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2019 The Mathematical Society of Japan

AUTUMN MEETING

Dates: September 17th (Tue)–20th (Fri), 2019

Venue: Kakuma Campus, Kanazawa University
Kakuma-machi, Kanazawa
920-1192 Japan

Contact to: School of Mathematics and Physics,
Kanazawa University
Kakuma-machi, Kanazawa
920-1192 Japan
E-mail kanazawa19sept@mathsoc.jp
During session: Phone +81 (0) 90 1791 3483
The Mathematical Society of Japan
Phone +81 (0) 3 3835 3483

	I Nat. Sci. and Tech Library Large Conf. Rm.	II Nat. Sci. and Tech Main Hall 101 Lect. Rm.	III Nat. Sci. and Tech Main Hall 103 Lect. Rm.	IV Nat. Sci. and Tech Main Hall AV Lect. Rm.	V Nat. Sci. and Tech Main Hall Lect. Hall	VI Nat. Sci. and Tech Main Hall Large Lect. Rm. A	VII Nat. Sci. and Tech Main Hall Large Lect. Rm. B	VIII Nat. Sci. and Tech Main Hall 105 Lect. Rm.	IX Nat. Sci. and Tech Main Hall 107 Lect. Rm.
17th (Tue)	Statistics and Probability 9:30–11:50 14:15–15:10	Infinite Analysis 14:15–16:00	Topology 9:30–12:00 15:30–17:10	Functional Equations 9:00–12:00 14:15–16:15	Algebra 9:15–11:50 15:30–17:40	Geometry 9:10–11:40 14:15–16:30	Applied Mathematics 9:50–12:00 14:15–16:40	Complex Analysis 9:30–11:50 14:15–15:30	Functional Analysis 10:00–11:45 14:15–16:15
	Featured Invited Talks 13:00–14:00								
	Invited Talks 15:25–16:25 16:40–17:40	Invited Talk 16:20–17:20	Invited Talk 14:15–15:15	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15	Invited Talk 16:45–17:45	Invited Talk 16:50–17:50	Invited Talk 15:45–16:45	Invited Talk 16:30–17:30
18th (Wed)	Statistics and Probability 9:10–11:30 13:10–14:15	Infinite Analysis 10:00–11:30		Functional Equations 9:00–12:00	Algebra 9:15–12:00	Geometry &Topology	Applied Mathematics 9:15–11:45	Complex Analysis 9:10–11:45	Functional Analysis 9:00–12:00
		Invited Talk 13:00–14:00		Invited Talk 13:15–14:15	Invited Talk 13:00–14:00	Invited Talks 10:30–11:30 13:15–14:15	Invited Talk 13:10–14:10	Invited Talk 13:15–14:15	Invited Talk 13:15–14:15
	MSJ Prizes Presentation (Nat. Sci. and Tech Main Hall) ····· (15:10–15:40) Plenary Talks (Nat. Sci. and Tech Main Hall) Autumn Prize Winner ····· (15:50–16:50) Masaki Kashiwara (Kyoto Univ.) ····· (17:00–18:00) Official Party (Houou-B, 3F, KKR Hotel Kanazawa) ····· (19:00–20:30)								
19th (Thu)	Statistics and Probability 9:00–12:00 14:15–14:55	Found. of Math. & Hist. of Math. 9:15–11:35 14:15–16:35	Topology 9:30–12:00 15:30–17:10	Functional Equations 9:00–12:00 14:15–16:15	Algebra 9:15–11:30 15:30–17:40	Geometry 9:10–11:45 14:15–16:15	Applied Mathematics 9:15–11:55 Special Session 14:15–17:45	Real Analysis 10:00–11:55 14:15–16:05	Functional Analysis 9:00–11:45 14:15–16:00
	Featured Invited Talks 13:00–14:00								
	Invited Talks 15:10–16:10 16:25–17:25	Invited Talk 16:45–17:45	Invited Talk 14:15–15:15	Invited Talk 16:30–17:30	Invited Talk 14:15–15:15	Invited Talk 16:30–17:30		Invited Talk 16:20–17:20	Invited Talk 16:15–17:15
20th (Fri)		Found. of Math. & Hist. of Math. 9:00–10:15 14:15–15:30		Functional Equations 9:00–12:00 14:15–16:15	Algebra 9:45–12:00 15:30–16:15		Applied Mathematics 9:15–11:55 14:15–16:25	Real Analysis 9:00–11:55 14:15–16:05	
	Featured Invited Talks 13:00–14:00								
		Invited Talk 10:30–11:30		Invited Talk 16:30–17:30	Invited Talk 14:15–15:15		Invited Talk 16:40–17:40	Invited Talk 16:20–17:20	

Plenary Talks

September 18th (Wed) Large Lecture Rm. A & B (Conf. Rm. VI–VII), 1F, Natural Science and Technology Main Hall

The 2019 MSJ Autumn Prize

Autumn Prize Winner ..... (15:50–16:50)

Invited Lecture on the Occasion of the Third Chern Medal

Masaki Kashiwara (Kyoto Univ.) Categorifications and quiver Hecke algebras ..... (17:00–18:00)

Featured Invited Talks

September 17th (Tue)

Conference Room I

Tetsuya Hattori (Keio Univ.) Amazon ranking and hydrodynamic limit of stochastic ranking process ..... (13:00–14:00)

Conference Room IV

Kengo Hirachi (Univ. of Tokyo)$^{\flat}$ Ramadanov conjecture for the Bergman kernel ..... (13:00–14:00)

Conference Room VI

Takuro Mochizuki (Kyoto Univ.) Harmonic bundles, monopoles and instantons —an intersection of differential geometry and algebraic geometry— .... (13:00–14:00)

September 19th (Thu)

Conference Room IV

Takaaki Nomura (Kyushu Univ.*/Osaka City Univ.) Homogeneous open convex cones ..... (13:00–14:00)

Conference Room VI

Guest Talk from Korean Mathematical Society

Yongnam Lee (KAIST) Deformation of a generically finite map to a hypersurface embedding and the moduli space of smooth hypersurfaces in abelian varieties ..... (13:00–14:00)

September 20th (Fri)

Conference Room IV

Shuichi Jimbo (Hokkaido Univ.) Time entire solutions of Allen–Cahn equation in the star graph ..... (13:00–14:00)

Conference Room VI

Shane Kelly (Tokyo Tech) A motivic formalism in representation theory ..... (13:00–14:00)

Talks Invited by Research Sections and Special Session

September 17th (Tue)

Algebra (Conference Room V)

Kazuya Kawasetsu (Kyoto Univ.) Vertex operator algebras and modular differential equations ..... (14:15–15:15)

Geometry (Conference Room VI)

Makoto Kimura (Ibaraki Univ.) Gauss map of real hypersurfaces in non-flat complex space forms and twistor space of complex 2-plane Grassmannian ..... (16:45–17:45)

Complex Analysis (Conference Room VIII)

Katsunori Shimomura (Ibaraki Univ.) Caloric morphism —Transformation preserving solutions of the heat equation— ..... (15:45–16:45)

Functional Equations (Conference Room IV)

Masakazu Onitsuka (Okayama Univ. of Sci.) Ulam stability for diamond-alpha difference equations .... (16:30–17:30)

Functional Analysis (Conference Room IX)

Yoshihisa Miyanishi (Osaka Univ.)♭ The spectral theory of the Neumann–Poincaré operator and its applications ..... (16:30–17:30)

Statistics and Probability (Conference Room I)

Kenkichi Tsunoda (Osaka Univ.) Scaling limits for exclusion processes ..... (15:25–16:25)

David Croydon (Kyoto Univ.) Scaling limits of random walks on random graphs in critical regimes ..... (16:40–17:40)

Applied Mathematics (Conference Room VII)

Ken'ichiro Tanaka (Univ. of Tokyo) Estimate of the best approximation of analytic functions and construction of approximation formulas for them by mathematical optimization ..... (16:50–17:50)

Topology (Conference Room III)

Tamás Kálmán (Tokyo Tech)♭ The Homfly polynomial, Floer homology, and combinatorics ..... (14:15–15:15)

Infinite Analysis (Conference Room II)

Ryo Fujita (Kyoto Univ.) Quantum affine Schur–Weyl duality associated with a Dynkin quiver ..... (16:20–17:20)

September 18th (Wed)

Algebra (Conference Room V)

Futoshi Hayasaka (Okayama Univ.) Integral closure of modules over a regular local ring ..... (13:00–14:00)

Geometry and Topology (Conference Room VI)

Award Lecture for the 2019 MSJ Geometry Prize

Masaki Tsukamoto (Kyushu Univ.) Mean dimension of dynamical systems and information theory ····· (10:30–11:30)

Award Lecture for the 2019 MSJ Geometry Prize

Kei Irie (Univ. of Tokyo) Symplectic capacities and periodic orbits of Hamiltonian systems ····· (13:15–14:15)

Complex Analysis (Conference Room VIII)

Joe Kamimoto (Kyushu Univ.) Newton polyhedra in several complex variables ····· (13:15–14:15)

Functional Equations (Conference Room IV)

Takuya Watanabe (Ritsumeikan Univ.) Semiclassical distribution of resonances above an energy-level crossing ····· (13:15–14:15)

Functional Analysis (Conference Room IX)

Yuichiro Tanaka (Univ. of Tokyo) Visible actions on complex spherical varieties and some applications ····· (13:15–14:15)

Applied Mathematics (Conference Room VII)

Hiroshi Matsuzawa (Numazu Nat. Coll. of Tech.) Spreading profile of solutions for a free boundary problem of a reaction diffusion equation with a multi-stable nonlinearity ····· (13:10–14:10)

Infinite Analysis (Conference Room II)

Teruhisa Tsuda (Hitotsubashi Univ.) Birational Weyl group actions via mutation combinatorics in cluster algebras ····· (13:00–14:00)

September 19th (Thu)

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

Diego A. Mejía (Shizuoka Univ.) Cichon's maximum over ZFC alone ····· (16:45–17:45)

Algebra (Conference Room V)

Hiraku Atobe (Hokkaido Univ.) Jacquet modules and local Langlands correspondence ····· (14:15–15:15)

Geometry (Conference Room VI)

Yoshihiko Matsumoto (Osaka Univ.) Geometric analysis on asymptotically hyperbolic and complex hyperbolic spaces ····· (16:30–17:30)

Functional Equations (Conference Room IV)

Michiaki Onodera (Tokyo Tech)♭ Hyperbolic solutions to Bernoulli's free boundary problem ····· (16:30–17:30)

Real Analysis (Conference Room VIII)

Youhei Tsutsui (Shinshu Univ.)♭ A sparse bound for an time integral operator with wave propagator ····· (16:20–17:20)

Functional Analysis (Conference Room IX)

Masatoshi Fujii (Osaka Kyoiku Univ.⋆) Some inequalities on operator geometric mean ····· (16:15–17:15)

Statistics and Probability (Conference Room I)

Xiaoling Dou (Waseda Univ.) Baker's distribution, Bernstein copula and B-spline copulas ..... (15:10–16:10)

Shintaro Hashimoto (Hiroshima Univ.) Bayesian inference based on general posterior distributions and their applications ..... (16:25–17:25)

Topology (Conference Room III)

Shunsuke Tsuji (Kyoto Univ.)♭ A method to compute the Johnson homomorphism on a homology 3-cylinder using a skein algebra ..... (14:15–15:15)

September 20th (Fri)

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

Hidenori Kurokawa (Kanazawa Univ.) The completeness theorem revisited ..... (10:30–11:30)

Algebra (Conference Room V)

Yuya Matsumoto (Tokyo Univ. of Sci.)♭ Derivations on K3 surfaces in positive characteristic ..... (14:15–15:15)

Functional Equations (Conference Room IV)

Yuta Wakasugi (Ehime Univ.) L^p-L^q estimates for the damped wave equation and their application to nonlinear problems ..... (16:30–17:30)

Real Analysis (Conference Room VIII)

Makoto Nakamura (Yamagata Univ.)♭ Partial differential equations in homogeneous and isotropic spaces ..... (16:20–17:20)

Applied Mathematics (Conference Room VII)

Hiroshi Nozaki (Aichi Univ. of Edu.) Linear programming bounds for regular uniform hypergraphs ..... (16:40–17:40)

Open Lectures for Citizens

Date: September 16th (Mon) 14:00–16:30

Venue: Kanazawa Art Hall

Sponsored by: The Mathematical Society of Japan

Supported by: Kanazawa University,
College of Science and Engineering, Kanazawa University,
Ishikawa Prefectural Board of Education,
Kanazawa City Board of Education,
Great People of Kanazawa Memorial Museum

Program: Opening Speech ..... (14:00–14:10)
Tomohide Terasoma (President of MSJ / Hosei Univ.)

