Foundation of Mathematics and History of Mathematics

September 17th (Sat) Conference Room VIII

9:30–11:20

1 Makoto Tamura (Osaka Sangyo Univ.) Indeterminate equation in "Shu" housed at Yuelu Academy ····· 15

2 Shunzi Horiguchi (Niigata Sangyo Univ.) Handwriting analysis of Chinese characters in the Koutaku Hosoi work Hiden Chiiki Zuhou Daizensyo and Koutaku Hosoi autograph 1000 characters of ten bodies ····· 15

3 Mitsuo Morimoto (Yokkaichi Univ. / Sophia Univ.*) Volume 12 (Geometric Quantities) of the *Taisei Sankei* and the *Tetsujutsu Sankei* ····· 15

4 Shigeru Jochi (Osaka Kyoiku Univ.) The evaluation of the questions on the mathematical votive tablets by AIDA Yasuaki ····· 15

5 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) The contributions by Lagrange, Laplace and Legendre to the mathematical ground of heat theory ····· 15

6 Shigeru Masuda (Res. Workshop of Classical Fluid Dynamics) The mathematical digressions in the heat theories come from Fourier and Poisson ····· 15

11:30–12:00 Mathematics History Team Meeting

14:15–16:00

7 Shotaro Tanaka Representations of k^p and $\Sigma^k n^p$ by suida ····· 15

8 Ken Saito (Osaka Pref. Univ.) Syntactic analysis of the whole text of Euclid's *Elements* ····· 15

9 Michiyo Nakane Algebra and analysis vs. algebraic analysis in 18th century ····· 15

10 Yoshihiro Abe (Kanagawa Univ.) The extent of the ideals over $\mathcal{P}_\kappa\lambda$ below the bounded ideal in the Rudin–Keisler ordering ····· 15

11 Teruyuki Yorioka (Shizuoka Univ.) Properties of ccc forcings related to von Neumann's problem on measure algebras ····· 15

12 Toshimichi Usuba (Waseda Univ.) Set-theoretic geology without AC ····· 15

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

Taishi Kurahashi (Kisarazu Nat. Coll. of Tech.) On the incompleteness theorems and provability predicates

September 18th (Sun) Conference Room VIII

9:30–11:20

13 Takashi Oyabu ♭ The mathematical principle of the natural philosophy ····· 5

14 Nobu-Yuki Suzuki (Shizuoka Univ.) Weak variants of disjunction and existence properties in intermediate predicate logics ····· 15

15 Kyohei Yokomizo (Nihon Univ.) A Separable Axiomatization of the Gabbay–de Jongh Logics ····· 15

16 Tatsuya Shimura (Nihon Univ.) An example of formulas with a strong form of disjunction property ····· 15

17 Ryo Kashima (Tokyo Tech) — On intuitionistic (and intermediate) second order propositional logics · · · 15

18 Koichiro Ikeda (Hosei Univ.) — A remark on full amalgamation property · · · 15

19 Akito Tsuboi (Univ. of Tsukuba), Makoto Yanagawa (Univ. of Tsukuba) — Uncountable ω-categorical theories · · · 10

11:30–12:00 Research Section Assembly

14:15–16:00

20 Toshio Suzuki (Tokyo Metro. Univ.) — Separation of parallel advice and serial advice on real-time deterministic context-free languages · · · 15

21 Kenshi Miyabe (Meiji Univ.) — On computability of reals on the space where the triangle inequality does not hold · · · 15

22 Kohtaro Tadaki (Chubu Univ.) — An operational characterization of the notion of probability by algorithmic randomness III · · · 15

23 Kenetsu Fujita (Gunma Univ.) — On the Church–Rosser theorem · · · 15

24 Satoru Kuroda (Gunma Pref. Women's Univ.) — A formal system of Sprague–Grundy theory · · · 15

25 Keita Yokoyama (JAIST) — On the proof-theoretic strength of Ramsey's theorem for pairs · · · 15

Algebra

September 15th (Thu) Conference Room I

9:30–11:45

1 Hideto Asashiba (Shizuoka Univ.), Ken Nakashima (Shizuoka Univ.), Michio Yoshiwaki (Shizuoka Univ. / Osaka City Univ.) — Decomposition theory of modules: the case of Kronecker algebra · · · 15

2 Kenta Ueyama (Hirosaki Univ.) — Graded endomorphism algebras of cluster tilting modules · · · 10

3 Yuta Kozakai (Tokyo Univ. of Sci.), Naoko Kunugi (Tokyo Univ. of Sci.) — On two-sided tilting complexes for Brauer tree algebras · · · 10

4 Sota Asai (Nagoya Univ.) — bricks and 2-term simple-minded collections · · · 15

5 Shigeto Kawata (Osaka City Univ.) * — Auslander–Reiten components and vertecies for group rings · · · 10

6 Kenichi Shimizu (Shibaura Inst. of Tech.) — Indicators of finite tensor categories · · · 15

7 Hideto Asashiba (Shizuoka Univ.) — Quiver presentations of smash products of categories and coverings of Brauer graph algebras · · · 15

8 Hideto Asashiba (Shizuoka Univ.) — A simple application of a 2-categorical covering theory to a construction of triangulated orbit categories · · · 15

14:15–15:45

9 Yoshitomo Baba (Osaka Kyoiku Univ.) — On i-pairs of two-sided Harada rings ····· 15

10 Yugen Takegahara (Muroran Inst. of Tech.) — Multiplicative induction for monomial Burnside rings ····· 15

11 Shuhei Kamioka (Kyoto Univ.) — Product formulae for skew plane partitions and the discrete two-dimensional Toda molecule ····· 15

12 Naoki Genra (Kyoto Univ.) — Screening operators for W-algebras ····· 10

13 Shunsuke Tsuchioka (Univ. of Tokyo), Masaki Watanabe (Univ. of Tokyo) — On a general Schur partition theorem ····· 15

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

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

September 16th (Fri) Conference Room I

9:20–12:00

14 Haruhisa Nakajima * (J. F. Oberlin Univ.) — Pseudo-reflections of stable regular actions of finite central extensions of algebraic tori in free characteristics ····· 10

15 Akiyoshi Tsuchiya (Osaka Univ.) — On the sign patterns of the coefficients of Hilbert polynomials ····· 10

16 Akiyoshi Tsuchiya (Osaka Univ.), Takayuki Hibi (Osaka Univ.) — Flat δ-vectors and their Ehrhart polynomials ····· 15

17 Akihiro Higashitani (Kyoto Sangyo Univ.), Kohji Yanagawa (Kansai Univ.) — Non-level semi-standard graded Cohen–Macaulay domains with h-vectors (h_0, h_1, h_2) ····· 15

18 Kazunori Matsuda (Osaka Univ.) *, Hidefumi Ohsugi (Kwansei Gakuin Univ.), Kazuki Shibata (Rikkyo Univ.) — Toric rings and ideals of stable set polytopes ····· 15

19 Ryota Okazaki (Fukuoka Univ. of Edu.) — On construction of $\mathbb{Z}$-graded finite free resolutions of finitely generated $\mathbb{Z}$-graded modules over a polynomial ring ····· 10

20 Tadahito Harima (Niigata Univ.) *, Akihito Wachi (Hokkaido Univ. of Edu.), Junzo Watanabe (Tokai Univ.*) — The EGH conjecture and the Sperner property of complete intersections ····· 10

21 Akihito Wachi (Hokkaido Univ. of Edu.), Tadahito Harima (Niigata Univ.), Junzo Watanabe (Tokai Univ.*) — The Strong Lefschetz property of zero-dimensional complete intersection with the action of the symmetric group ····· 15

22 Futoshi Hayasaka * (Hokkaido Univ. of Edu.) — A formula for the associated Buchsbaum–Rim multiplicity of a direct sum of cyclic modules ····· 10

