... 15

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

- 10-02-0001  
Mitsunobu Tsutaya (Kyushu Univ.) Applications of Stasheff's  $A_\infty$ -theory to Lie groups

## 15:30–17:00

- 10-01-0014  
7 Jin-ho Lee  
(Samsung Fire/Marine Insurance)  
Toshiyuki Miyauchi (Fukuoka Univ.)  
Juno Mukai (Shinshu Univ.\*)  
Mariko Ohara (Shinshu Univ.) The generators on 23-th, 24-th and 25-th homotopy groups of the n-th rotation group ..... 15
- 10-01-0019  
8 Hisao Kato (Univ. of Tsukuba) Topological entropy and indecomposability of continua ..... 15
- 10-01-0022  
9 Atsuhide Mori (Osaka Dental Univ.) Topology of information geometry ..... 15
- 10-01-0036  
10 Shun Wakatsuki (Univ. of Tokyo) On the semi-purity of Sullivan algebras ..... 15
- 10-01-0010  
11 Shin Kiriki (Tokai Univ.)  
Teruhiko Soma (Tokyo Metro. Univ.) Takens' last problem and existence of non-trivial wandering domains ..... 15

March 25th (Sat)

## 10:00–11:50

- 10-01-0001  
12 Erika Kuno (Tokyo Tech) Abelian subgroups of the mapping class groups for non-orientable surfaces ..... 10
- 10-01-0002  
13 Erika Kuno (Tokyo Tech)  
Genki Omori (Tokyo Tech) On the distortion of the Torelli group in the mapping class group with boundary components ..... 10

<a href="#">10-01-0011</a>	14 <a href="#">Genki Omori</a> (Tokyo Tech) Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.)	A simple infinite presentation for the mapping class group of a non-orientable surface with boundary . . . . . 15
<a href="#">10-01-0012</a>	15 <a href="#">Genki Omori</a> (Tokyo Tech)	A small generating set for the twist subgroup of the mapping class group of a non-orientable surface by Dehn twists . . . . . 15
<a href="#">10-01-0007</a>	16 <a href="#">Shunsuke Tsuji</a> (Univ. of Tokyo)	A Johnson homomorphism on a compact connected non-orientable surface with non-empty boundary . . . . . 10
<a href="#">10-01-0008</a>	17 <a href="#">Shunsuke Tsuji</a> (Univ. of Tokyo)	The mapping class group and the Kauffman bracket skein algebra . . . . 10
<a href="#">10-01-0009</a>	18 <a href="#">Shunsuke Tsuji</a> (Univ. of Tokyo)	Construction of an invariant for integral homology 3-spheres via completed Kauffman bracket skein algebras . . . . . 10
<b>13:15–14:45</b>		
<a href="#">10-01-0021</a>	19 <a href="#">Mari Hataoka</a> (Japan Women's Univ.)	A presentation of a symmetric handlebody group . . . . . 15
<a href="#">10-01-0035</a>	20 <a href="#">Teruaki Kitano</a> (Soka Univ.) <a href="#">Anh T. Tran</a> (Univ. of Texas at Dallas)	On the polynomial defined by $SL(2; \mathbb{C})$ -Reidemeister torsion for Brieskorn homology 3-spheres . . . . . 10
<a href="#">10-01-0003</a>	21 <a href="#">Masakazu Teragaito</a> (Hiroshima Univ.) <a href="#">Kimihiko Motegi</a> (Nihon Univ.)	Generalized torsion elements and bi-orderability of 3-manifold groups . . . . . 10
<a href="#">10-01-0025</a>	22 <a href="#">Tatsuro Shimizu</a> (Kyoto Univ.)	On the $SU(2)$ Chern–Simons perturbation theory . . . . . 10
<a href="#">10-01-0017</a>	23 <a href="#">Tomohiro Asano</a> (Univ. of Tokyo)	The transverse element in the symplectic Khovanov homology . . . . . 15
March 26th (Sun)		
<b>10:00–12:00</b>		
<a href="#">10-01-0027</a>	24 <a href="#">Tomo Murao</a> (Univ. of Tsukuba) <a href="#">Yusuke Iijima</a> (Univ. of Tsukuba)	The complete connected component decomposition of quandles . . . . . 10
<a href="#">10-01-0004</a>	25 <a href="#">Atsushi Ishii</a> (Univ. of Tsukuba) <a href="#">Masahide Iwakiri</a> (Saga Univ.) <a href="#">Seiichi Kamada</a> (Osaka City Univ.) <a href="#">Jieon Kim</a> (Osaka City Univ.) <a href="#">Shosaku Matsuzaki</a> (Waseda Univ.) <a href="#">Kanao Oshiro</a> (Sophia Univ.)	The algebraic structure of a partially multiplicative biquandle . . . . . 10
<a href="#">10-01-0033</a>	26 <a href="#">Yusuke Takimura</a> (Gakushuin Boys' Junior High School)	A pre-order of chord diagrams on knot projections . . . . . 15
<a href="#">10-01-0023</a>	27 <a href="#">Noboru Ito</a> (Univ. of Tokyo)	Spaces of chord diagrams on spherical curves II . . . . . 15
<a href="#">10-01-0031</a>	28 <a href="#">Takuji Nakamura</a> (Osaka Electro-Comm. Univ.) <a href="#">Masahico Saito</a> (Univ. of South Florida) <a href="#">Shin Satoh</a> (Kobe Univ.) <a href="#">Yasutaka Nakanishi</a> (Kobe Univ.)	The palette numbers of 2-bridge knots . . . . . 10
<a href="#">10-01-0013</a>	29 <a href="#">Kodai Wada</a> (Waseda Univ.)	Link invariants of Milnor type . . . . . 10
<a href="#">10-01-0020</a>	30 <a href="#">Makoto Ozawa</a> (Komazawa Univ.)	Unknotting submanifolds of the 3-sphere by twistings . . . . . 10