Lecture 1: "Complex numbers and geometry of circles"
..... (14:10–15:10)
Toshihiro Nakanishi (Shimane Univ.)

Lecture 2: "Mathematics as a language: A perspective from the elastica theory as an origin of the elliptic functions"
..... (15:30–16:30)
Shigeki Matsutani (Kanazawa Univ.)

Web Page: `https://www.mathsoc.jp/en/meeting/kanazawa19sept/`

Foundation of Mathematics and History of Mathematics

September 19th (Thu) Conference Room II

9:15–11:35

1 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) — Application to the mechanics with the elliptic functions by Legendre · · · 15

2 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) — "Construction of integral table with the elliptic functions" by Legendre · · · 15

3 Ken Saito (Osaka Pref. Univ.*/Yokkaichi Univ.) — Diagrams in Greek manuscripts of Apollonius' *Conics* · · · 15

4 Tsukane Ogawa (Yokkaichi Univ.) — Theory of equations developed by Seki Takakazu · · · 15

5 Toshio Harikae (Osaka Sangyo Univ.) — The approximate calculation by the false position method to extract square root · · · 15

6 Hirotaka Kikyo (Kobe Univ.) — On Hrushovski's pseudoplanes in rational cases · · · 15

7 Koichiro Ikeda (Hosei Univ.) — On superstability of generic structures · · · 15

8 Kota Takeuchi (Univ. of Tsukuba), Kanoko Ueda (TIS) — On isomorphic submodels of nonstandard models of arithmetic · · · 15

9 Akito Tsuboi (Univ. of Tsukuba) — A remark on Ehrenfeucht theories · · · 10

11:35–11:55 Mathematics History Team Meeting

14:15–16:35

10 Masahiro Kumabe (Open Univ. of Japan), Kenshi Miyabe (Meiji Univ.), Yuki Mizusawa (Tokyo Metro. Univ.), Toshio Suzuki (Tokyo Metro. Univ.) — Solovay reduction and continuity · · · 15

11 Kohtaro Tadaki (Chubu Univ.) — A refinement of quantum information theory by algorithmic randomness II · · · 15

12 Masanao Ozawa (Nagoya Univ.) — Improving Takeuti's quantum set theory to satisfy De Morgan's law for bounded quantifications · · · 15

13 Yukinobu Yajima (Kanagawa Univ.), Yasushi Hirata (Kanagawa Univ.) — A characterization of certain products of ordinals and weakly inaccessible cardinals · · · 15

14 Katsuya Eda (Waseda Univ.) — Archipelago groups · · · 15

15 Teruyuki Yorioka (Shizuoka Univ.) — Uniformization of ladder system colorings and Todorcevic's fragments of Martin's Axiom · · · 15

16 Yoshihiro Abe (Kanagawa Univ.) — A condition for an ideal to be a P-point · · · 15

17 Souji Shizuma (Osaka Pref. Univ.) — Infinite Hat Guessing Games and the axiom of choice · · · 15

18 Daisuke Ikegami (Shibaura Inst. of Tech.) — On supercompactness of ω_1 · · · 15

16:45–17:45 Talk Invited by Section on Foundation and History of Mathematics

Diego A. Mejía (Shizuoka Univ.) Cichon's maximum over ZFC alone

September 20th (Fri) Conference Room II

9:00–10:15

19 Saburou Saitoh (Gunma Univ.*/Inst. of Reproducing Kernels) Meanings of zero and infinity; Relations of zero and infinity ····· 15

20 Nobu-Yuki Suzuki (Shizuoka Univ.) Logics constructed in my previous talk are incomplete with respect to Kripke and algebraic frames ····· 15

21 Daishi Yazaki (Shizuoka Univ.) Another restriction of cut in sequent calculi for the modal logics S5 and K4B. ····· 15

22 Tatsuya Shimura (Nihon Univ.) Modal logics around $\mathbf{KD4Z_{14}}$. ····· 15

23 Takahiro Seki (Niigata Univ.) On some restricted weakening rules ····· 15

10:30–11:30 Talk Invited by Section on Foundation and History of Mathematics

Hidenori Kurokawa (Kanazawa Univ.) The completeness theorem revisited

11:35–11:55 Research Section Assembly

14:15–15:30

24 Ken-etsu Fujita (Gunma Univ.) Equational theory and reduction rules of reduction paths ····· 15

25 Ryo Kashima (Tokyo Tech) On the completeness of simple type assignment system for lambda calculus ····· 15

26 Yuya Okawa (Chiba Univ.)
Taishi Kurahashi (Nat. Inst. of Tech., Kisarazu Coll.) Around Guaspari's problem on partially conservative sentences ····· 15

27 Sohei Iwata (Kobe Univ.)
Taishi Kurahashi (Nat. Inst. of Tech., Kisarazu Coll.) Fixed-point properties in predicate modal logics ····· 15

28 Taishi Kurahashi (Nat. Inst. of Tech., Kisarazu Coll.) On the second incompleteness theorem ····· 15

Algebra

September 17th (Tue) Conference Room V

9:15–11:50

1 Keiji Ito (Tohoku Univ.)
Akihiro Munemasa (Tohoku Univ.) Nearly multiplicity-free for imprimitive permutation groups ····· 15

2 Yugen Takegahara (Muroran Inst. of Tech.) — p-adic properties of the number of permutation representations of a finite abelian p-group ····· 15

3 Taro Sakurai (Chiba Univ.) — A criterion for the modular isomorphism problem ····· 10

4 Shigeto Kawata (Nagoya City Univ.) — On almost split sequences and tensor products for group rings ····· 10

5 Satoshi Usui (Tokyo Univ. of Sci.), Tomohiro Itagaki (Tokyo Univ. of Sci.), Katsunori Sanada (Tokyo Univ. of Sci.) — A Batalin–Vilkovisky structure on the complete cohomology ring of a Frobenius algebra ····· 15

6 Mayu Tsukamoto (Yamaguchi Univ.), Takahide Adachi (Osaka Pref. Univ.) — Tilting modules and dominant dimension with respect to injective modules ····· 15

7 Takahide Adachi (Osaka Pref. Univ.) — τ-rigid modules over an algebra with radical square zero ····· 15

8 Toshiya Yurikusa (Nagoya Univ.) — Density of g-vector cones from triangulated surfaces ····· 15

9 Takahiro Honma (Tokyo Univ. of Sci.), TakumaAihara (Tokyo Gakugei Univ.), Aaron Chan (Nagoya Univ.) — Representation-finite gendo-symmetric algebras ····· 15

10 Takuma Aihara (Tokyo Gakugei Univ.) [b], Aaron Chan (Nagoya Univ.), Takahiro Honma (Tokyo Univ. of Sci.) — On the weakly Iwanaga–Gorenstein property of gendo algebras ····· 15

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

Kazuya Kawasetsu (Kyoto Univ.) — Vertex operator algebras and modular differential equations

15:30–17:40

11 Taiki Shibata (Okayama Univ. of Sci.) — Typical representations for Chevalley supergroups of type I ····· 10

12 Ryotaro Kawago (Okayama Univ. of Sci.), Takeshi Ikeda (Okayama Univ. of Sci.) — Multiplicities of points on Schubert varieties in the symplectic flag variety ····· 15

13 Naoki Fujita (Univ. of Tokyo) — Recursive constructions of Nakashima–Zelevinsky polytopes ····· 15

14 Haruhisa Enomoto (Nagoya Univ.) — The Jordan–Hölder property and Grothendieck monoids of exact categories ····· 10

15 Takahiko Furuya (Meikai Univ.), Masashi Yamauchi (Meikai Univ.) — Auslander–Reiten translations and monomorphism categories ····· 10

16 Izuru Mori (Shizuoka Univ.), Kenta Ueyama (Hirosaki Univ.) — Noncommutative graded Knörrer's periodicity theorem ····· 15

17 Ryo Kanda (Osaka Univ.) — Normal extensions of Artin–Schelter regular algebras and flat families of Calabi–Yau central extensions ····· 15

18 Ayako Itaba (Tokyo Univ. of Sci.), Kenta Ueyama (Hirosaki Univ.) — Hochschild cohomology of Beilinson algebras of down-up algebras ····· 15

19 Fumitsuna Maruyama, Yozo Deguchi, Masao Toyoizumi (Toyo Univ.) — Euler–Fermat type theorem for matrices ····· 10

September 18th (Wed) Conference Room V

9:15–12:00

20 Yoshiharu Shibata (Yamaguchi Univ.)
Isao Kikumasa (Yamaguchi Univ.)
Yosuke Kuratomi (Yamaguchi Univ.)
On d-square free modules over a right perfect ring ····· 10

21 Tsunekazu Nishinaka (Univ. of Hyogo)
On Thompson group F and its group ring ····· 10

22 Norihiro Nakashima (Nagoya Inst. of Tech.)
High order freeness for 3-arrangements and Holm's problems ····· 10

23 Kaori Shimada (Meiji Univ.)
On the radius of the category of totally reflexive modules ····· 10

24 Shinya Kumashiro (Chiba Univ.)
The Auslander–Reiten conjecture for non-Gorenstein rings ····· 15

25 Ryotaro Isobe (Chiba Univ.)
Ulrich ideals in hypersurfaces ····· 10

26 Hiroki Matsui (Univ. of Tokyo)
On the second rigidity theorem and Tor-rigidity of modules ····· 10

27 Mitsuhiro Miyazaki (Kyoto Univ. of Edu.)
On the symbolic powers of the canonical ideal of the Ehrhart ring of a chain polytope ····· 10

28 Mitsuhiro Miyazaki (Kyoto Univ. of Edu.)
On the generators of the canonical ideal of the Ehrhart ring of a chain polytope ····· 15

29 Hidefumi Ohsugi (Kwansei Gakuin Univ.)
Akiyoshi Tsuchiya (Univ. of Tokyo)
Enriched Hibi ring ····· 15

30 Takayuki Hibi (Osaka Univ.)
Kyouko Kimura (Shizuoka Univ.)
Kazunori Matsuda (Kitami Inst. of Tech.)
Akiyoshi Tsuchiya (Univ. of Tokyo)
Regularity and a-invariant of Cameron–Walker graphs ····· 15

31 Hiroju Kanno (Osaka Univ.) ♭
Takayuki Hibi (Osaka Univ.)
Kazunori Matsuda (Kitami Inst. of Tech.)
Induced matching numbers of finite graphs and edge ideals ····· 15

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

Futoshi Hayasaka (Okayama Univ.)
Integral closure of modules over a regular local ring

September 19th (Thu) Conference Room V

9:15–11:30

32 Yasutoshi Nomura ♭
A search for quasi-linear congruence via Chinese remainders ····· 10

33 Wataru Takeda (Nagoya Univ.)
Brocard–Ramanujan problem for irreducible polynomials ····· 10

34 Yusuke Tanuma (Keio Univ.)
Algebraic independence of certain series generated by Beatty sequence ····· 10

35 Kurt Fischer (Tokuyama Coll. of Tech.)
Explicit formulas for Dirichlet series of the Liouville and Möbius functions ····· 15

36 Makoto Minamide (Yamaguchi Univ.), Yoshio Tanigawa — On the mean square of the derivatives of Hardy's Z-function ····· 10

37 Shota Inoue (Nagoya Univ.) — On the prime numbers and the distribution of zeros of the Riemann zeta-function ····· 10

38 Kenta Endo (Nagoya Univ.), Shōta Inoue (Nagoya Univ.) — Value-distribution of the integral of the logarithm of the Riemann zeta-function ····· 10

39 Masahiro Mine (Tokyo Tech) — On the value-distribution of Artin L-functions and counting functions for cubic fields ····· 10

40 Ryota Umezawa (Nagoya Univ.) — Evaluation of iterated log-sine integrals by multiple polylogarithms ··· 10

41 Yoshitaka Sasaki (Osaka Univ. of Health and Sport Sci.) — On the coefficients of the asymptotic expansion of the multiple zeta-function at non-positive integers ····· 10