23 Hiraku Kawanoue (Kyoto Univ.) $^\flat$ — On embedded resolution for surfaces ····· 15

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

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

September 17th (Sat) Conference Room I

9:20–11:15

24 Shigeru Iitaka (Gakushuin Univ.*) On Euler's perfect numbers ····· 10

25 Genki Shibukawa (Osaka Univ.) Modified higher order Fibonacci and Lucas numbers ····· 10

26 Takao Komatsu (Wuhan Univ.) Incomplete multi-poly-Bernoulli numbers ····· 15

27 Yoshitaka Sasaki (Osaka Univ. of Health and Sport Sci.)
Ohno Yasuo (Tohoku Univ.) On sum formula for generalized poly-Bernoulli numbers ····· 10

28 Kazuhito Kozuka * (Miyakonojo Nat. Coll. of Tech.) On power sums for lattice points in certain rational polytopes and multiple Dedekind sums ····· 15

29 Takashi Miyagawa (Nagoya Univ.) * Mean values of the Barnes zeta-function ····· 10

30 Makoto Minamide (Yamaguchi Univ.) *
Jun Furuya (Hamamatsu Univ. School of Medicine)
Yoshio Tanigawa On the approximate functional equation for $\zeta'(s)^2$ ····· 10

31 Maki Nakasuji (Sophia Univ.)
Ouamporn Phuksuwan((Chulalongkorn Univ.) Jacobi–Trudi type formula for Schur multiple zeta functions ····· 10

11:30–12:00 Research Section Assembly

14:20–15:15

32 Fumitake Hyodo (Kawasaki Univ. of Med. Welfare) Formal power series of Hecke rings associated with some Lie algebras ····· 15

33 Yuichi Shimada (Nagoya Univ.) Modularity lifting and Oda's conjecture for Hilbert modular varieties ····· 10

34 Hiroyasu Miyazaki (Univ. of Tokyo) An invariance property of higher Chow groups with modulus and its applications ····· 15

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

Takuya Yamauchi (Tohoku Univ.) Serre conjecture for GSp4 and weight reduction theorem

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

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

September 18th (Sun) Conference Room I

9:30–11:45

35 Tomohiro Iwami (Kyushu Inst. of Tech.) * Construction of deformation family of semistable extremal neighborhoods via framed form fans ····· 15

36 Khulan Tumenbayar (Tokyo Metro. Univ.) Examples of Zariski pairs for arrangements of line-conic-irreducible with 2 nodes and 1 cusp ····· 15

37 Hirokazu Nasu (Tokai Univ.) Obstructions to deforming curves lying on a $K3$ surface in a Fano 3-fold ····· 15

14:15–15:45

Geometry

September 15th (Thu) Conference Room IX

9:30–11:40

14:15–15:40

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

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

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

Nicola Gigli (SISSA) Nonsmooth differential geometry

September 16th (Fri) Conference Room IX

9:30–10:00

14 Yuuji Tanaka (Nagoya Univ.) A construction of $Spin(7)$-instantons 15

15 Kazushi Kobayashi (Chiba Univ.) On the structure of exact triangles consisting of holomorphic vector bundles on high dimensional complex tori 15

10:10–10:25 Presentation Ceremony for the 2016 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2016 MSJ Geometry Prize

Teruhiko Soma (Tokyo Metro. Univ.)$^{\flat}$ Geometry and topology of irreducible 3-manifolds

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

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

September 17th (Sat) Conference Room IX

9:30–11:40

16 Saburou Saitoh * (Gunma Univ.*/Inst. of Reproducing Kernels)
Hiroshi Michiwaki (NejiLaw Inc.)
Hiroshi Okumura (Yamato Univ.)
Division by zero z/0=0 in Euclidean spaces 15

17 Saburou Saitoh * (Gunma Univ.*/Inst. of Reproducing Kernels)
Tsutomu Matsuura (Gunma Univ.)
Matrices and division by zero z/0=0 15

18 Udo Hertrich-Jeromin * (Vienna Univ. of Tech.)
Atsufumi Honda (Miyakonojo Nat. Coll. of Tech.)
Minimal Darboux transformations 10

19 Yuta Ogata (Kobe Univ.)
Keisuke Teramoto (Kobe Univ.)
Duality between cuspidal butterflies and cuspidal S_1 singularities on maxfaces 15

20 Katsuhiro Moriya (Univ. of Tsukuba) The Weierstrass representation for surfaces in Euclidean space of arbitrary dimension 15

21 Kazuyuki Hasegawa (Kanazawa Univ.) A quaternionic invariant for an inclusive immersion 10

22 Kazuyuki Hasegawa (Kanazawa Univ.) A quaternionic Willmore immersion 10

23 Kouhei Miura (Tokyo Univ. of Sci.) Superextremal spacelike surfaces in a pseudo-Riemannian space form and a characterization of Boruvka hyperbolic planes 10

24 Qing Song Shi (Nagoya Inst. of Tech.) *
Toshiaki Adachi (Nagoya Inst. of Tech.)
Comparison theorems on trajectory-harps 10

14:15–16:50

25 Yuichiro Taketomi (Hiroshima Univ.) — On a Riemannian submanifold whose slice representation has no nonzero fixed point ····· 15

26 Kotaro Kawai (Univ. of Tokyo), Hông Vân Lê (CAS), Lorenz Schwachhöfer (TU Dortmund) — Frölicher–Nijenhuis bracket and geometry of G_2-and Spin(7)-manifolds ····· 15

27 Akira Kubo (Hiroshima Shudo Univ.), Takayuki Okuda (Hiroshima Univ.), Hiroshi Tamaru (Hiroshima Univ.) — Totally geodesic complex curves in Hermitian symmetric spaces ····· 15

28 Shinji Ohno (Osaka City Univ.), Takashi Sakai (Tokyo Metro. Univ.), Hajime Urakawa (Tohoku Univ.*) — A construction of biharmonic homogeneous hypersurfaces in compact Lie groups ····· 15

29 Makiko Tanaka (Tokyo Univ. of Sci.), Hiroyuki Tasaki (Univ. of Tsukuba) — Maximal antipodal subgroups of the automorphism groups of classical compact Lie algebras ····· 15

30 Makiko Tanaka (Tokyo Univ. of Sci.), Hiroyuki Tasaki (Univ. of Tsukuba), Osami Yasukura (Univ. of Fukui) — Maximal antipodal subgroups of the compact Lie group G_2 of exceptional type ····· 15

31 Kurando Baba (Tokyo Univ. of Sci.), Osamu Ikawa (Kyoto Inst. Tech.), Atsumu Sasaki (Tokai Univ.) — A duality between semisimple pseudo-Riemannian symmetric pairs and compact symmetric triads ····· 15

32 Kurando Baba (Tokyo Univ. of Sci.), Osamu Ikawa (Kyoto Inst. Tech.), Atsumu Sasaki (Tokai Univ.) — An alternative proof for semisimple pseudo-Riemannian symmetric pairs from the viewpoint of compact symmetric triads ····· 15

33 Oleksii Leontiev (Univ. of Tokyo)♭, Kobayashi Toshiyuki (Univ. of Tokyo) — Symmetry breaking operators of indefinite orthogonal groups $O(p,q)$ ····· 15

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

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

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Complex Analysis

September 15th (Thu) Conference Room VIII

9:00–11:45

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

2 Narufumi Tsuboi (JSOL Co.) — The defects of Hadamard gap series in the unit disk which is of small order ····· 15

14:15–16:55

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

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

September 16th (Fri) Conference Room VIII

9:30–11:45

20 Masakazu Shiba (Hiroshima Univ.*)
Hiroshi Yamaguchi (Shiga Univ.*)
Conformal embeddings of an open Riemann surface into closed ones of the same genus —The range of the period matrices— ····· 15

21 Sachiko Hamano (Osaka City Univ.)
Masakazu Shiba (Hiroshima Univ.*)
Hiroshi Yamaguchi (Shiga Univ.*)
Variation of the moduli disk for an open Riemann surface of positive finite genus ····· 15

22 Shigeki Matsutani (Sasebo Nat. Coll. of Tech.)
Jiryo Komeda (Kanagawa Inst. of Tech.)
Emma Previato (Boston Univ.)
Jacobi inversion formulae for a trigonal curve $y^3 = x^2k(x)$ ····· 15