10-01-0026

- 31 Hajime Fujita (Japan Women's Univ.) The maximum genus of the generalized jenga game ..... 15  
 Rika Akiyama (Japan Women's Univ.)  
 Yukie Inaba (Japan Women's Univ.)  
 Satomi Seita (Japan Women's Univ.)  
 Mari Hataoka (Japan Women's Univ.)

**14:15–15:45**

10-01-0029

- 32 Akiko Shima (Tokai Univ.) Regions without crossings for minimal charts ..... 15  
 Teruo Nagase (Tokai Univ.\*)

10-01-0005

- 33 Kouki Sato (Tokyo Tech) A full-twist formula for the  $\nu^+$ -invariant ..... 15

10-01-0006

- 34 Kouki Sato (Tokyo Tech)  $CP^2$ -sliceness and Floer homologically thin knots ..... 15

10-01-0016

- 35 Motoo Tange (Univ. of Tsukuba) Slice-ribbon conjecture and handle slide ..... 15  
 Tetsuya Abe (Osaka City Univ.)

10-01-0028

- 36 Syunji Moriya (Osaka Pref. Univ.) The space of short ropes and the classifying space of the space of long  
 Keiichi Sakai (Shinshu Univ.) knots ..... 15

**16:00–17:00 Talk Invited by Topology Section**

10-02-0002

- Yasuyuki Miyazawa (Yamaguchi Univ.) Links with trivial  $Q$ -polynomial



# Infinite Analysis

March 26th (Sun)

## 10:30–11:30

11-01-0005

- 1 Akishi Kato (Univ. of Tokyo) Quiver mutation sequences and  $q$ -binomial identities ..... 15  
 Yuma Mizuno (Tokyo Tech)  
 Yuji Terashima (Tokyo Tech)

11-01-0007

- 2 Ryosuke Kodera (Kyoto Univ.) Higher level Fock spaces and affine Yangian ..... 15

11-01-0006

- 3 Katsuyuki Naoi Noncommutativity between the operations of taking tensor products  
 (Tokyo Univ. of Agri. and Tech.) and classical limits of  $U_q(\mathbf{Lg})$ -modules ..... 15

11-01-0008

- 4 Yoshihiro Takeyama On the eigenfunctions for the multi-species  $q$ -Boson system ..... 15  
 (Univ. of Tsukuba)

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

11-02-0001

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

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

11-02-0002

- Akishi Kato (Univ. of Tokyo) Quiver mutation loops and partition  $q$ -series

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## 10:15–12:00

11-01-0004

- 5 Hiroshi Kawakami The complete degeneration scheme of the four-dimensional Painlevé-  
 (Aoyama Gakuin Univ.) type equations ..... 15

11-01-0009

- 6 Hidehito Nagao (Akashi Coll. of Tech.) On  $q$ -Garnier systems ..... 15  
 Yasuhiko Yamada (Kobe Univ.)

11-01-0010

- 7 Hidehito Nagao (Akashi Coll. of Tech.) Reductions from  $q$ -Garnier systems to  $q$ -Painlevé systems ..... 15  
 Yasuhiko Yamada (Kobe Univ.)

11-01-0003

- 8 Genki Shibukawa (Osaka Univ.) A generalization of multivariate Meixner, Charlier and Krawtchouk  
 polynomials ..... 15

11-01-0001

- 9 Yousuke Ohyama (Tokushima Univ.)  $q$ -Stokes phenomenon of  $q$ -hypergeometric series  ${}_2\varphi_0(a, 0; -; q, x)$  ..... 15

11-01-0002

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