42 Masaki Kato (Kobe Univ.) — On (p, q)-deformations of multiple zeta values ····· 15

11:30–12:00 Research Section Assembly

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

Hiraku Atobe (Hokkaido Univ.) — Jacquet modules and local Langlands correspondence

15:30–17:40

43 Masataka Ono (Kyushu Univ.), Shuji Yamamoto (Keio Univ.) — Series expression of symmetric multiple zeta values ····· 15

44 Henrik Bachmann (Nagoya Univ.), Yoshihiro Takeyama (Univ. of Tsukuba), Koji Tasaka (Aichi Pref. Univ.) — Finite multiple harmonic q-series at roots of unity and finite & symmetric multiple zeta values ····· 15

45 Ryota Okano (Tokyo Univ. of Sci.), Masanari Kida (Tokyo Univ. of Sci.) — On Fourier expansions at arbitrary cusps of theta functions of binary quadratic forms with congruence conditions. ····· 15

46 Yuichi Sakai (Kyushu Univ.), Kiyokazu Nagatomo (Osaka Univ.), Geoffrey Mason (UCSC) — Vertex operator algebras with central charge 8 and 16 ····· 15

47 Yasushi Mizusawa (Nagoya Inst. of Tech.), Kota Yamamoto (Nagoya Inst. of Tech.) — Iterated towers of number fields by a quadratic map defined over the Gaussian rationals ····· 10

48 Yasushi Mizusawa (Nagoya Inst. of Tech.), Kota Yamamoto (Nagoya Inst. of Tech.) — On 2-adic Lie iterated extensions of number fields arising from a Joukowski map ····· 10

49 Ippei Nagamachi (Univ. of Tokyo)$^{\flat}$ — On homotopy exact sequences for normal algebraic stacks ····· 15

50 Shigeru Iitaka (Gakushuin Univ.*) — Super perfect numbers and Mersenne perfect numbers ····· 15

September 20th (Fri) Conference Room V

9:45–12:00

51 Kazunori Nakamoto (Univ. of Yamanashi)
Takeshi Torii (Okayama Univ.)
An application of Hochschild cohomology to the moduli of subalgebras of the full matrix ring II ····· 15

52 Kenta Sato (RIKEN)
Ascending chain condition for F-pure thresholds ····· 15

53 Jun Horiuchi (Nippon Inst. of Tech.)
Kazuma Shimomoto (Nihon Univ.)
Normal hyperplane sections of normal schemes in mixed characteristic ····· 10

54 Yusuke Yoshida (Hiroshima Univ.)
Projective plane curves whose automorphism group is $\mathfrak{A}_6$ ····· 15

55 Kazuki Kurimoto (Kyoto Sangyo Univ.)
Akihiro Higashitani (Osaka Univ.)
Mikiya Masuda (Osaka City Univ.)
Cohomological rigidity problem of toric Fano manifolds ····· 15

56 Daniel Cavey (Univ. Nottingham)
Akihiro Higashitani (Osaka Univ.)
Classification of del Pezzo surfaces and singularity contents of Fano polygons ····· 15

57 Kiwamu Watanabe (Saitama Univ.)
Fano manifolds of coindex three admitting nef tangent bundle ····· 15

58 Ayako Kubota (Waseda Univ.)
On minimality of the invariant Hilbert scheme associated to Popov's $SL(2)$-variety ····· 15

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

Yuya Matsumoto (Tokyo Univ. of Sci.) ♭
Derivations on K3 surfaces in positive characteristic

15:30–16:15

59 Norihiko Minami (Nagoya Inst. of Tech.)
A criterion for higher-uniruledness=lower-rationality, via generalized Bott tower ····· 15

60 Atsushi Kanazawa (Kyoto Univ.)
Stability spaces and Weil–Petersson geometry ····· 15

61 Tomohiro Iwami (Kyushu Inst. of Tech.) ♭
Higgs sheaves for semistable extremal neighborhoods with regards to the associated Chern classes ····· 15

Geometry

September 17th (Tue) Conference Room VI

9:10–11:40

1 Masahiro Morimoto (Osaka City Univ.)
On weakly reflective PF submanifolds in Hilbert spaces ····· 15

2 Makiko Sumi Tanaka (Tokyo Univ. of Sci.)
Hiroyuki Tasaki (Univ. of Tsukuba)
Osami Yasukura (Univ. of Fukui)
Geometry of the exceptional compact symmetric space $G_2/SO(4)$ ···· 15

3 Yoshio Agaoka (Hiroshima Univ.), Takahiro Hashinaga (Kitakyushu Nat. Coll. of Tech.) — Local isometric embeddings of 3-dimensional warped product metrics ····· 15

4 Hiraku Nozawa (Ritsumeikan Univ.), Subaru Nomoto (Ritsumeikan Univ.) — A hierarchy on Bishop type frames of regular curves ····· 15

5 Kazuhiro Okumura (Asahikawa Nat. Coll. of Tech.) — The parallelism of a certain tensor on real hypersurfaces in a nonflat complex space form ····· 10

6 Yosuke Kubota (RIKEN) — Codimension 2 index obstruction to positive scalar curvature metrics ····· 15

7 Masayuki Aino (Nagoya Univ.)♭ — Lichnerowicz–Obata estimate, almost parallel differential form and almost product manifolds ····· 15

8 Tsukasa Takeuchi (Tokyo Univ. of Sci.), Kiyonori Hosokawa (ORCA Management Organization Co., Ltd.) — An approach to integrable systems by constructing concrete examples of symplectic-Haantjes manifolds ····· 10

9 Masayuki Igarashi (Tokyo Univ. of Sci.) — On a one-parameter family of the Hermite–Liouville structures on Hopf surface ····· 10

14:15–16:30

10 Yuya Takeuchi (Osaka Univ.) — Graham–Witten energy and its variation ····· 15

11 Asuka Takatsu (Tokyo Metro. Univ.)♭, Hiroshi Matsuzoe (Nagoya Inst. of Tech.) — Revisiting Čencov's theorem ····· 15

12 Asuka Takatsu (Tokyo Metro. Univ.)♭, Shin-ichi Ohta (Osaka Univ.) — Equality in the logarithmic Sobolev inequality ····· 15

13 Masahiro Kawamata (Hiroshima Univ.), Kazuhiro Shibuya (Hiroshima Univ.) — On a generalization of Monge–Ampère system ····· 15

14 Shinichiro Kobayashi (Tohoku Univ.) — Monge mass transportation problem in Hilbert geometries ····· 15

15 Takumi Shirakawa (Saitama Univ.), Masayoshi Nagase (Saitama Univ.) — A formula for the heat kernel coefficients of the Dirac Laplacians on spin manifolds ····· 15

16 Mitsuhiro Itoh (Univ. of Tsukuba), Hiroyasu Satoh (Nippon Inst. of Tech.) — Volume entropy of harmonic Hadamard manifolds of hypergeometric type ····· 10

17 Akifumi Ochiai (Tokyo Metro. Univ.) — A construction of Lagrangian mean curvature flows by generalized perpendicular symmetries ····· 15

16:45–17:45 Talk Invited by Geometry Section

Makoto Kimura (Ibaraki Univ.) — Gauss map of real hypersurfaces in non-flat complex space forms and twistor space of complex 2-plane Grassmannian

September 18th (Wed) Conference Room VI

10:10–10:20 Presentation Ceremony for the 2019 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2019 MSJ Geometry Prize

Masaki Tsukamoto (Kyushu Univ.) — Mean dimension of dynamical systems and information theory

13:15–14:15 Award Lecture for the 2019 MSJ Geometry Prize

Kei Irie (Univ. of Tokyo) Symplectic capacities and periodic orbits of Hamiltonian systems

September 19th (Thu) Conference Room VI

9:10–11:45

18 Yoichi Maeda (Tokai Univ.) Three-dimensional model of $SL(2,\mathbb{R})$ and visualization of $SL(2,\mathbb{Z})$ as a pattern on the cubic lattice ····· 15

19 Kaoru Ikeda (Keio Univ.)♭ An application of Poisson sigma model for the irreducible decomposition of the unitary representation of Heisenberg groupe ····· 15

20 Kazushi Kobayashi (Chiba Univ.) The bijectivity of mirror functors on tori ····· 15

21 Hiroto Inoue (Kyushu Univ.) Differential equation of the element of an exponential matrix ····· 15

22 Masahiro Kawamata (Hiroshima Univ.), Hiroshi Tamaru (Osaka City Univ.) A classification of almost abelian Lie groups whose moduli spaces of left-invariant Riemmanian metrics are one-dimensional ····· 15

23 Keiichi Maeta (Univ. of Tokyo) A cohomological approach to the existence problem of compact Clifford–Klein forms for some symmetric spaces of solvable type ····· 15

24 Kosuke Ono (Tohoku Univ.), Toshikazu Sunada (Meiji Univ. / Meiji Univ.) Distributions of points in arithmetic discrete sets and applications in number theory ····· 15

25 Tomohiro Fukaya (Tokyo Metro. Univ.) Examples of groups acting on coarsely convex spaces ····· 15

26 Kurando Baba (Tokyo Univ. of Sci.), Osamu Ikawa (Kyoto Inst. Tech.) Symmetric triads with multiplicities and double Satake diagrams ····· 15

14:15–16:15

27 Satoshi Nakamura (Fukuoka Univ.) Deformation of coupled Kähler–Einstein metrics ····· 15

28 Masaya Kawamura (Nat. Inst. of Tech., Kochi Coll.) On the Kähler-likeness on almost Hermitian manifolds ····· 15

29 Shunsuke Saito (RIKEN / Kyoto Univ.), Yasufumi Nitta (Tokyo Univ. of Sci.), Naoto Yotsutani (Kagawa Univ.) Calabi's extremal Kähler metrics versus Mabuchi's Kähler–Einstein metrics ····· 15

30 Ken Sumi (Kyoto Univ.) The Riemann–Roch inequality for tropical abelian surfaces ····· 15

31 Domenico Fiorenza (Univ. of Rome), Kotaro Kawai (Gakushuin Univ.), Hông Vân Lê (CAS), Lorenz Schwachhöfer (TU Dortmund) Poincaré DGA of Hodge type and its applications ····· 15

32 Kotaro Kawai (Gakushuin Univ.) Conformal transformations of the pseudo-Riemannian metric of a homogeneous pair ····· 15

33 Nobuhiro Honda (Tokyo Tech) Twistors, quartics, and del Pezzo fibrations ····· 15

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

Yoshihiko Matsumoto (Osaka Univ.) Geometric analysis on asymptotically hyperbolic and complex hyperbolic spaces

Complex Analysis

September 17th (Tue) Conference Room VIII

9:30–11:50

1 Saburou Saitoh (Gunma Univ.*/Inst. of Reproducing Kernels) — Remarks for the Quan's identity on the analytic conjugate H^2 norm and the Bergman norm; Isoperimetric inequalities for Dirichlet integrals ····· 15

2 Kiyoki Tanaka (Daido Univ.) — Estimate for the weighted m-polyharmonic Bergman kernel ····· 15

3 Masaharu Nishio (Osaka City Univ.), Katsunori Shimomura (Ibaraki Univ.) — Reproducing property for iterated paraboplic operators of fractional order ····· 15

4 Hideaki Izumi (Chiba Inst. of Tech.) — Real-analyticity of dimensioned number solutions to iterative functional equations ····· 15

5 Masakazu Shiba (Hiroshima Univ.*) — Closings of an open Riemann surface —Period matrices of hydrodynamic closings and a new span— ····· 15

6 Koh Katagata (Ichinoseki Nat. Coll. of Tech.) — Transcendental entire functions whose Julia sets contain any infinite collection of quasiconformal copies of quadratic Julia sets ····· 15

7 Toshihiro Nakanishi (Shimane Univ.) — Applications of a coordinate system of the space of twice punctured torus groups ····· 15

8 Yoshihiko Shinomiya (Shizuoka Univ.) — Simple closed goedesics on hyperelliptic translation surfaces ····· 15

14:15–15:30

9 Saburou Saitoh (Gunma Univ.*/Inst. of Reproducing Kernels) — Division by zero calculus in multiply dimensions and open problems ····· 15