23 Takashi Umeno (Kyushu Sangyo Univ.) Two examples of arithmetic toroidal groups ····· 15

24 Takayuki Koike (Kyoto Univ.) * Ueda theory for compact curves with nodes ····· 15

25 Atsushi Atsuji (Keio Univ.) Default function and Liouville type theorems ····· 15

26 Genki Hosono (Univ. of Tokyo) Converegnce along geodesics between toric plurisubharmonic functions ····· 10

27 Takeo Ohsawa (Nagoya Univ.) ♭ Runge's theorem on pseudoconvex Kähler manifolds ····· 15

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

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

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Functional Equations

September 15th (Thu) Conference Room II

9:15–12:00

1 Masafumi Yoshino (Hiroshima Univ.) Moving singularity and monodromy of some Hamiltonian system ····· 12

2 Shogo Yamanaka (Kyoto Univ.)
Kazuyuki Yagasaki (Kyoto Univ.)
Non-integrability of general differential equations with homo- and heteroclinic orbits ····· 12

3 Mika Tanda (Kansai Med. Univ.)
Toshinori Takahashi (Kinki Univ.)
Takashi Aoki (Kinki Univ.)
The relation between the confluent hypergeometric function and WKB solutions ····· 12

4 Naoto Yamaoka (Osaka Pref. Univ.) Oscillation criteria for linear dynamic equations on time scales ····· 10

5 Junya Nishiguchi (Kyoto Univ.) — Well-posedness of initial value problems of differential equations with unbounded delays · · · · · 12

6 Hiroyuki Usami (Gifu Univ.) * — Asymptotic forms of slowly decaying solutions of a Lanchester-type model · · · · · 12

7 Pati Doi (Osaka Pref. Univ.), Hideaki Matsunaga (Osaka Pref. Univ.) — Oscillation criteria for a difference system with two delays · · · · · 10

8 Tatsuki Mori (East China Normal Univ.), Kousuke Kuto (Univ. of Electro-Comm.), Tohru Tsujikawa (Univ. of Miyazaki), Shoji Yotsutani (Ryukoku Univ.) — Exact solution of stationary problem for a cell polarization model · · · · 12

9 Kousuke Kuto (Univ. of Electro-Comm.), Tatsuki Mori (East China Normal Univ.), Tohru Tsujikawa (Univ. of Miyazaki), Shoji Yotsunani (Ryukoku Univ.) — Secondary bifurcation and global solution structure for a one-dimensional stationary Allen–Cahn equation with nonlocal term · · · · · 12

10 Tetsutaro Shibata (Hiroshima Univ.) — Asymptotic length of bifurcation curves related to inverse bifurcation problems · · · · · 12

11 Kenji Kurogi (Hiroshima Univ.) — Counterexample to the 1-summability of a divergent formal solution to some linear partial differential equations · · · · · 12

12 Yoshihiko Mitsumatsu (Chuo Univ.), Tomohiro Horiuchi (Chuo Univ.) — Schröder's equation on the half-line · · · · · 12

14:15–16:15

13 Marco Squassina (Univ. of Verona), Tatsuya Watanabe (Kyoto Sangyo Univ.) — Uniqueness of limit flow for quasi-linear parabolic equations · · · · · 10

14 Mathieu Colin (Univ. of Bordeaux), Tatsuya Watanabe (Kyoto Sangyo Univ.) — Orbital stability of standing waves for the nonlinear Schrödinger equation coupled with the Maxwell equation · · · · · 10

15 Yukinori Komiya (Saga Univ.), Ryuji Kajikiya (Saga Univ.) — Existence of infinitely many solutions for the (p, q)-Laplace equation · · · · · 12

16 Hiroko Yamamoto (Meiji Univ.) — Concentration phenomenon in stationary solution of a spatially heterogeneous semilinear Neumann problem · · · · · 12

17 Masataka Shibata (Tokyo Tech), Shinji Adachi (Shizuoka Univ.), Tatsuya Watanabe (Kyoto Sangyo Univ.) — Uniqueness of positive solutions for a class of quasilinear elliptic equations · · · · · 12

18 Masato Hashizume (Osaka City Univ.) ♭ — Asymptotic behavior of the least-energy solutions of a semilinear elliptic equation with the Hardy–Sobolev critical exponent · · · · · 10

19 Takashi Suzuki (Osaka Univ.), Yohei Toyota (Osaka Univ.), Yūki Naito (Ehime Univ.) — A priori bounds for superlinear elliptic equations with semidefinite nonlinearity · · · · · 12

20 Shigeaki Koike (Tohoku Univ.)
Takahiro Kosugi (Tohoku Univ.)
Fully nonlinear elliptic equations with sublinear growth in Du ····· 12

21 Masaki Ohnuma (Univ. of Tokushima) *
Shigeru Sakaguchi (Tohoku Univ.)
A strong comparison principle for semicontinuous solutions of the prescribed mean curvature equation ····· 12

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

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

September 16th (Fri) Conference Room II

9:00–12:00

22 Yusuke Yamauchi (Hiroshima Inst. of Tech.)
Mitsuharu Ôtani (Waseda Univ.)
Tetsuya Koyama (Hiroshima Inst. of Tech.)
On a regularity theorem for rectangular domain ····· 10

23 Kunihiro Usuba (Tokyo Univ. of Sci.)
Regularity results up to the boundary for minimizers of $p(x)$-energy with $p(x) > 1$ ····· 12

24 Hiroya Ito (Univ. of Electro-Comm.)
Shuichi Jimbo (Hokkaido Univ.)
Naofumi Honda (Hokkaido Univ.)
Spherical functions for the Lamé operator ····· 12

25 Xiaojing Liu (Ibaraki Univ.)
Horiuchi Toshio (Ibaraki Univ.)
Remarks on Kato's inequality when $\Delta_p u$ is a measure ····· 12

26 Kohji Ohtsuka (Hiroshima Kokusai Gakuin Univ.)
Shape optimization of singular points in boundary value problems ···· 12

27 Takashi Kagaya (Tokyo Tech)
Yoshihiro Tonegawa (Tokyo Tech)
A fixed contact angle condition for varifolds ····· 10

28 Takashi Suzuki (Osaka Univ.)
Yoshio Yamada (Waseda Univ.)
Lotka–Volterra systems with periodic orbits ····· 5

29 Takashi Suzuki (Osaka Univ.)
Yoshio Yamada (Waseda Univ.)
Dissipative reaction diffusion systems with quadratic growth ····· 5

30 Ryuji Kajikiya (Saga Univ.)
Stability of stationary solutions for sublinear parabolic equations ····· 12

31 Yohei Fujishima (Shizuoka Univ.)
Kazuhiro Ishige (Tohoku Univ.)
Hiroki Maekawa (Tohoku Univ.)
Blow-up set of type I blowing up solutions for nonlinear parabolic systems ····· 12

32 Kazuhiro Ishige (Tohoku Univ.)
Ryuichi Sato (Tohoku Univ.)
Heat equation with a nonlinear boundary condition and growing initial data ····· 12

33 Yukihiro Seki (Kyushu Univ.) *
Type II blow-up mechanisms in a semilinear heat equation with critical Joseph–Lundgren exponent ····· 12

34 Yasuhiro Fujita (Univ. of Toyama)
On lower estimate of gradients of solutions to uniformly parabolic equations ····· 12

35 Shigeru Sakaguchi (Tohoku Univ.) *
Two-phase heat conductors with a stationary isothermic surface ····· 12

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

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

September 17th (Sat) Conference Room II

9:15–12:00

36 Shuichi Jimbo (Hokkaido Univ.) *
Yoshihiro Takazawa
Y-shaped graph and a time entire solution to a semilinear parabolic equation · · · 12

37 Naoto Kajiwara (Univ. of Tokyo)
Yoshikazu Giga (Univ. of Tokyo)
Resolvent estimates for bidomain operators · · · 12

38 Masaaki Mizukami (Tokyo Univ. of Sci.)
Tomomi Yokota (Tokyo Univ. of Sci.)
Asymptotic stability in a two-species chemotaxis system with any chemical diffusion · · · 10

39 Masaaki Mizukami (Tokyo Univ. of Sci.)
Tobias Black (Paderborn Univ.)
Johannes Lankeit (Paderborn Univ.)
Boundedness and asymptotic stability in a two-species chemotaxis-competition model of parabolic-parabolic-elliptic type · · · 10

40 Toshikazu Kuniya (Kobe Univ.)
Jinliang Wang (Heilongjiang Univ.)
Construction of Lyapunov functions for an SIR epidemic model with diffusion terms and space-dependent coefficients · · · 12

41 Yusuke Sugiyama (Tokyo Univ. of Sci.)
Degeneracy in finite time of a parameterized quasilinear wave equation · · · 12

42 Mamoru Okamoto (Shinshu Univ.)
Machihara Shuji (Saitama Univ.)
Well-posedness and ill-posedness of the Cauchy problem for the dimensional reduced Chern–Simons–Dirac system · · · 10

43 Isao Kato (Nagoya Univ.) *
Well-posedness and scattering for the Cauchy problem of the Klein–Gordon–Zakharov system in four and more spatial dimensions · · · 10

44 Kunio Hidano (Mie Univ.) *
Regularity and global existence of small solutions to systems of quasilinear wave equations in $2D$ with multiple speeds · · · 12

45 Masahiro Ikeda (Kyoto Univ.) *
Takahisa Inui (Kyoto Univ.)
Yuta Wakasugi (Nagoya Univ.)
The Cauchy problem for the nonlinear damped wave equation with slowly decaying data · · · 10

46 Hiroyuki Takamura (Future Univ.-Hakodate) *
Kyouhei Wakasa (Muroran Inst. of Tech.)
Blow-up for semilinear wave equations with scale invariant damping and super Fujita exponent · · · 10

47 Kyouhei Wakasa (Muroran Inst. of Tech.) *
Borislav Yordanov (Hokkaido Univ.)
Global regularity for supercritical nonlinear dissipative wave equations in 3D · · · 10

48 Itsuko Hashimoto (Toyama Nat. Coll. of Tech.) *
Hideo Kozono (Waseda Univ.)
Asymptotic behavior of radially symmetric solutions for quasilinear hypaerbolic fluid model · · · 10

14:15–16:15

49 Masaru Ikehata (Hiroshima Univ.) — On finding an obstacle with the Leontovich boundary condition via the time domain enclosure method · · · 12

50 Fumihiko Hirosawa (Yamaguchi Univ.), Wanderley Nunes do Nascimento (Univ. of Campinas) — Energy estimates for the Cauchy problem of Klein–Gordon type equation with time dependent potential · · · 12

51 Shota Sakamoto (Kyoto Univ.), Yoshinori Morimoto (Kyoto Univ.) — A solution of the Boltzmann equation with initial datum in a Chemin–Lerner space · · · 12

52 Yuki Kimura (Tohoku Univ.) — Asymptotic profile of a solution to thermoelastic equations in three space dimension · · · 12

53 Naofumi Mori (Kyushu Univ.), Reinhard Racke (Univ. of Konstanz) — The asymptotic behavior of a nonlinear version of the Timoshenko–Cattaneo system · · · 12

54 Tetu Makino (Yamaguchi Univ.*) * — Application of the Nash–Moser(–Schwartz) theorem to gas dynamics · · · 12

55 Tsubasa Itoh (Tokyo Tech) — The growth of the vorticity gradient for the two-dimensional Euler flows on domains with cusps · · · 12

56 Abulizi Aihaiti (Kyushu Univ.), Shouta Enomoto (Kyushu Univ.), Yoshiyuki Kagei (Kyushu Univ.) — Large time behavior of solutions to the compressible Navier–Stokes equations in an infinite layer under slip boundary condition · · · 12

57 Yoshiyuki Kagei (Kyushu Univ.), Takaaki Nishida (Kyoto Univ.), Yuka Teramoto (Kyushu Univ.) — On the spectrum for artificial compressible system · · · 12

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

Atsuhide Ishida (Tokyo Univ. of Sci.) $^{\flat}$ — Direct and inverse problems of quantum scattering in time-dependent electric fields

September 18th (Sun) Conference Room II

9:15–12:00

58 Noboru Chikami (Tohoku Univ.), Raphaël Danchin (Univ. Paris-Est) — On the global existence and time decay estimates in critical spaces for the Navier–Stokes–Poisson system · · · 12

59 Hirokazu Saito (Waseda Univ.) — Global solvability of the Navier–Stokes equations with a free surface in the maximal L_p-L_q regularity class · · · 12

60 Hajime Koba (Osaka Univ.) — On $L^{3,\infty}$ and L^{∞}-stability of the Navier–Stokes system on exterior domains · · · 12

61 Ken Abe (Kyoto Univ.) — Exterior Navier–Stokes flows for bounded data · · · 10

62 Mitsuo Higaki (Kyoto Univ.), Yasunori Maekawa (Kyoto Univ.), Yuu Nakahara (Tohoku Univ.) — On Navier–Stokes flows around a rotating obstacle in two-dimensions · · · 10

63 Yasunori Maekawa (Kyoto Univ.), David Gerard-Varet (Univ. Paris VII), Nader Masmoudi (New York Univ.) — Gevrey stability of Prandtl expansions for 2D Navier–Stokes flows · · · 10

64 Yoshihiro Shibata (Waseda Univ.) Global well-posedness of unsteady motion of viscous incompressible capillary liquid bounded by a free surface ····· 10

65 Yoshihiro Shibata (Waseda Univ.) On the free boundary problem for the Navier-Stokes equations in the exterior domain case. ····· 10

66 Taisuke Yoneyama (Tokyo Univ. of Sci.) Consideration of wave operator for Schrödinger equation with variable coefficients ····· 12

67 Haruya Mizutani (Osaka Univ.)
Jean-Marc Bouclet (Univ. Paul Sabatier) Resolvent estimates for scaling-critical Schrödinger operators and applications ····· 12

68 Wataru Ichinose (Shinshu Univ.)
Takayoshi Aoki (Shinshu Univ.) On the Cauchy problem for the Schrödinger equations with polynomially growing potentials in the spatial direction ····· 10

69 Wataru Ichinose (Shinshu Univ.) The Feynman path integral for the Schrödinger equations with polynomially growing potentials in the spatial direction ····· 10

14:15–16:15

70 Yutaka Kamimura (Tokyo Univ. of Marine Sci. and Tech.) Inverse scattering method by an energy dependent Schrödinger equation ····· 12

71 Satoshi Masaki (Osaka Univ.) Existence of a minimal blowup solution to mass-subcritical nonlinear Schrödinger equation of which flow has a compactness property ····· 10

72 Rowan Killip (UCLA)
Jason Murphy (UC Berkeley)
Satoshi Masaki (Osaka Univ.)
Monica Visan (UCLA) Equivalence of critical weighted bounds and scattering for mass-subcritical nonlinear Schrödinger equation: ····· 10

73 Noriyoshi Fukaya (Tokyo Univ. of Sci.) Instability of solitary waves for a generalized derivative nonlinear Schrödinger equation in a borderline case ····· 12

74 Masahito Ohta (Tokyo Univ. of Sci.) Strong instability of standing waves for nonlinear Schrödinger equations with harmonic potential ····· 10

75 Yohei Yamazaki (Osaka City Univ.) Stability for line solitary waves of Zakharov–Kuznetsov equation ····· 10

76 Takahisa Inui (Kyoto Univ.) Global dynamics of solutions with group invariance for the nonlinear Schrödinger equation ····· 10

77 Nobu Kishimoto (Kyoto Univ.) Weak dispersion limit for nonlinear Schrödinger equations with higher order corrections ····· 12

78 Hayato Miyazaki (Tsuyama Nat. Coll. of Tech.)
Satoshi Masaki (Osaka Univ.) Global behavior of solutions of generalized Gross–Pitaevskii equation ····· 12

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

Masaya Maeda (Chiba Univ.) On orbital instability of excited states of nonlinear Schrödinger equations