10 Tatsuhiro Honda (Senshu Univ.) — Weighted composition operators from the Hardy space to the α-Bloch space ····· 15

11 Hidetaka Hamada (Kyushu Sangyo Univ.), Gabriela Kohr (Babeş-Bolyai Univ.) — α-Bloch mappings on bounded symmetric domains in $\mathbb{C}^n$ ····· 15

12 Hidetaka Hamada (Kyushu Sangyo Univ.), Gabriela Kohr (Babeş-Bolyai Univ.) — Composition operators of α-Bloch spaces on bounded symmetric domains in $\mathbb{C}^n$ ····· 10

13 Hidetaka Hamada (Kyushu Sangyo Univ.) — Bloch-type spaces and extended Cesàro operators in the unit ball of a complex Banach space ····· 15

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

Katsunori Shimomura (Ibaraki Univ.) — Caloric morphism —Transformation preserving solutions of the heat equation—

September 18th (Wed) Conference Room VIII

9:10–11:45

14 Atsushi Hayashimoto (Nagano Nat. Coll. of Tech.), Kanata Hayashimoto (Nagano City High School) — Area and length in Euclidean and non-Euclidean geometry ····· 15

15 Takanori Ayano (Osaka City Univ.), Victor M. Buchstaber (Steklov Inst. of Math.) — Hyperelliptic integrals of genus 2 and two-dimensional sigma function · · · 15

16 Shinichi Tajima (Niigata Univ.*), Katsusuke Nabeshima (Tokushima Univ.) — Torsion differential forms associated with an isolated hypersurface singularity · · · 15

17 Masataka Tomari (Nihon Univ.) — On isolated singularity property of Saito's regular system of weights in high degrees · · · 15

18 Takayuki Koike (Osaka City Univ.), Takato Uehara (Okayama Univ.) — Points of the Period domain which correspond to K3 surfaces constructed by gluing · · · 15

19 Yusaku Tiba (Ochanomizu Univ.) — Cohomology of vector bundles and non-pluriharmonic loci · · · 15

20 Takeo Ohsawa (Nagoya Univ.)♭ — Generalization of theorems of Nishino and Hartogs by the L^2 method · · · 15

21 Akio Kodama (Kanazawa Univ.*)♭, Satoru Shimizu (Tohoku Univ.) — Two theorems on the Fock–Bargmann–Hartogs domains · · · 15

22 Akio Kodama (Kanazawa Univ.*)♭ — On proper holomorphic mappings between two equidimensional FBH-type domains · · · 15

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

Joe Kamimoto (Kyushu Univ.) — Newton polyhedra in several complex variables

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Functional Equations

September 17th (Tue) Conference Room IV

9:00–12:00

1 Ichiro Tsukamoto (Toyo Univ.)♭ — On solutions of $x'' = t^{-2}x^{1+\alpha}$ with $\alpha < 0$ · · · 10

2 Kazuki Ishibashi (Hiroshima Nat. Coll. of Maritime Tech.) — Oscillation problems for half-linear differential equations with periodic coefficients · · · 10

3 Hideaki Matsunaga (Osaka Pref. Univ.), Akitomo Kawano — Stability analysis of solutions of a linear integral system with two delays · · · 10

4 Junya Nishiguchi (Tohoku Univ.) — Some discontinuous functional differential equation and its connection to smoothness of composition operators in L^p-spaces · · · 10

5 Mitsuru Shibayama (Kyoto Univ.) — Variational construction of orbits realizing sequences in the planar Sitnikov problem · · · 10

6 Hiroyuki Usami (Gifu Univ.) — On asymptotic forms of slowly decaying positive solutions of second-order quasilinear ordinary differential equations with critical coefficients · · · 10

7 Tetsutaro Shibata (Hiroshima Univ.) — Asymptotic behavior of oscillatory bifurcation curves of semilinear ordinary differential equations · · · 10

8 Yumiko Takei (Kobe Univ.) — On the expression of Voros coefficients for hypergeometric differential equations associated with 2-dimensional Garnier systems in terms of the topological recursion, and its applications · · · · · 10

9 Kohei Iwaki (Nagoya Univ.) — Topological recursion and the τ-function of Painlevé I equation · · · · · 10

10 Kyohei Itakura (Kobe Univ.), Tadayoshi Adachi (Kyoto Univ.), Ito Kenichi (Univ. of Tokyo), Erik Skibsted (Aarhus Univ.) — Analysis of 1-body Stark operators · · · · · 10

11 Ryu Fujiwara (Meiji Univ.) — Localization of graph Laplacian eigenvectors on scale free networks · · · 10

12 Xiaojing Liu (Ibaraki Univ. / Osaka City Univ.), Hiroshi Ando (Ibaraki Univ.), Toshio Horiuchi (Ibaraki Univ.) — One dimensional weighted Hardy's inequalities and application · · · · · 10

13 Masato Hashizume (Ehime Univ.) — On maximization problem on Trudinger–Moser inequality with compact term · · · · · 10

14 Takeyuki Nagasawa (Saitama Univ.) — The cosine formula for generalized O'Hara energie · · · · · 10

14:15–16:15

15 Albert Rodríguez Mulet (Hokkaido Univ.), Shuichi Jimbo (Hokkaido Univ.) — Asymptotic analysis of mid-frequency vibrations of thin axis-symmetric elastic rods · · · · · 10

16 Yuta Ishii (Tokyo Metro. Univ.) — Stability of multi-peak symmetric stationary solutions for the Schnakenberg model with heterogeneity · · · · · 10

17 Yuta Ishii (Tokyo Metro. Univ.) — Construction and stability of asymmetric spike patterns for the Schnakenberg model with heterogeneity · · · · · 10

18 Ryuji Kajikiya (Saga Univ.), Eunkyung Ko (Keimyung Univ.) — Existence of positive radial solutions for a semipositone elliptic equation · · · · · 10

19 Takanobu Hara (Hokkaido Univ.), Adisak Seesanea (Hokkaido Univ.) — Existence of minimal solutions to nonlinear elliptic equations with subnatural growth terms · · · · · 10

20 Naoki Sioji (Yokohama Nat. Univ.), Satoshi Tanaka (Okayama Univ. of Sci.), Kotaro Watanabe (Nat. Defense Acad. of Japan) — A Korman–Ouyang–Tanaka type identity and uniqueness of positive radial solutions of elliptic equations in annuli · · · · · 10

21 Takashi Suzuki (Osaka Univ.) — Uniform boundedness of the solution to reaction diffusion equation with quadratic growth · · · · · 5

22 Isamu Ohnishi (Hiroshima Univ.) — Microscopically fine structure of the most stable stationary state in Turing patterns (Basic theorem) · · · · · 10

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

Masakazu Onitsuka (Okayama Univ. of Sci.) — Ulam stability for diamond-alpha difference equations

September 18th (Wed) Conference Room IV

9:00–12:00

23 Naoyuki Ichihara (Aoyama Gakuin Univ.)
Emmanuel Chasseigne (Univ. Tours)
Sharp estimates of the generalized principal eigenvalue for superlinear viscous Hamilton–Jacobi equations with inward drift ····· 10

24 Yasuhiro Fujita (Univ. of Toyama)
Nao Hamamuki (Hokkaido Univ.)
Norikazu Yamaguchi (Univ. of Toyama)
A self-affine property of evolutional type appearing in a Hamilton–Jacobi equation ····· 10

25 Hajime Koba (Osaka Univ.)
Local and global solvability for advection-diffusion equation on an evolving surface with a boundary ····· 10

26 Keisuke Takasao (Kyoto Univ./Kyoto Univ.)
Masashi Mizuno (Nihon Univ.)
On existence of a solution for some evolution equation related to grain boundary motion with dynamic lattice misorientations ····· 10

27 Kohei Nakamura (Saitama Univ.)
Asymptotic behavior of higher order curvature flow for closed plane curves ····· 10

28 Yuki Tsukamoto (Tokyo Tech)
Yoshihiro Tonegawa (Tokyo Tech)
A diffused interface with the advection term in a sobolev space ····· 10

29 Takashi Kagaya (Kyushu Univ.)
Yoshihito Kohsaka (Kobe Univ.)
On non-uniqueness and non-convexity of traveling waves for surface diffusion of plane curves ····· 10

30 Masaharu Taniguchi (Okayama Univ.)
Axisymmetric traveling fronts in balanced bistable reaction-diffusion equations ····· 10

31 Masahiko Shimojyou (Okayama Univ. of Sci.)
Amy Poh Ai Ling (Okayama Univ.)
Blow-up of radially symmetric solutions for a semilinear heat equation on hyperbolic space ····· 10

32 Masahiko Shimojyou (Okayama Univ. of Sci.)
Amy Poh Ai Ling (Okayama Univ.)
Total blow-up of a quasilinear heat equation for non-decaying initial data ····· 10

33 Junichi Harada (Akita Univ.)
Type II blowup for the energy critical heat equation in 5D and 6D ····· 6

34 Yukihiro Seki (Osaka City Univ.)
Biernat Paweł (Univ. Bonn)
Transitions of blow-up mechanisms in k-equivariant harmonic map heat flow ····· 10

35 Takasi Senba (Fukuoka Univ.)
Yūki Naito (Ehime Univ.)
Existence of peaking solutions for semilinear heat equations with blow-up profile above the singular steady state ····· 10

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

Takuya Watanabe (Ritsumeikan Univ.)
Semiclassical distribution of resonances above an energy-level crossing

September 19th (Thu) Conference Room IV

9:00–12:00

36 Masamitsu Suzuki (Univ. of Tokyo)
Local existence and nonexistence for reaction-diffusion systems with coupled exponential nonlinearities ····· 10

37 Junyong Eom (Tohoku Univ.)
Kazuhiro Ishige (Univ. of Tokyo)
Large time behavior of ODE type solutions to a nonlinear parabolic system · · · · · 10

38 Nobuhito Miyake (Tohoku Univ.)
Kazuhiro Ishige (Univ. of Tokyo)
Shinya Okabe (Tohoku Univ.)
Blow up of solutions for a fourth order parabolic equation with gradient nonlinearlity · · · · · 10

39 Kensuke Yoshizawa (Tohoku Univ.)
Shinya Okabe (Tohoku Univ.)
Energy structure of solutions to a fourth order semilinear parabolic obstacle problem · · · · · 10

40 Masaaki Mizukami (Tokyo Univ. of Sci.)
Tatsuhiko Ono (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Absence of gradient blow-up in a quasilinear degenerate chemotaxis system with flux limitation · · · · · 10

41 Yuka Chiyoda (Tokyo Univ. of Sci.)
Masaaki Mizukami (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Blow-up in a quasilinear degenerate chemotaxis system with flux limitation · · · · · 10

42 Tetsuya Yamada (Fukui Nat. Coll. of Tech.)
Global existence and blow up of solutions to an attraction-repulsion chemotaxis system in the balance case · · · · · 10

43 Yusuke Sugiyama (Univ. of Shiga Pref.)
Masakazu Yamamoto (Niigata Univ.)
Asymptotic stability of stationary solutions to the drift-diffusion model with the fractional dissipation · · · · · 10

44 Masakazu Yamamoto (Niigata Univ.)
Yuusuke Sugiyama (Univ. of Shiga Pref.)
Sharp estimates for decay of solutions to the quasi-geostrophic equation · · · · · 10

45 Okihiro Sawada (Gifu Univ.)
On the reaction diffusion equations of Keener–Tyson model for Belousov–Zhabotinsky reaction · · · · · 10

46 Koichi Taniguchi (Nagoya Univ.)
Masahiro Ikeda (RIKEN/Keio Univ.)
Dissipation and blow-up for semilinear heat equations in general energy spaces · · · · · 10

47 Jayson Mesitas Cunanan (Saitama Univ.)
Inhomogeneous Strichartz estimates in some critical cases · · · · · 10

48 Haruya Mizutani (Osaka Univ.)
Wave operator on Sobolev space · · · · · 10

14:15–16:15

49 Shobu Shiraki (Saitama Univ.)
Pointwise convergence along paths generated by fractals for the fractional Schrödinger equation · · · · · 10

50 Fumihito Abe (Tokyo Univ. of Sci.)
Keiichi Kato (Tokyo Univ. of Sci.)
H^s wave front set for Schrödinger equations with sub-quadratic potential · · · · · 10