Real Analysis

September 17th (Sat) Conference Room VI

9:30–11:45

1 Yoshifumi Ito (Univ. of Tokushima*) * Development of L^p-calculus 15

2 Yoshifumi Ito (Univ. of Tokushima*) * Fourier Transformation of L^p_{loc}-functions 15

3 Yasuhiro Fujita (Univ. of Toyama), Yusuke Saito (Univ. of Toyama) On the set where a generalized Takagi function takes its maximum 15

4 Shin-ya Matsushita (Akita Pref. Univ.), Li Xu (Akita Pref. Univ.) On convergence of the aternating direction method of multipliers 15

5 Fumiaki Kohsaka (Tokai Univ.) Approximation of minimizers of convex functions in Hadamard spaces 15

6 Koji Aoyama (Chiba Univ.) Approximation of zeros of accretive operators in a Banach space 15

7 Sachiko Atsushiba (Univ. of Yamanashi) Common acute points, fixed points and convergence theorems for nonlinear mappings 15

8 Tomonari Suzuki (Kyushu Inst. of Tech.) Ćirić's and Bogin's fixed point theorems 15

14:15–16:00

9 Kazuya Otsubo (Bon Agency Co.), Shigehiko Kuratsubo (Hirosaki Univ.*), Eiichi Nakai (Ibaraki Univ.), Shoichi Fujima (Ibaraki Univ.) Fourier spherical partial sum in four-dimension. 15

10 Takeshi Iida (Fukushima Nat. Coll. of Tech.), Shohei Nakamura (Tokyo Metro. Univ.) A note on the Fefferman–Stein inequality on Morrey spaces 15

11 Hiroki Saito (Kogakuin Univ. / Tokyo Metro. Univ.), Hitoshi Tanaka (Tsukuba Univ. of Tech.), Toshikazu Watanabe (Tokyo Univ. of Information Sci.) Abstract dyadic cubes, maximal operators and Hausdorff content 15

12 Kenichi Mitani (Okayama Pref. Univ.), Kichisuke Saito (Niigata Univ.), Yasuji Takahashi (Okayama Pref. Univ.*) On the von Neumann–Jordan constant of Banaś–Frączek space 15

13 Aoi Honda (Kyushu Inst. of Tech.), Yoshiaki Okazaki (Fuzzy Logic Systems Inst.) Shilkret–Sugeno type integral for a subadditive monotone measure and its L_p space 15

14 Jun Kawabe (Shinshu Univ.) Monotone convergence theorems for nonlinear integrals 15

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

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

September 18th (Sun) Conference Room VI

9:30–12:00

15 Toshiyuki Suzuki (Kanagawa Univ.) — Abstract semilinear Schrödinger equations with nonautonomous terms 15

16 Takanori Kuroda (Waseda Univ.), Mitsuharu Ôtani (Waseda Univ.) — Solvability of complex Ginzburg–Landau equations with non-dissipative terms 15

17 Shun Uchida (Waseda Univ.), Mitsuharu Ôtani (Waseda Univ.) — Right-differentiability for solution of some evolution equation with non-monotone perturbation 15

18 Kentarou Yoshii (Tokyo Univ. of Sci.), Motohiro Sobajima (Tokyo Univ. of Sci.) — An embedding estimate for the repulsive Hamiltonian in L^p 15

19 Kota Kumazaki (Tomakomai Nat. Coll. of Tech.) — On a mathematical model for moisture transport in porous media involving adsorption phenomenon 15

20 Akio Ito, Yusuke Murase (Meijo Univ.) — Existence of weak solutions for mathematical model of brewing process of Japanese Sake with stirring effect 15

21 Takeshi Fukao (Kyoto Univ. of Edu.), Pierluigi Colli (Pavia Univ.) — Degenerate parabolic equations as asymptotic limits of Cahn–Hilliard equations 15

22 Ryota Nakayashiki (Chiba Univ.), Ken Shirakawa (Chiba Univ.), Pierluigi Colli (Univ. Pavia), Gianni Gilardi (Univ. Pavia) — Quasilinear parabolic variational inequalities subject to dynamic boundary condition 15

23 Noriaki Yamazaki (Kanagawa Univ.), Tomoyuki Suzuki (Kanagawa Univ.), Keisuke Takasao (Univ. of Tokyo) — Stability criteria for numerical experiments of Allen–Cahn equations with constraint via Yosida approximation 15

14:15–15:15

24 Hiroshi Watanabe (Oita Univ.) — Nonlocal strongly degenerate parabolic system with variable coefficients 15

25 Ken Shirakawa (Chiba Univ.), Noriaki Yamazaki (Kanagawa Univ.) — Optimal control problems involving one-dimensional models of grain boundary motions 15

26 Akio Ito — Asymptotic behavior of a global-in-time solution to a tumor invasion model of Chaplain–Anderson type with quasi-variational structure 15

27 Toyohiko Aiki (Japan Women's Univ.), Adrian Muntean (Karlstad Univ.) — Large time behavior of solutions to the model describing change of mass of colloids 15

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

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

Functional Analysis

September 15th (Thu) Conference Room IV

14:15–16:15

1 Hiroyuki Yamagishi (Tokyo Metropolitan Coll. of Indus. Tech.)
Yoshinori Kametaka (Osaka Univ.*)
The best constant of Sobolev inequality corresponding to Schrödinger operator with square-well potential ····· 15

2 Akito Suzuki (Shinshu Univ.)
Toru Fuda (Hokkaido Univ.)
Daiju Funakawa (Hokkaido Univ.)
Localization of a one-dimensional split-step quantum walk ····· 15

3 Hiromichi Ohno (Shinshu Univ.)
Unitary equivalence of one-dimensional quantum walks ····· 15

4 Yoritaka Iwata ♭ (Tokyo Tech / Shibaura Inst. of Tech.)
Characterization of infinitesimal generators of invertible evolution families ····· 15

5 Yukihide Tadano (Univ. of Tokyo)
Long-range scattering for discrete Schrödinger operators ····· 15

6 Fumio Hiroshima (Kyushu Univ.)
Spectrum of discrete Schrödinger operators on lattice ····· 10

7 Fumio Hiroshima (Kyushu Univ.)
Time operators associated with Schrödinger operators ····· 15

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

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

September 16th (Fri) Conference Room IV

9:15–12:00

8 Imam Nugraha Albania (Chiba Univ.)
Kosuke Kanemitsu (Chiba Univ.)
Masaru Nagisa (Chiba Univ.)
The order of some functions related to their positive definiteness ····· 15

9 Yoichi Udagawa (Tokyo Univ. of Sci.)
Operator monotonicity of 2-parameter family of functions ····· 10

10 Hiroshi Isa (Maebashi Inst. of Tech.)
Masatoshi Ito (Maebashi Inst. of Tech.)
Eizaburo Kamei
Hiroaki Tohyama (Maebashi Inst. of Tech.)
Masayuki Watanabe (Maebashi Inst. of Tech.)
Velocity and acceleration at a point of the path $A \sharp_{t,r} B$ ····· 15

11 Masatoshi Ito (Maebashi Inst. of Tech.)
Estimations of power difference mean by Heron mean ····· 15

12 Yuki Seo (Osaka Kyoiku Univ.)
Operator power means and the information monotonicity ····· 10

13 Hiroyuki Osaka (Ritsumeikan Univ.)
Yukihiro Tsurumi (Ritsumeikan Univ.)
Shuhei Wada (Kisarazu Nat. Coll. of Tech.)
Generalized reverse Cauchy inequality and applications to operator means ····· 15

14 Junichi Fujii (Osaka Kyoiku Univ.)
Around Jones–Wenzl projections ····· 15

15 Mitsuru Uchiyama (Ritsumeikan Univ.) Positive linear maps on C*-algebras and rigid functions ····· 15

16 Kei Ji Izuchi (Niigata Univ.) * Topological properties of path connected components in spaces of weighted composition operators into L^∞ ····· 15
Yuko Izuchi
Shûichi Ohno (Nippon Inst. of Tech.)

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

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

September 17th (Sat) Conference Room IV

9:15–12:00

17 Masatoshi Enomoto Unbounded strongly irreducible operators and Hilbert representations of Kronecker quivers ····· 15
Yasuo Watatani (Kyushu Univ.)

18 Takahiro Sudo (Univ. of Ryukyus) Classification of topological manifolds by the Euler characteristic and the K-theory ranks of C*-algebras ····· 15

19 Yuhei Suzuki (Chiba Univ.) Elementary constructions of non-discrete C*-simple groups ····· 15

20 Yuhei Suzuki (Chiba Univ.) Construction of minimal skew products of amenable minimal dynamical systems ····· 15

21 Takuya Takeishi (Kyoto Univ.) Primitive ideals and K-theoretic approach to Bost–Connes systems ··· 10

22 Norio Nawata (Osaka Kyoiku Univ.) Examples of simple stably projectionless C*-algebras with non-zero pairings ····· 15

23 Tsuyoshi Kajiwara (Okayama Univ.) Ideals of the cores of the C*-algebras associated with self-similar maps with higher dimensional sets of branched points ····· 15
Yasuo Watatani (Kyushu Univ.)

24 Kengo Matsumoto * Strong Morita equivalence vs. strong shift equivalence ····· 15
(Joetsu Univ. of Edu.)

14:15–16:15

25 Shuhei Masumoto (Univ. of Tokyo) The Jiang–Su algebra and Fraïssé theory ····· 15

26 Yusuke Isono (Kyoto Univ.) On fundamental groups of tensor product II_1 factors ····· 15

27 Yoshikata Kida (Univ. of Tokyo) Stable actions and central group-extensions ····· 15

28 Narutaka Ozawa (Kyoto Univ.) A functional analysis proof of Gromov's polynomial growth theorem ····· 15

29 Junko Inoue (Tottori Univ.) Holomorphically induced representations of certain exponential solvable Lie groups ····· 15

30 Taito Tauchi (Univ. of Tokyo) ♭ Dimension of the space of intertwining operators from degenerate principal series representations ····· 15

31 Toshiyuki Kobayashi (Univ. of Tokyo / Univ. of Tokyo) The classification and explicit construction of symmetry breaking operators for differential forms on spheres ····· 15
Toshihisa Kubo (Ryukoku Univ.)
Micheal Pevzner (Univ. de Reims-Champagne-Ardenne)

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

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

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Statistics and Probability

September 15th (Thu) Conference Room VII

9:15–12:00

14:15–15:00

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

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

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

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

September 16th (Fri) Conference Room VII

9:00–11:40

15 Ryo Shimizu (Hiroshima Univ.), Akihiko Inoue (Hiroshima Univ.), Yukio Kasahara (Hokkaido Univ.) — A Baxter-type inequality for stationary processes and its application to bootstrap ····· 15

16 Yusuke Nakamura (Hiroshima Univ.), Akihiko Inoue (Hiroshima Univ.) — Semimartingale representation of moving-average type stationary-increment processes by innovation processes ····· 15

17 Yumiharu Nakano (Tokyo Tech) — Approximating nonlinear filter by radial basis functions ····· 15

18 Tomoki Inoue (Ehime Univ.) — Invariant measures of random maps and the first return maps ····· 15

19 Johannes Jaerisch (Shimane Univ.), Marc Kesseböhmer (Univ. Bremen), Sara Munday (Univ. di Bologna) — Cusp-winding process for some hyperbolic surfaces with cusps ····· 15

20 Hiroki Takahashi (Keio Univ.) — On the removal of freezing phase transition of the Chebyshev quadratic maps ····· 15

21 Naoto Shimaru (Okayama Univ. of Sci.), Yoshiyuki Mori (Okayama Univ. of Sci.), Keizo Takashima (Okayama Univ. of Sci.) — On the leading digit of a^n ····· 10

22 Naoto Shimaru (Okayama Univ. of Sci.), Keizo Takashima (Okayama Univ. of Sci.) — On the behavior of irrational rotations ····· 10

23 Naoto Shimaru (Okayama Univ. of Sci.), Keizo Takashima (Okayama Univ. of Sci.) — On discrepancy of irrational rotations ····· 10

24 Katusi Fukuyama (Kobe Univ.), István Berkes (Graz Tech. Univ.), Nishimura Takuya (Hitachi, Ltd.) — A metric discrepancy result with given speed ····· 5

25 Akimichi Takemura (Shiga Univ.), Ryosuke Sato (Univ. of Tokyo), Kenshi Miyabe (Meiji Univ.) — Relation between the rate of convergence of strong law of large numbers and the rate of concentration of Bayesian prior in game-theoretic probability ····· 15

11:40–12:10 Research Section Assembly

September 17th (Sat) Conference Room VII

9:15–12:00

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

27 Masahide Kuwada (Int. Inst. for Nat. Sci.)
Yoshifumi Hyodo (Okayama Univ. of Sci./Int. Inst. for Nat. Sci.)
Hiromu Yumiba (Int. Inst. for Nat. Sci.)
Characteristics of balanced third-order designs of resolution $\mathrm{R}^*(\{10, 01\})$ with $N < \nu(m)$ and $\mathrm{NSV}_2 = 0$ for 3^m factorials ····· 15

28 Kazuki Matsubara (ChuoGakuin Univ.)
Sanpei Kageyama (Tokyo Univ. of Sci.)
Cyclically near-resolvable splitting-balanced block designs ····· 15

29 Kiyoshi Inoue (Seikei Univ.)
Sigeo Aki (Kansai Univ.)
On sooner and later waiting time distributions associated with simple patterns in a sequence of bivariate trials ····· 10

30 Hisashi Johno (Univ. of Yamanashi)
Nakamoto Kazunori (Univ. of Yamanashi)
Decision tree-based calculation of the overlap between probability distributions ····· 15

31 Kiyotaka Iki (Tokyo Univ. of Sci.)
Sadao Tomizawa (Tokyo Univ. of Sci.)
Double symmetric multivariate density function and its decomposition ····· 10

32 Yusuke Saigusa (Tokyo Univ. of Sci.)
Kouji Tahata (Tokyo Univ. of Sci.)
Sadao Tomizawa (Tokyo Univ. of Sci.)
Linear quasi point-symmetry model and decomposition of point-symmetry for multi-way contingency tables ····· 10

33 Tomoyuki Nakagawa (Hiroshima Univ.)
Shintaro Hashimoto (Hiroshima Univ.)
Rubust Bayesian estimation based on γ-divergence ····· 15

34 Koji Tsukuda (Univ. of Tokyo)
Maximum likelihood estimation for the large parameter of the Ewens sampling formula ····· 15

35 Yoshihiko Maesono (Kyushu Univ.)
Taku Moriyama (Kyushu Univ.)
Kernel type estimators of a conditional density and its application to regression ····· 10

12:10–12:30 Presentation Ceremony for the 2016 MSJ Analysis Prize

14:15–15:00

36 Masashi Hyodo (Osaka Pref. Univ.)
Takahiro Nishiyama (Senshu Univ.)
Simultaneous testing of the mean vector and the covariance matrix for high-dimensional data ····· 15

37 Hirokazu Yanagihara (Hiroshima Univ.)
A convergence rate of a probability of selecting the true model by a consistent C_p-type criterion in multivariate linear regression models ·· 15

38 Yasunori Fujikoshi (Hiroshima Univ.*)
Strong consistency of estimation criteria AIC and BIC for dimensionality in high-dimensional principal component analysis ····· 15

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

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

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

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

September 18th (Sun) Conference Room VII

9:15–12:00

39 Hideaki Nagahata (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
Numerical results of analysis of variance for multivariate time series 10

40 Yujie Xue (Waseda Univ.)
Yan Liu (Waseda Univ.)
Taniguchi Masanobu (Waseda Univ.)
Robust interpolation problem in L^p 10

41 Yoshiyuki Tanida (Waseda Univ.)
Masanobu Taniguchi (Waseda Univ.)
Asymptotic theory for estimation problem of Whittle functional in high-dimensional time series. 10