51 Tomoyuki Tanaka (Nagoya Univ./Chuo Univ./RIKEN/Keio Univ.)
Kotaro Tsugawa (Chuo Univ.)
Parabolic smoothing effect for higher order linear Schrödinger type equations on the torus · · · · · 10

52 Masaru Hamano (Saitama Univ.)
Takahisa Inui (Osaka Univ.)
Kuranosuke Nishimura (Tokyo Univ. of Sci.)
Scattering solutions of the quadratic NLS system without mass-resonance condition in $\mathbb{R}^5$ · · · · · 10

53 Kota Uriya (Okayama Univ. of Sci.), Mamoru Okamoto (Shinshu Univ.): Final state problem for the nonlocal nonlinear Schrödinger equation with dissipative nonlinearity ····· 10

54 Shota Kawakami (Saitama Univ.), Shuji Machihara (Saitama Univ.): Blowup solutions for the nonlinear Schrödinger equation with complex coefficient ····· 10

55 Kazuyuki Yagasaki (Kyoto Univ.), Shotaro Yamazoe (Kyoto Univ.): Linear stability of solitary waves in coupled nonlinear Schrödinger equations ····· 10

56 Masayuki Hayashi (Kyoto Univ.): Characterization of 4π-mass condition for the derivative nonlinear Schrödinger equation ····· 10

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

Michiaki Onodera (Tokyo Tech) ♭: Hyperbolic solutions to Bernoulli's free boundary problem

September 20th (Fri) Conference Room IV

9:00–12:00

57 Toshiyuki Suzuki (Kanagawa Univ.): Nonlinear Schrödinger equations with some critical inverse-square potential ····· 10

58 Noriyoshi Fukaya (Tokyo Univ. of Sci.): Uniqueness and nondegeneracy of ground states for nonlinear Schrödinger equations with attractive inverse-power potential ····· 10

59 Hayato Miyazaki (Tsuyama Nat. Coll. of Tech.): Local well-posedness for the higher-order generalized KdV type equation with low-degree of nonlinearity ····· 10

60 Hiroyuki Hirayama (Univ. of Miyazaki), Shinya Kinoshita (Univ. Bielefeld), Mamoru Okamoto (Shinshu Univ.): Well-posedness for KdV type equation with second derivative nonlinearity ····· 10

61 Shinya Kinoshita (Univ. Bielefeld): Well-posedness for the Cauchy problem of the Zakharov–Kuznetsov equation in 2D ····· 10

62 Isao Kato (Kyoto Univ.) ♭: The bilinear estimates for the Zakharov type system ····· 10

63 Makoto Nakamura (Yamagata Univ.): On the Cauchy problem for the semilinear Proca equations in the de Sitter spacetime ····· 10

64 Makoto Nakamura (Yamagata Univ.), Hiroshi Takeda (Fukuoka Inst. of Tech.): Asymptotic profiles of global solutions for the semilinear diffusion equation in the de Sitter spacetime ····· 10

65 Yoshinori Nishii (Osaka Univ.), Hideaki Sunagawa (Osaka Univ.): Remarks on Agemi-type structural condition for systems of semilinear wave equations ····· 10

66 Tadahiro Oh (Univ. of Edinburgh), Mamoru Okamoto (Shinshu Univ.), Tristan Robert (Univ. of Edinburgh): On triviality for the two-dimensional stochastic damped nonlinear wave equation ····· 10

67 Kimitoshi Tsutaya (Hirosaki Univ.) ♭, Yuta Wakasugi (Ehime Univ.): Blow up of solutions of semilinear wave equations with scale-invariant damping relevant to nonlinear waves in FLRW spacetime ····· 10

68 Ikki Fukuda (Hokkaido Univ.): Asymptotic behavior of solutions to the damped wave equation with a nonlinear convection term ····· 10

69 Hironori Michihisa (Hiroshima Univ.): On some Rosenau equation ····· 10

70 Daisuke Kawagoe (Kyoto Univ.): $W^{1,p}$ estimate for the solution to the stationary transport equation ····· 10

14:15–16:15

71 Toshiaki Hishida (Nagoya Univ.) ♭ Decay estimates of gradient of a generalized Oseen evolution operator arising from time-dependent rigid motions in exterior domains ····· 10

72 Kenta Oishi (Nagoya Univ.) On the R-boundedness for the generalized Stokes resolvent problem in an infinite layer with Neumann boundary condition ····· 10

73 Naoki Hamamoto (Osaka City Univ.) Sharp Hardy–Leray inequality for solenoidal fields ····· 10

74 Keiichi Watanabe (Waseda Univ.), Patrick Tolksdorf (UPEC) Navier–Stokes equations in exterior Lipschitz domains ····· 10

75 Shouta Enomoto (Keio Univ. / Meiji Univ.), Kota Ikeda (Meiji Univ.) ♭ Local existence of the linearized problem for Navier–Stokes equation around the dynamics of a spherical bubble ····· 10

76 Noboru Chikami (Osaka Univ.), Takayuki Kobayashi (Osaka Univ.) Global well-posedness and time-decay estimates of the compressible Navier–Stokes–Korteweg system ····· 10

77 Yusuke Ishigaki (Tokyo Tech), Yoshiyuki Kagei (Tokyo Tech), Ayaka Haruki Stability of time-periodic parallel flow of compressible viscoelastic system ····· 10

78 Yuka Teramoto (Tokyo Tech), Chun-Hsiung Hsia (Nat. Tiwan Univ.), Yoshiyuki Kagei (Tokyo Tech), Takaaki Nishida (Kyoto Univ.) Hopf bifurcation for artificial compressible system for doubly diffusive convection ····· 10

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

Yuta Wakasugi (Ehime Univ.) L^p-L^q estimates for the damped wave equation and their application to nonlinear problems

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Real Analysis

September 19th (Thu) Conference Room VIII

10:00–11:55

1 Koji Aoyama (Chiba Univ.) Strong convergence of Halpern's method for quasinonexpansive mappings ····· 15

2 Sachiko Atsushiba (Univ. of Yamanashi) Fixed point property and convergence theorems for iterative sequences ····· 15

3 Shin-ya Matsushita (Akita Pref. Univ.) On regularized convex minimization problem ····· 15

4 Kengo Kasahara (Toho Univ.), Yasunori Kimura (Toho Univ.) Iterative sequences for a finite family of resolvent operators on geodesic spaces ····· 15

5 Jun Kawabe (Shinshu Univ.) Convergence theorems of nonlinear integrals of p-th order integrable functions ····· 15

6 Minglei Shi (Ibaraki Univ.), Eiichi Nakai (Ibaraki Univ.) Sharp maximal function and Orlicz–Morrey spaces ····· 15

7 Ryota Kawasumi, Eiichi Nakai (Ibaraki Univ.) A characterization of pointwise multipliers on weak Morrey spaces ··· 15

14:15–16:05

8 Toru Nogayama (Tokyo Metro. Univ.), Yoshihiro Sawano (Tokyo Metro. Univ.), Naoya Hatano (Chuo Univ.) — A characterization of the vector-valued Morrey spaces in terms of pointwise multiplier space · · · · · 15

9 Ryutaro Arai (Ibaraki Univ.), Eiichi Nakai (Ibaraki Univ.), Gaku Sadasue (Osaka Kyoiku Univ.) — Commutators of fractional integrals on martingale Orlicz Spaces · · · · · 15

10 Yoichi Miyazaki (Nihon Univ.) — Gagliardo–Nirenberg inequality and Muramatu's integral formula · · · · 12

11 Takeshi Iida (Fukushima Nat. Coll. of Tech.) — Orlicz-fractional maximal operators in Morrey and Orlicz–Morrey spaces · · · · · 15

12 Hiroki Saito (Nihon Univ.) — Boundedness of the strong maximal operator with the Hausdorff content · · · · · 15

13 Ryosuke Yamamoto (Shinshu Univ.) — Sparse form bounds for Fourier integral operators · · · · · 15

14 Akihiro Nakamura (Tokai Univ.) — On complete and minimal complex exponential systems which are not bases in $L^2[-\pi, \pi]$ · · · · · 15

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

Youhei Tsutsui (Shinshu Univ.)$^{\flat}$ — A sparse bound for an time integral operator with wave propagator

September 20th (Fri) Conference Room VIII

9:00–11:55

15 Masaaki Mizukami (Tokyo Univ. of Sci.) — How far does small chemotactic interaction perturb the Lotka–Volterra competition dynamics on bounded convex domains? · · · · · 15

16 Shunsuke Kurima (Tokyo Univ. of Sci.) — Employing a time discretization scheme for a simultaneous abstract evolution equation applying to parabolic-hyperbolic phase-field models · · · · · 15

17 Kosuke Kita (Waseda Univ.), Mitsuharu Ôtani (Waseda Univ.) — On the uniform boundedness for global solutions of nonlinear heat equations with nonlinear boundary conditions in bounded domain · · · · 15

18 Takanori Kuroda (Waseda Univ.), Mitsuharu Ôtani (Waseda Univ.) — Periodic problem of the complex Ginzburg–Landau equation with focusing nonlinearity · · · · · 15

19 Keiichiro Kagawa (Waseda Univ.), Mitsuharu Ôtani (Waseda Univ.) — Time periodic problem for the viscous Cahn–Hilliard equation with the homogeneous Dirichlet boundary condition · · · · · 10

20 Ryota Nakayashiki (Chiba Inst. of Tech.) — Kobayashi–Warren–Carter system of singular type with dynamic boundary condition · · · · · 10

21 Makoto Okumura (Osaka Univ.) — The existence and uniqueness for a structure-preserving scheme of the Cahn–Hilliard equation with a dynamic boundary condition · · · · · 15

22 Yutaka Tsuzuki (Hiroshima Shudo Univ.) — Solvability of problems for Vlasov–Poisson equations with angle error in magnetic field in a half-space · · · · · 15

23 Noriaki Yamazaki (Kanagawa Univ.), Nobuyuki Kenmochi (Chiba Univ.*), Ken Shirakawa (Chiba Univ.) — Approximate problems for singular optimal control of nonlinear evolution equations governed by double time-dependent subdifferentials · · · · · 15

24 Shobu Shiraki (Saitama Univ.)
Yosuke Aoki (Saitama Univ.)
Jonathan Bennett (Univ. of Birmingham)
Neal Bez (Saitama Univ.)
Shuji Machihara (Saitama Univ.)
Kosuke Matsuura (Saitama Univ.)
Hypercontractivity via diffusion flow monotonicity ····· 15

25 Kentarou Yoshii
Tomomi Yokota (Tokyo Univ. of Sci.)
On the semilinear abstract evolution equations with countable time delays under local Lipschitz condition ····· 15

14:15–16:05

26 Yoshimasa Sasaki (Niigata Univ.)
Hiroki Ohwa (Niigata Univ.)
Stability of approximate solutions constructed by the wave-front tracking method ····· 15

27 Hiroshi Watanabe (Oita Univ.)
Traveling wave solutions to one-dimensional initial value problems for scalar parabolic-hyperbolic conservation laws ····· 15

28 Kota Kumazaki (Nagasaki Univ.)
Global solvability of a multiscale model describing moisture transport in porous materials ····· 15

29 Risei Kano (Kochi Univ.)
On the plasticity model with non-linear hardening ····· 15

30 Takeshi Fukao (Kyoto Univ. of Edu.)
Pierluigi Colli (Pavia Univ.)
Hao Wu (Fudan Univ.)
On a transmission problem for equation and dynamic boundary condition of Cahn–Hilliard type ····· 15

31 Ken Shirakawa (Chiba Univ.) ♭
Optimal control problem for one-dimensional semi-discrete system of Kobayashi–Warren–Carter type ····· 15

32 Makoto Nakamura (Yamagata Univ.) ♭
On the Cauchy problem for the Navier–Stokes equations in the de Sitter spacetime ····· 10

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

Makoto Nakamura (Yamagata Univ.) ♭
Partial differential equations in homogeneous and isotropic spaces

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Functional Analysis

September 17th (Tue) Conference Room IX

10:00–11:45

1 Hayato Arai (Nagoya Univ.)
Yuuya Yoshida (Nagoya Univ.)
Masahito Hayashi (Nagoya Univ.)
Perfect discrimination of separable states on a bipartite quantum system —From a viewpoint of general probabilistic theories— ····· 15