42 Yan Liu (Waseda Univ.)
Quantile tests in frequency domain for sinusoid models 15

43 Kou Fujimori (Waseda Univ.)
Yoichi Nishiyama (Waseda Univ.)
The l_q consistency of the Dantzig selector for Cox's proportional hazards model 10

44 Fumiya Akashi (Waseda Univ.)
L_1-based empirical likelihood approach for testing problem of regression models with singular design matrix 15

45 Kazuyoshi Yata (Univ. of Tsukuba)
Makoto Aoshima (Univ. of Tsukuba)
High-dimensional classifiers for the strongly spiked models 15

46 Aki Ishii (Univ. of Tsukuba)
A two-sample test for high dimensional data via the cross-data-matrix methodology 15

47 Ayaka Yagi (Tokyo Univ. of Sci.)
Takashi Seo (Tokyo Univ. of Sci.)
On the LRT statistic for covariance matrix with monotone missing data 15

48 Shoichi Sasabuchi (Kyushu Univ.)
On some properties and comparison of test statistics for homogeneity of regression coefficient vectors under synchronized order restrictions 10

Applied Mathematics

September 15th (Thu) Conference Room V

10:00–12:00

1 Iwao Sato (Oyama Nat. Coll. of Tech.)
Hideo Mitsuhashi (Utsunomiya Univ.)
Hideaki Morita (Muroran Inst. of Tech.)
A matrix-weighted zeta function of a graph 15

2 Shunichi Maezawa (Shibaura Inst. of Tech.)
Ryota Matsubara (Shibaura Inst. of Tech.)
Haruhide Matsuda (Shibaura Inst. of Tech.)
Fan-type condition for a graph to be a k-leaf-connected 15

3 Zhi Xian Zhao (Tokyo Univ. of Sci.)
Forbidden triples generating a finite set of 4-connected graphs 10

4 Raiji Mukae (Miyakonojo Nat. Coll. of Tech.)
Terukazu Sano (Kisarazu Nat. Coll. of Tech.)
On tree-tree quadrangulations ····· 15

5 Kazuhide Hirohata (Ibaraki Nat. Coll. of Tech.)
Ronald J. Gould (Emory Univ.)
Megan Cream (Spelman Coll.)
Chorded pancyclic graphs ····· 15

6 Shohei Satake (Nagoya Univ.)
A construction of N-e.c. tournaments ····· 15

7 Akihiro Higashitani (Kyoto Sangyo Univ.)
Johannes Hofscheier (Otto-von-Guericke-Univ. Magdeburg)
Classification of lattice simplices with small degrees ····· 15

8 Kenta Ozeki (Nat. Inst. of Information / JST ERATO)
Arthur Hoffmann-Ostenhof (Technical Univ. of Vienna)
On HISTs in cubic graphs ····· 15

14:15–15:30

9 Kaname Matsue (Inst. of Stat. Math.)
Osamu Ogurisu (Kanazawa Univ.)
Etsuo Segawa (Tohoku Univ.)
On eigenpairs of quantum walk models ····· 15

10 Etsuo Segawa (Tohoku Univ.)
Hideaki Obuse (Hokkaido Univ.)
Sensitivity of quantum walks to edge ····· 15

11 Takashi Komatsu (Yokohama Nat. Univ.)
Takako Endo (Monash Univ. / Ochanomizu Univ.)
Hikari Kawai (Yokohama Nat. Univ.)
Norio Konno (Yokohama Nat. Univ.)
Seiya Yoshida (Yokohama Nat. Univ.)
One-dimensional three-state Fourier walk ····· 15

12 Takashi Komatsu (Yokohama Nat. Univ.)
Norio Konno (Yokohama Nat. Univ.)
Fourier walk on the two-dimensional torus ····· 10

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

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

September 16th (Fri) Conference Room V

10:00–11:30

13 Kazuhiko Ushio
Balanced C_3-foil designs and related designs ····· 15

14 Kohei Yamada (Nagoya Univ.)
Miwako Mishima (Gifu Univ.)
Junya Satoh (Nagoya Univ.)
Masakazu Jimbo (Chubu Univ.)
On λ-fold factorizations of cyclic groups ····· 15

15 Shoko Chisaki (Tokyo Univ. of Sci.), Nobuko Miyamoto (Tokyo Univ. of Sci.) — Computational results for optimal difference systems of sets ····· 10

16 Tomoko Adachi (Toho Univ.) — A cyclic labeling of bipartite graph ····· 10

17 Norihiro Nakashima (Tokyo Denki Univ.), Hajime Matsui (Toyota Tech. Inst.) — A reduction of the computational complexity of the algebraic geometry codes defined by Garcia and Stichtenoth ····· 15

13:15–14:00

18 Shinya Fujita (Yokohama City Univ.) — Some results on properly colored cycles in edge-colored graphs II ····· 10

19 Morimasa Tsuchiya (Tokai Univ.), Shinichiro Tashiro (Tokai Univ.), Kazutaka Ikeda (Tokai Univ.) — On strict-double-bound numbers of graphs with cut vertices ····· 10

20 Akira Saito (Nihon Univ.), Michael D. Plummer (Vanderbilt Univ.) — Toughness, binding number and restricted matching extension ····· 15

September 17th (Sat) Conference Room V

10:00–11:35

21 Yushi Nakaya (Kwansei Gakuin High School), Ryohei Miyadera (Kwansei Gakuin High School) — Grundy numbers of impartial three dimensional chocolate bar games ····· 15

22 Masaji Watanabe (Okayama Univ.), Fusako Kawai (Kyoto Inst. Tech.) — Numerical techniques for inverse analysis in study of microbial depolymerization processes ····· 15

23 Aoi Honda (Kyushu Inst. of Tech.), Yoshiaki Okazaki (Fuzzy Logic Systems Inst.) — Inclusion-exclusion integral and t-norm based data analysis model construction ····· 15

24 Takeshi Gotoda (Kyoto Univ.) — Global solvability of regularized 2D Euler equations in Radon measure space ····· 15

25 Koichi Anada (Waseda Univ. Senior High School), Tetsuya Ishiwata (Shibaura Inst. of Tech.) — Backward self similar solutions for a quasi-linear parabolic equations ····· 15

14:15–15:30

26 Syunsuke Kobayashi (Meiji Univ.), Takashi Sakamoto (Meiji Univ.) — Hopf and Hopf–Pitchfork bifurcation in an integro-differential reaction-diffusion system ····· 15

27 Kazuyuki Yagasaki (Kyoto Univ.), Shotaro Yamazoe (Kyoto Univ.) — Pitchfork bifurcation and linear stability of solitary waves for coupled nonlinear Schrödinger equations ····· 10

28 Kazuyuki Yagasaki (Kyoto Univ.) — Heteroclinic motions in periodic perturbations of conservative systems ····· 15

29 Hideto Asashiba (Shizuoka Univ.), Emerson G. Escolar (Tohoku Univ.), Yasuaki Hiraoka (Tohoku Univ.), Hiroshi Takeuchi (Tohoku Univ.) — Matrix method for persistence modules on commutative ladders of finite type ····· 15

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

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

September 18th (Sun) Conference Room V

10:00–12:00

30 Shunzi Horiguchi (Niigata Sangyo Univ.) Extended complex Newton's method and the formulas to compare the convergences · · · · · 10

31 Shunzi Horiguchi (Niigata Sangyo Univ.) Numerical calculations to compare the convergences of the extended complex Newton's method · · · · · 10

32 George Miyake (Ube Nat. Coll. of Tech.), Yuji Katsuta (Ube Nat. Coll. of Tech.) A computational method for stationary solutions in nonlinear dynamical systems · · · · · 15

33 Fuminori Sakaguchi (Univ. of Fukui) Reduction of computational quantity in an integer-type algorithm for differential equations by means of 1-norm minimization · · · · · 15

34 Koya Sakakibara (Univ. of Tokyo) Mathematical analysis of the method of fundamental solutions for bi-harmonic equation using Almansi-type decomposition · · · · · 15