2 Noboru Chikami (Osaka Univ.)
Gagliardo–Nirenberg type inequalities in Fourier–Herz spaces ····· 15

3 Yoritaka Iwata (Kansai Univ.)
Takahiro Noi (Tokyo Metro. Univ.)
Abstract evolution equations of hyperbolic type in Besov spaces ····· 15

4 Shuji Watanabe (Gunma Univ.)♭ The second-order phase transition in the BCS-Bogoliubov model of superconductivity and its operator-theoretical proof III ····· 15

5 Hisashi Morioka (Ehime Univ.) Generalized eigenfunctions and scattering matrices for one-dimensional two-state quantum walks ····· 15

6 Yohei Tanaka (Flinders Univ.)
Akito Suzuki (Shinshu Univ.) The Witten index for a one-dimensional two-phase quantum walk ···· 15

14:15–16:15

7 Naoya Yoshida (Ritsumeikan Univ.)♭ Bohr–Sommerfeld type quantization condition for the two dimensional Schrödinger operator with strong magnetic field ····· 15

8 Masahiro Kaminaga (Tohoku Gakuin Univ.)
Takuya Mine (Kyoto Inst. Tech.)
Fumihiko Nakano (Gakushuin Univ.) Spectrum of the Schrödinger operator with point interactions of Poisson type ····· 15

9 Kouichi Taira (Univ. of Tokyo) Spectral theory for repulsive Schrödinger operators and an application to limit circle problem ····· 15

10 Hideki Inoue (Nagoya Univ.)
Naohiro Tsuzu (Nagoya Univ.) Schrödinger wave operators on the discrete half-line ····· 15

11 Masaki Kawamoto (Tokyo Univ. of Sci.) Mourre theory for time-periodic magnetic fields ····· 15

12 Noriaki Teranishi (Hokkaido Univ.)
Itaru Sasaki (Shinshu Univ.)
Akito Suzuki (Shinshu Univ.)
Daiju Funakawa (Hokkai-Gakuen Univ.)
Yasumichi Matsuzawa (Shinshu Univ.) On the deficiency indices and the spectrum of time operators ····· 15

13 Fumio Hiroshima (Kyushu Univ.) Pointwise bounds on eigenvectors in quantum field theory ····· 15

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

Yoshihisa Miyanishi (Osaka Univ.)♭ The spectral theory of the Neumann–Poincaré operator and its applications

September 18th (Wed) Conference Room IX

9:00–12:00

14 Cid Reyes-Bustos (Tokyo Tech)
Kazufumi Kimoto (Univ. of Ryukyus)
Masato Wakayama (Kyushu Univ.) Spectral determinant and G-function of the asymmetric quantum Rabi model ····· 10

15 Cid Reyes-Bustos (Tokyo Tech)
Masato Wakayama (Kyushu Univ.) Heat kernel and spectral zeta function of the quantum Rabi model ····· 15

16 Kazufumi Kimoto (Univ. of Ryukyus)
Masato Wakayama (Kyushu Univ.) Modularity appearing in the non-commutative harmonic oscillator ··· 15

17 Atsumu Sasaki (Tokai Univ.) Visible actions on complex Heisenberg homogeneous spaces ····· 15

18 Masaki Hidaka
Minoru Itoh (Kagoshima Univ.) The Schur polynomials in all nth primitive roots of unity ····· 15

19 Ryo Tabata (Ariake Nat. Coll. of Tech.) Symmetric functions and immanant identities ····· 15

20 Ryosuke Nakahama (Univ. of Tokyo) — Weighted Bergman inner products on subspaces of bounded symmetric domains ····· 15

21 Yoshiki Oshima (Osaka Univ.)♭ — On the asymptotic support of Plancherel measures for homogeneous spaces ····· 15

22 Nobukazu Shimeno (Kwansei Gakuin Univ.), Hiroshi Oda (Takushoku Univ.) — Spherical transform for minuscule K-types (case of 1st order invariant differential operator) ····· 15

23 Kyo Nishiyama (Aoyama Gakuin Univ.), Lucas Fresse (Univ. Lorraine) — A generalization of the Steinberg theory for type A ····· 15

24 Kyo Nishiyama (Aoyama Gakuin Univ.), Lucas Fresse (Univ. Lorraine) — Exotic Robinson–Schensted correspondence for a symmetric pair of type A ····· 15

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

Yuichiro Tanaka (Univ. of Tokyo) — Visible actions on complex spherical varieties and some applications

September 19th (Thu) Conference Room IX

9:00–11:45

25 Kengo Matsumoto (Joetsu Univ. of Edu.) — Subshifts, λ-graph bisystems and their C^*-algebras ····· 15

26 Taro Sogabe (Kyoto Univ.)♭ — The homotopy groups of the automorphism groups of Cuntz–Toeplitz algebras ····· 10

27 Hiroyuki Osaka (Ritsumeikan Univ.), Hyun Ho Lee (Ulsan Univ.) — On dualities of actions and inclusions ····· 15

28 Hiroshi Ando (Chiba Univ.), Yasumichi Matsuzawa (Shinshu Univ.) — Polish groups of unitaries ····· 15

29 Michiya Mori (Univ. of Tokyo) — On 2-local isometries on normed spaces and C*-algebras ····· 15

30 Yusuke Isono (Kyoto Univ.) — Unitary conjugacy for type III subfactors and W*-superrigidity ····· 15

31 Norio Nawata (Osaka Kyoiku Univ.) — Rohlin actions of finite groups on the Razak–Jacelon algebra ····· 15

32 Toshihiko Masuda (Kyushu Univ.) — On the relative bicentralizer flows and the relative flow of weights of inclusions of factors of type III_1 ····· 15

33 Tsuyoshi Kajiwara (Okayama Univ.), Watatani Yasuo (Kyushu Univ.⋆) — Dimension groups of the C*-algebra associated with self-similar maps with branch points ····· 15

12:15–12:35 Presentation Ceremony for the 2019 MSJ Analysis Prize

14:15–16:00

34 Akiko Yazawa (Shinshu Univ.), Takahiro Nagaoka (Kyoto Univ.) — The strong Lefschetz property for simple graphic matroids ····· 15

35 Masatoshi Ito (Maebashi Inst. of Tech.) — A new family of weighted operator means including the weighted Heron, logarithmic and Heinz means ····· 15

36 Shigeru Furuichi (Nihon Univ.), Venus Kaleibary (Tabriz Univ.) — On reverses of operator Aczél inequality ····· 15

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

Statistics and Probability

September 17th (Tue) Conference Room I

9:30–11:50

14:15–15:10

9 Yuri Imamura (Kanazawa Univ.) Carr–Nadtochiy's weak reflection principle for Markov chains on $\mathbf{Z}^d$ 15

10 Jiro Akahori (Ritsumeikan Univ.), Andrea Collevecchio (Monash Univ.), Masato Takei (Yokohama Nat. Univ.) Phase transitions for edge-reinforced random walks on the half-line ... 15

11 Kei Noba (Kyoto Univ.), José-Luis Pérez (CIMAT), Xiang Yu (PolyU) On the bail-out dividend problem for spectrally negative Markov additive models 15

15:25–16:25 Talk Invited by Statistics and Probability Section

Kenkichi Tsunoda (Osaka Univ.) Scaling limits for exclusion processes

16:40–17:40 Talk Invited by Statistics and Probability Section

David Croydon (Kyoto Univ.) Scaling limits of random walks on random graphs in critical regimes

September 18th (Wed) Conference Room I

9:10–11:30

12 Toshiyuki Katsuda (Kwansei Gakuin Univ.) Diffusion approximations for many-server queues with abandonment under the general scaling of abandonment distribution 15

13 Kazuhiro Yoshikawa (Hirosaki Univ.) Modified log-concavity for discrete distributions 15

14 Haruyoshi Tanaka (Wakayama Med. Univ.) Some properties of Perron complements of Ruelle operators 15

15 Shigeyoshi Ogawa (Ritsumeikan Univ.) Numerical evaluation of the stochastic integral by an interpolation scheme 10

16 Yuki Chino (NCTS) Asymptotic behaviour of random walk in cooling random environment 15

17 Hiroshi Takahashi (Tokyo Gakugei Univ.), Yozo Tamura (Keio Univ.) Brox's diffusion processes in disconnected self-similar fractal sets in $\mathbb{R}$ 15

18 Kouhei Matsuura (Kyoto Univ.) Compactness of semigroups of explosive symmetric Markov processes 15

19 Masaki Wada (Fukushima Univ.) Asymptotic behavior of spectral functions 15

20 Yuichi Shiozawa (Osaka Univ.), Yasuhito Nshimori (Nat. Inst. of Tech., Anan Coll.) Limiting distributions for the maximal displacement of branching Brownian motions 15

11:30–12:00 Research Section Assembly

13:10–14:15

21 Takaaki Toyoshima (Tokyo Tech), Yumiharu Nakano (Tokyo Tech) Heath–Jarrow–Morton–Musiela equation with boundary condition driven by Lévy Process 15

22 Yushi Hamaguchi (Kyoto Univ.) Flow of forward-backward stochastic differential equations 15

23 Takuji Arai (Keio Univ.)
Ryoichi Suzuki (Keio Univ.)
A Clark–Ocone type formula via Itô calculus and its application to finance 15

24 Masayuki Kageyama (Nagoya City Univ. / Tsinghua Univ.)
Bayesian Markov decision processes 15

September 19th (Thu) Conference Room I

9:00–12:00

25 Yuichi Goto (Waseda Univ.)
Marc Hallin (Univ. libre de Bruxelles)
Masanobu Taniguchi (Waseda Univ.)
Kolmogorov–Smirnov tests for Laplace spectral density kernels 15

26 Yujie Xue (Waseda Univ.)
Modified LASSO estimators for high-dimensional linear quantile regression models with long-memory disturbances 10

27 Akitoshi Kimura (Waseda Univ.)
The asymptotic properties of the correlation estimator between latent processes 15

28 Shogo H Nakakita (Osaka Univ.)
Yusuke Kaino (Osaka Univ.)
Masayuki Uchida (Osaka Univ.)
Quasi-likelihood analysis for noisily observed diffusion processes 15

29 Kou Fujimori (Waseda Univ.)
Sota Sakamoto (Waseda Univ.)
Yasutaka Shimizu (Waseda Univ.)
Generalized maximum composite likelihood estimator for determinantal point processes 15

30 Koji Tsukuda (Univ. of Tokyo)
Error bounds for the normal approximation to the length of a Ewens partition 15

31 Yoshihide Kakizawa (Hokkaido Univ.)
Recursive asymmetric kernel density estimators 15

32 Yoshihiko Maesono (Chuo Univ.)
Masanori Shimizu (Sumitomo Mitsui Banking Corp.)
Kernel type estimation of hazard function with covariates 10

33 Tomonari Sei (Univ. of Tokyo)
Existence and nonuniqueness of exponential-type distributions corresponding to copulas 15

34 Eiichiro Funo (Kanto Gakuin Univ.)
Decomposition of the Kullback–Leibler information based on statistical mathematics 10

35 Ayaka Yagi (Tokyo Univ. of Sci.)
Takashi Seo (Tokyo Univ. of Sci.)
Yasunori Fujikoshi (Hiroshima Univ.*)
AIC for selecting degree in growth curve model with three-step monotone missing data pattern 15

36 Hirofumi Wakaki (Hiroshima Univ.)
Laplace expansion of the distribution funciton of Bartlett–Nanda–Pillai test and its error bound 15

14:15–14:55

37 Aki Ishii (Tokyo Univ. of Sci.)
Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
High-dimensional two-sample test procedures under the uni strongly spiked eigenvalue model 15

38 Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
Geometric consistency for high-dimensional mixture data 15

15:10–16:10 Talk Invited by Statistics and Probability Section

Xiaoling Dou (Waseda Univ.) Baker's distribution, Bernstein copula and B-spline copulas

16:25–17:25 Talk Invited by Statistics and Probability Section

Shintaro Hashimoto (Hiroshima Univ.) Bayesian inference based on general posterior distributions and their applications

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Applied Mathematics

September 17th (Tue) Conference Room VII

9:50–12:00

1 Tatsuya Tsurii (Osaka Univ. of Human Sci.), Naoharu Ito (Nara Univ. of Edu.), Toyoki Matsuyama (Nara Univ. of Edu.) Periodicity of Grover walks on complete graphs with n vertices and with self-loop at each vertex ····· 10

2 Itsuki Watanabe (Waseda Univ.) Difference of the deterministic and stochastic model for data-diffusion ····· 15

3 Aoi Honda (Kyushu Inst. of Tech.), Tsuyoshi Okita (Kyushu Inst. of Tech.) Parameter estimation using backpropagation for Möbius type inclusion-exclusion integral mathematical model ····· 15

4 Noboru Nomura (Kochi Univ.) Reducing truncation error in the evaluation of orthant probability of elliptical distributions ····· 15

5 Yasuyoshi Tsutsumi (Oshima Nat. Coll. of Maritime Tech.), Kazuaki Nakane (Osaka Univ.) On acquisition of 3-dimensional information from the projection images ····· 15

6 Hiroshi Takeuchi (Chubu Univ.) Persistence analysis of sampled maps and 2-dimensional persistent homology ····· 15

7 Masaji Watanabe (Okayama Univ.*), Fusako Kawai (Okayama Univ.*), Shuji Jimbo (Okayama Univ.) Computational study on biodegradability of xenobiotic polymer ····· 15

8 Patrick van Meurs (Kanazawa Univ.) Discrete-to-continuum limits of particles with an annihilation rule ···· 15

14:15–16:40

9 Fuminori Sakaguchi (Univ. of Fukui) A method for removeing extra solutions in an integer-type algorithm for solving higher-order linear ODEs with general algebraic coefficient functions ····· 15

10 Hiroki Ishizaka (Ehime Univ.), Takuya Tsuchiya (Ehime Univ.) Error analysis of Crouzeix–Raviart finite element method without the shape regularity condition ····· 15

11 Yuki Chiba (Univ. of Tokyo) Discontinuous Galerkin methods for a generalized Robin boundary condition ····· 15

12 Toru Nakanishi (Univ. of Tokyo)
Norikazu Saito (Univ. of Tokyo)
New finite element schemes of mass-lumping type for computing spherically symmetric solutions of N-dimensional semilinear heat equations 15

13 Xuefeng Liu (Niigata Univ.)
Pointwise error estimation for finite element solution to boundary value problems 15

14 Hajime Koba (Osaka Univ.)
Kazuki Sato (Osaka Univ.)
Truncation error analysis of approximate operators for a moving particle semi-implicit method 15

15 Takehiko Kinoshita (Kyushu Univ.)
Yoshitaka Watanabe (Kyushu Univ.)
Nobito Yamamoto (Univ. of Electro-Comm.)
Mitsuhiro T. Nakao (Waseda Univ.)
On the optimal constants for second order error estimates of orthogonal polynomial approximation for H_0^1 functions 15

16 Koya Sakakibara (Kyoto Univ.)
Mathematical analysis of the method of fundamental solutions applied to Helmholtz-type equations 15

17 Tomoya Kemmochi (Nagoya Univ.)
SAV approach for Hamiltonian systems 15

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

Ken'ichiro Tanaka (Univ. of Tokyo)
Estimate of the best approximation of analytic functions and construction of approximation formulas for them by mathematical optimization

September 18th (Wed) Conference Room VII

9:15–11:45

18 George Miyake (Ube Nat. Coll. of Tech.)
Yuji Katsuta (Ube Nat. Coll. of Tech.)
Integration of three analytic methods, namely, analysis of periodic solutions in non-autonomous system, equilibrium points in autonomous system, and periodic solutions in autonomous system 10

19 Yukihiko Nakata (Shimane Univ.)
Periodic solutions of distributed delay differential equations 15

20 Tetsuya Ishiwata (Shibaura Inst. of Tech.)
Emiko Ishiwata (Tokyo Univ. of Sci.)
Yukihiko Nakata (Shimane Univ.)
Blow-up of solutions to distributed delay differential equations 15

22 Makoto Nakamura (Yamagata Univ.)
On the Cauchy problem for a semilinear ordinary differential equation in homogeneous and isotropic spaces 10

23 Makoto Nakamura (Yamagata Univ.)
On global solutions for the semilinear complex Ginzburg–Landau type equation in homogeneous and isotropic spaces 10

24 Kei Nishi (Kyoto Sangyo Univ.)
Yasumasa Nishiura (Tohoku Univ.)
Takashi Teramoto (Asahikawa Med. Univ.)
The dynamics of a 2-pulse solution arising in a bistable three-component reaction-diffusion system. 15

25 Harunori Monobe (Okayama Univ.)
Tetsuya Ishiwata (Shibaura Inst. of Tech.)
Behavior of solutions to an interface equation with exponential nonlinearity 10

26 Isamu Ohnishi (Hiroshima Univ.)
The application to heterocist cell differenciation of a terrestrial cyanobacteria of Nostochineae of microscopically fine structure theorem of the most stable stationary state in Turing patterns 15

27 Kota Ikeda (Meiji Univ.)
Delphine Salort (Sorbonne Univ.)
Pierre Roux
(Sorbonne Univ./Univ. Paris-Sud)
A periodic motion of a spatially nonconstant solution in the Fokker–Planck equation for the LIF model 15

13:10–14:10 Talk Invited by Applied Mathematics Section

Hiroshi Matsuzawa
(Numazu Nat. Coll. of Tech.)
Spreading profile of solutions for a free boundary problem of a reaction diffusion equation with a multi-stable nonlinearity

September 19th (Thu) Conference Room VII

9:15–11:55

28 Sho Fujimura (Fukuoka Univ.)
Shuji SHIRAISHI (Fukuoka Univ.)
On a new method of finding an Euler tour in a graph with an even number of edges 10

29 Masato Kobayashi (Kanagawa Univ.)
When does a strict inequality of Kazhdan–Lusztig polynomials hold? 15

30 Masato Kobayashi (Kanagawa Univ.)
Weighted counting of inversions on alternating sign matrices 15

31 Hiromichi Ohno (Shinshu Univ.)
Parameterization of translation-invariant two-dimensional two-state quantum walks 15

32 Yusuke Ide (Kanazawa Inst. of Tech.)
Analysis of continuous time quantum walk search by using a graph partition and spectral decomposition 15

33 Sho Kubota (Tohoku Univ.)
Etsuo Segawa (Yokohama Nat. Univ.)
Tetsuji Taniguchi
(Hiroshima Inst. of Tech.)
Yusuke Yoshie
(Sendai Nat. Coll. of Tech.)
A quantum walk on edge signed graphs 15

34 Sho Kubota (Tohoku Univ.)
Etsuo Segawa (Yokohama Nat. Univ.)
Tetsuji Taniguchi
(Hiroshima Inst. of Tech.)
Quantum walks defined by digraphs and generalized Hermitian adjacency matrices 15

35 Ryota Hanaoka (Yokohama Nat. Univ.)
Takashi Komatsu (Kanagawa Univ.)
Norio Konno (Yokohama Nat. Univ.)
Stationary measures for quantum walks determined by singular continuous measures 10

36 Takashi Komatsu (Kanagawa Univ.)
Takako Endo (Yokohama Nat. Univ.)
Norio Konno (Yokohama Nat. Univ.)
Distributions of eigenvalues for space-inhomogeneous quantum walks 10

37 Kei Saito (Yokohama Nat. Univ.)
Akito Suzuki (Shinshu Univ.)
Narimatsu Akihiro
(Yokohama Nat. Univ.)
Fuda Toru (Kokushikan Univ.)
The birth eigenspace and long time behavior of the quantum walk on cycles 10

38 Akihiro Narimatsu
(Yokohama Nat. Univ.)
Kei Saito (Yokohama Nat. Univ.)
Akito Suzuki (Shinshu Univ.)
Toru Fuda (Kokushikan Univ.)
The spectrum of the one-defected quantum walk on the multi-dimensional lattice 15

14:15–17:45 Special Session "Games and Mathematics"

Naoki Matsumoto (Keio Univ.) Combinatorial games on graphs 45

Ryuhei Uehara (JAIST) Games, puzzles, and complexity 60

Hiro Ito (Univ. of Electro-Comm.) Generalized janken —Useless signs, measure of amusement, ties between different signs, etc.— 60

September 20th (Fri) Conference Room VII

9:15–11:55

39 Hirotaka Ebisui (Geomathes Res. Center) Calcuration of TTTTTTwin and some data on prime 15

40 Ginji Hamano (Tokyo Denki Univ.) Existence of a regular unimodular triangulation of the edge polytopes of finite graphs —Improvement of the criteria— 15

41 Hiroyuki Yamagishi (Tokyo Metro. Coll. of Ind. Tech.), Hiroto Sekido (Kyoto Univ.), Yoshinori Kametaka (Osaka Univ.*) The best constant of discrete Sobolev inequality corresponding to Hamilton path on the regular polyhedra 15

42 Kohei Tanaka (Shinshu Univ.) Topological and combinatorial approach to symmetric motion planning 15

43 Shohei Satake (Kobe Univ.) On ranking pseudo-random tournaments 15

44 Shuhei Tsujie (Hiroshima Kokusai Gakuin Univ.), Norihiro Nakashima (Nagoya Inst. of Tech.) Enumeration of flats of the extended Catalan and Shi arrangements 10

45 Akiko Yazawa (Shinshu Univ.) The Hessian of the generating function for the forests of the complete bipartite graph 15

46 Iwao Sato (Oyama Nat. Coll. of Tech.), Norio Konno (Yokohama Nat. Univ.), Hideo Mitsuhashi (Hosei Univ.), Hideaki Morita (Muroran Inst. of Tech.) A new weighted Ihara zeta function of a graph 15

47 Daiju Funakawa (Hokkai-Gakuen Univ.), Keisuke Asahara (Hokkaido Univ.), Yohei Tanaka (Flinders Univ.), Akito Suzuki (Shinshu Univ.) The spectrum of the non-unitary quamtum walk, Part 1 —Mochizuki Kim Obuse model— 15

48 Keisuke Asahara (Hokkaido Univ.), Daiju Funakawa (Hokkai-Gakuen Univ.), Etsuo Segawa (Yokohama Nat. Univ.), Akito Suzuki (Shinshu Univ.), Noriaki Teranishi (Hokkaido Univ.) The spectrum of the non-unitary quantum walk, Part2 —Application for the Ihara zeta function— 15

14:15–16:25

49 Shinya Fujita (Yokohama City Univ.), Boram Park (Ajou Univ.), Tadashi Sakuma (Yamagata Univ.) Stable networks and connected safe set problem 15

50 Kiyoshi Yoshimoto (Nihon Univ.) — Structures of edge-colored complete bipartite graphs and the applications ····· 15

51 Akira Saito (Nihon Univ.) — Chorded cycles in dense graphs ····· 15

52 Yumiko Ohno (Yokohama Nat. Univ.), Naoki Matsumoto (Keio Univ.) — Locally connected graphs with chromatic and achromatic numbers both 3 ····· 15

53 Kengo Enami (Yokohama Nat. Univ.), Yumiko Ohno (Yokohama Nat. Univ.) — Ranges of facial achromatic number of triangulations on closed surfaces ····· 15

54 Yusuke Suzuki (Niigata Univ.), Naoki Matsumoto (Keio Univ.) — Non-1-planarity of lexicographic products of graphs ····· 15

55 Hidefumi Ohsugi (Kwansei Gakuin Univ.), Akiyoshi Tsuchiya (Univ. of Tokyo) — Two enriched poset polytopes ····· 15

56 Masashi Shinohara (Shiga Univ.), Hiroshi Nozaki (Aichi Univ. of Edu.) — Maximal 2-distance sets containing a regular simplex ····· 15

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

Hiroshi Nozaki (Aichi Univ. of Edu.) — Linear programming bounds for regular uniform hypergraphs

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Topology

September 17th (Tue) Conference Room Ⅲ

9:30–12:00

1 Haruko Miyazawa (Tsuda Coll.), Kodai Wada (Osaka Univ.), Akira Yasuhara (Waseda Univ.) — Classification of string links up to $2n$-moves and link-homotopy ····· 10

2 Shin Satoh (Kobe Univ.), Takuji Nakamura (Osaka Electro-Comm. Univ.), Yasutaka Nakanishi (Kobe Univ.) — Shell moves for 2-component virtual links ····· 10

3 Atsuhiko Mizusawa (Waseda Univ.), Yuka Kotorii (RIKEN / Osaka Univ.) — Link-homotopy classes of 4-component links and claspers ····· 15

4 Jun Murakami (Waseda Univ.) — Quantized SL(2) representations of knot groups ····· 15

5 Ippei Ishii, Takuji Nakamura (Osaka Electro-Comm. Univ.), Toshio Saito (Joetsu Univ. of Edu.) — Combed 3-manifolds as viewed from virtual knot diagrams ····· 10

6 Yoshiyuki Ohyama (Tokyo Woman's Christian Univ.), Migiwa Sakurai (Shibaura Inst. of Tech.) — Virtualization and n-writhes for virtual knots ····· 10

7 Taizo Kanenobu (Osaka City Univ.), Hideo Takioka (Kobe Univ.) — 4-move distance of knots ····· 10

8 Masaki Taniguchi (Univ. of Tokyo), Nozaki Yuta (Meiji Univ.), Kouki Sato (Univ. of Tokyo) — The homology cobordism group of homology 3-spheres and Chern–Simons functional ····· 15

9 Kouki Sato (Univ. of Tokyo), Yuta Nozaki (Meiji Univ.), Masaki Taniguchi (Univ. of Tokyo) — Simply connected definite cobordisms and the homology cobordism group ····· 15

10 Yuta Nozaki (Meiji Univ.), Kouki Sato (Univ. of Tokyo), Masaki Taniguchi (Univ. of Tokyo) — Computation of a homology cobordism invariant of a hyperbolic manifold ····· 10

11 Teruaki Kitano (Soka Univ.), Yuta Nozaki (Meiji Univ.) — Finiteness of the image of the Reidemeister torsion of a splice ····· 10

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

Tamás Kálmán (Tokyo Tech)♭ — The Homfly polynomial, Floer homology, and combinatorics

15:30–17:10

12 Tomoyuki Yasuda (Nara Nat. Coll. of Tech.) — Ribbon 2-knots of ribbon crossing number four ····· 10

13 Inasa Nakamura (Kanazawa Univ.) — Branched covering surfaces with degree three have the simplifying numbers less than three ····· 10

14 Motoo Tange (Univ. of Tsukuba), Youlin Li (Shanghai Jiao Tong Univ.) — Smoothly non-isotopic Lagrangian disk fillings of Legendrian knots ··· 15

15 Ken'ichi Yoshida (Saitama Univ.) — An example of degeneration of 3-dimensional hyperbolic cone structures with decreasing cone angles ····· 15

16 Yusuke Inagaki (Osaka Univ.) — A slice of $\mathrm{PSL}_n\mathbb{R}$-Hitchin components ····· 15

17 Tsuyoshi Kato (Kyoto Univ.), Hokuto Konno (RIKEN), Nobuhiro Nakamura (Osaka Med. Coll.) — Rigidity of the mod 2 families Seiberg–Witten invariants ····· 15

18 David Baraglia (Univ. of Adelaide), Hokuto Konno (RIKEN) — The diffeomorphism and homeomorphism groups of $K3$ ····· 15

September 18th (Wed) Conference Room VI

10:10–10:20 Presentation Ceremony for the 2019 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2019 MSJ Geometry Prize

Masaki Tsukamoto (Kyushu Univ.) — Mean dimension of dynamical systems and information theory

13:15–14:15 Award Lecture for the 2019 MSJ Geometry Prize

Kei Irie (Univ. of Tokyo) — Symplectic capacities and periodic orbits of Hamiltonian systems

September 19th (Thu) Conference Room III

9:30–12:00

19 Katsuya Eda (Waseda Univ.) Making spaces wild ····· 15

20 Hayato Imamura (Waseda Univ.) Markov-like set-valued functions on finite graphs and their inverse limits ····· 15

21 Katsuhisa Koshino (Kanagawa Univ.) Topological manifolds modeled on absorbing sets in Hilbert spaces and general position properties ····· 15

22 Masaki Tsukamoto (Kyushu Univ.) Mean dimension of full shifts ····· 15

23 Takahiro Matsuyuki (Tokyo Tech) Space of Chen's isomorphisms as a classifying space ····· 15

24 Katsuhiko Kuribayashi (Shinshu Univ.) On the de Rham theorem and simplicial cochain algebras for diffeological spaces ····· 15

25 Syunji Moriya (Osaka Pref. Univ.) On cohomology of space of knots in manifold ····· 15

26 Takahito Naito (Nippon Inst. of Tech.) A generating set of the rational loop homology algebra of $\mathbb{C}P^2\#\mathbb{C}P^2$ ····· 10

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

Shunsuke Tsuji (Kyoto Univ.)[♭] A method to compute the Johnson homomorphism on a homology 3-cylinder using a skein algebra

15:30–17:10

27 Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.)
Genki Omori (Tokyo Univ. of Sci.)
An infinite presentation for the twist subgroup of the mapping class group of a non-orientable surface ····· 15

28 Takuya Sakasai (Univ. of Tokyo)
Masaaki Suzuki (Meiji Univ.)
Shigeyuki Morita (Univ. of Tokyo[⋆]/Tokyo Tech[⋆])
Two filtrations of the Torelli group ····· 10

29 Norihisa Takahashi (Ritsumeikan Univ.)
Hiraku Nozawa (Ritsumeikan Univ.)
On presentaions of hyperelliptic periodic diffeomorphisms by Dehn twists ····· 15

30 Norikazu Hashiguchi (Nihon Univ.)
Hiroyuki Minakawa (Yamagata Univ.)
Construction of genus one Birkhoff sections for the geodesic flows of hyperbolic spheres with singularities ····· 10

31 Shuhei Maruyama (Nagoya Univ.) The central extension relating to flux homomorphism and the Euler class of flat $\mathrm{Diff}_+(S^1)$-bundle ····· 15

32 Naoki Kitazawa (Kyushu Univ.) Explicit construction of a smooth function on a 3-dimensional closed and orientable manifold inducing a given graph as its Reeb graph ···· 10

33 Shunsuke Ichiki (Kyushu Univ.)
Naoki Hamada (Fujitsu Laboratories Ltd./RIKEN AIP-FUJITSU Collaboration Center)
On strongly convex multi-objective optimization problems of class C^1 ····· 15

Infinite Analysis

September 17th (Tue) Conference Room II

14:15–16:00

1 Ayumu Hoshino (Hiroshima Inst. of Tech.)
Jun'ichi Shiraishi (Univ. of Tokyo)
Conjecture concerning B_n q-Toda eigenfunctions ····· 15

2 Yusuke Ohkubo (Univ. of Tokyo)
Jun'ichi Shiraishi (Univ. of Tokyo)
Masayuki Fukuda (Univ. of Tokyo)
Matrix element formula for 2N-valent intertwining operators of Ding–Iohara–Miki algebra ····· 15

3 Masayuki Fukuda (Univ. of Tokyo)
Yusuke Ohkubo (Univ. of Tokyo)
Jun'ichi Shiraishi (Univ. of Tokyo)
Realization of Koornwinder operator on Fock space ····· 15

4 Masaru Sugawara (Tohoku Univ.)
Universal R-matrix for the affine quantum group of type $A_2^{(1)}$ and wall-crossing formula ····· 15

5 Yousuke Ohyama (Tokushima Univ.)
q-Stokes problems on basic hypergeometric equations ····· 15

6 Naoya Hatano (Chuo Univ.)
Ryuya Matsunawa (Chuo Univ.)
Tomoki Sato (Chuo Univ.)
Kouichi Takemura (Ochanomizu Univ.)
Variants of q-hypergeometric equation ····· 15

16:20–17:20 Talk Invited by Infinite Analysis Special Session

Ryo Fujita (Kyoto Univ.)
Quantum affine Schur–Weyl duality associated with a Dynkin quiver

September 18th (Wed) Conference Room II

10:00–11:30

7 Ryo Okawa (Waseda Univ.)
(-2) blow-up formula ····· 15

8 Yasuaki Gyoda (Nagoya Univ.)
Toshiya Yurikusa (Nagoya Univ.)
Uniqueness of clusters by F-matrices in cluster algebras of triangulated surface type ····· 15

9 Soichi Okada (Nagoya Univ.)
Birational rowmotion and Coxeter-motion on minuscule posets ····· 15

10 Hiroshi Naruse (Univ. of Yamanashi)
Dual factorial Schur P-functions are solutions of BKP hierarchy ····· 15

11 Genki Shibukawa (Kobe Univ.)
Multivariate Bernoulli polynomials ····· 15

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

Teruhisa Tsuda (Hitotsubashi Univ.)
Birational Weyl group actions via mutation combinatorics in cluster algebras

Information for Speakers

The Organizing Committee apologizes that it had to cut the duration of contributed talks because of technical reasons. Since the schedule is very tight, we ask the speakers to strictly keep time. A bell will be rung when 2/3 of the assigned time has passed. A second bell will be rung as soon as the time is up, and the speaker has to leave the stage.

Collaborative works are presented by the underlined authors. The talks with ♭ marks denote presentations on whiteboard (or blackboard). 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 `program19sept@mathsoc.jp`.

Each conference room is equipped with a whiteboard (or a blackboard) and a projector with VGA interface for PC presentation, but there is no document camera. The whiteboards in some rooms are movable and foldable. You are asked to use your own PC and necessary accessory (for example, HDMI-VGA adapter) for a PC presentation. The time for connecting your PC to the projector is included in the assigned duration of your talk. You are recommended to check beforehand if your PC can be connected to the projector in the conference room. We strongly advise you to prepare an alternative method to present your talk such as a copy of the PDF file of your sheets on a USB flash drive in case your PC does not fit to the projector.

Information for Participants

Smoking is prohibited on campus except designated smoking areas (`https://www.kanazawa-u.ac.jp/wp-content/uploads/2019/07/kitsuen_h31.pdf`) and there is no parking area for participants. Please use the public transportation.
Kanazawa University is an eduroam participant.

Directions

2019 MSJ AUTUMN MEETING

Dates : September 17th (Tue)–20th (Fri), 2019

Venue : Kakuma Campus, Kanazawa University
Kakuma-machi, Kanazawa 920-1192 Japan

Contact to : School of Mathematics and Physics, Kanazawa University
Kakuma-machi, Kanazawa 920-1192 Japan
kanazawa19sept@mathsoc.jp
Phone +81 (0) 90 1791 3483 (During session)

Web Site : https://www.mathsoc.jp/en/meeting/kanazawa19sept/

Conference Rooms

	Place	Research Sections
Conference Room I	Large Conference Room, 1F, Natural Science and Technology Library	Statistics and Probability, Featured Invited Talk
Conference Room II	101 Lecture Rm., 1F, Natural Science and Technology Main Hall	Infinite Analysis, Foundation of Mathematics and History of Mathematics
Conference Room III	103 Lecture Rm., 1F, Natural Science and Technology Main Hall	Topology
Conference Room IV	AV Lecture Rm., 1F, Natural Science and Technology Main Hall	Functional Equations, Featured Invited Talks
Conference Room V	Lecture Hall, 1F, Natural Science and Technology Main Hall	Algebra
Conference Room VI	Large Lecture Rm. A, 1F, Natural Science and Technology Main Hall	Geometry, Featured Invited Talks
Conference Room VII	Large Lecture Rm. B, 1F, Natural Science and Technology Main Hall	Applied Mathematics
Conference Room VIII	105 Lecture Rm., 1F, Natural Science and Technology Main Hall	Complex Analysis, Real Analysis
Conference Room IX	107 Lecture Rm., 1F, Natural Science and Technology Main Hall	Functional Analysis
Plenary Talks	Large Lecture Rm. A & B, 1F, Natural Science and Technology Main Hall	
Open Lectures for Citizens	Kanazawa Art Hall	

Other Rooms

Membership Fee & Extended Abstracts	204 Lecture Rm., 2F, Natural Science and Technology Main Hall
Discussion Areas	1F, Natural Science and Technology Main Hall
Book Display and Sale	201 & 203 Lecture Rm., 2F, Natural Science and Technology Main Hall
Executive Committee, MSJ President	205 Lecture Rm., 2F, Natural Science and Technology Main Hall
Official Party	Houou-B, 3F, KKR Hotel Kanazawa