35 Yoshitaka Watanabe (Kyushu Univ.), Takehiko Kinoshita (Kyoto Univ.), Kyushu Univ. (Kyushu Univ.) Validated constructive error estimatations for bi-harmonic problems · · 15

36 Kaname Matsue (Inst. of Stat. Math.) Rigorous numerics of tubular neighborhoods of slow manifolds · · · · · 15

14:15–16:05

37 Tomoya Kemmochi (Univ. of Tokyo), Norikazu Saito (Univ. of Tokyo) Error analysis for the finite element approximation of parabolic equations via maximal regularity and fractional powers of operators · · · · · 15

38 Takuya Tsuchiya (Ehime Univ.), Kenta Kobayashi (Hitotsubashi Univ.) Error analysis of Lagrange interpolation on tetrahedrons · · · · · 15

39 Shinya Uchiumi (Waseda Univ.), Masahisa Tabata (Waseda Univ.) A Lagrange–Galerkin scheme with the grad-div stabilization and a locally linearized velocity for the Oseen problem · · · · · 15

40 Yoshiki Sugitani (Univ. of Tokyo), Norikazu Saito (Univ. of Tokyo) A remark on the mathematical formulation for the immersed boundary method · · · · · 15

41 Guanyu Zhou (Univ. of Tokyo) The conservative finite volume scheme on Voronoi mesh for the chemotaxis model · · · · · 15

42 Hiroshi Fujiwara (Kyoto Univ.), Nobuyuki Higashimori (Kyoto Univ.) Numerical analysis of the 2D stationary radiative transport equation by a semi-discrete upwind finite volume method · · · · · 15

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

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

Topology

September 15th (Thu) Conference Room III

9:50–12:00

1 Genki Omori (Tokyo Tech) A normal generating set for the handlebody subgroup of the Torelli group ····· 15

2 Takahiro Yamamoto (Kyushu Sangyo Univ.) Number of singularities of stable maps on surfaces ····· 15

3 Ryoma Kobayashi (Ishikawa Nat. Coll. of Tech.) On a normal generating set for the Torelli group of a compact non-orientable surface ····· 15

4 Takuya Sakasai (Univ. of Tokyo) Masaaki Suzuki (Meiji Univ.) Shigeyuki Morita (Univ. of Tokyo* / Tokyo Tech*) An abelian quotient of the symplectic derivation Lie algebra of the free Lie algebra ····· 15

5 Shunsuke Ichiki (Yokohama Nat. Univ.) Takashi Nishimura (Yokohama Nat. Univ.) Generalized distance-squared mappings of $\mathbb{R}^{n+1}$ into $\mathbb{R}^{2n+1}$ ····· 15

6 Huhe Han (Yokohama Nat. Univ.) Takashi Nishimura (Yokohama Nat. Univ.) Self-dual Wulff shapes and spherical convex bodies of constant width $\pi/2$ ····· 15

7 Motoo Tange (Univ. of Tsukuba) Infinite order corks ····· 15

8 Hokuto Konno (Univ. of Tokyo) High-dimensional wall crossing and gluing in Seiberg–Witten theory ····· 15

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

Hisaaki Endo (Tokyo Tech) Topology of Lefschetz fibrations

15:30–17:20

9 Hiraku Nozawa (Ritsumeikan Univ.) Independent variation of secondary characteristic classes of Riemannian foliations ····· 15

10 Takahiro Oba (Tokyo Tech) Higher dimensional contact manifolds with infinitely many Stein fillings ····· 15

11 Yoshihiko Mitsumatsu (Chuo Univ.) Tomohiro Horiuchi (Chuo Univ.) The automorphisms groups of Reeb components with complex leaves ····· 15

12 Kouichi Yasui (Hiroshima Univ.) Contact 5-manifolds and smooth structures on Stein 4-manifolds ····· 10

13 Katsuhiko Kuribayashi (Shinshu Univ.) Luc Menichi (Angers Univ.) The dual loop coproduct on the loop cohomology of the classifying space of a Lie group ····· 15

14 Shun Wakatsuki (Univ. of Tokyo) String topology on rational Gorenstein spaces ····· 15

15 Masaharu Morimoto (Okayama Univ.) On limites of Mackey functors ····· 15

September 16th (Fri) Conference Room IX

10:10–10:25 Presentation Ceremony for the 2016 MSJ Geometry Prize

10:30–11:30 Award Lecture for the 2016 MSJ Geometry Prize

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

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

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

September 17th (Sat) Conference Room III

9:50–12:00

16 Mitsunobu Tsutaya (Kyushu Univ.) * Finiteness of A_n-equivalence types of gauge groups ····· 15

17 Tatsuya Arai (Tsukuba Univ. of Tech.) * The structure of dendrites constructed by pointwise P-expansive maps on the unit interval ····· 10

18 Yukinobu Yajima (Kanagawa Univ.) Yasushi Hirata (Kanagawa Univ.) C^*-embedding implies P-embedding in certain products ····· 10

19 Takashi Shimomura (Nagoya Univ. of Economics) Bratteli–Vershik representations on zero-dimensional homeomorphisms ····· 10

20 Takashi Shimomura (Nagoya Univ. of Economics) Expansiveness on finite rank Bratteli–Vershik homeomorphisms ····· 10

21 Shosuke Omori (Waseda Univ.) Tomoyuki Yamamoto (Waseda Univ.) Akihiko Kitada (Waseda Univ.) A product space of {0,1} and an abstract polycrystal ····· 15

22 Shintaro Kuroki (Okayama Univ. of Sci.) Dong Youp Suh (KAIST) Cohomological non-rigidity of eight-dimensional complex projective towers ····· 15

23 Hirokazu Nishinobu (Kochi Univ.) Toshihiro Yamaguchi (Kochi Univ.) Rational cohomologies of classifying spaces for homogeneous spaces of small rank ····· 10

24 Tadayuki Haraguchi (Oita Nat. Coll. of Tech.) A model structure of the category of diffeological spaces ····· 15

25 Naoya Suzuki (Nat. Inst. of Tech., Akita Coll.) The equivariant cohomology on a simplicial manifold ····· 10

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

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

15:30–17:15

26 Teruaki Kitano (Soka Univ.) Yoshikazu Yamaguchi (Akita Univ.) $SL(2;\mathbb{R})$-representations of a Brieskorn homology 3-sphere ····· 10

27 Masaaki Suzuki (Meiji Univ.) Epimorphisms between 2-bridge knot groups ans their crossing numbers ····· 10

28 Takefumi Nosaka (Kyushu Univ.) On the fundamental relative 3-classes of knot group representations ····· 15

29 Ken'ichi Yoshida (Univ. of Tokyo) — Union of 3-punctured spheres in a hyperbolic 3-manifold ····· 15

30 Anh T. Tran (Univ. of Texas at Dallas), Yoshikazu Yamaguchi (Akita Univ.) — Asymptotic behavior of Reidmeister torsion for toroidal surgeries along twist knots ····· 10

31 Takuya Katayama (Hiroshima Univ.) — RAAGs in knot groups ····· 15

32 Yoshihiro Takeuchi (Aichi Univ. of Edu.), Misako Yokoyama (Shizuoka Univ.) — The w-Čech cohomology of orbifolds ····· 10

September 18th (Sun) Conference Room Ⅲ

9:50–12:00

33 Kodai Wada (Waseda Univ.) — A note on Milnor's link-homotopy invariants ····· 10

34 Kodai Wada (Waseda Univ.), Natsuka Kobayashi (Tokyo Metropolitan Fujimori High School), Akira Yasuhara (Tsuda Coll.) — Milnor invariants of covering links ····· 10

35 Yuka Kotorii (Univ. of Tokyo), Atsuhiko Mizusawa — Milnor invariant for handlebody-links ····· 10

36 Nao Imoto (Nara Women's Univ.) — On an estimation of flat plumbing basket number of knots ····· 10

37 Inasa Nakamura (Univ. of Tokyo) — Unbraiding 2-dimensional braids by an addition of 1-handles with chart loops ····· 10

38 Ayumu Inoue (Aichi Univ. of Edu.), Ryo Shimizu (Okazakigakuen High School) — On a subspecies of region crossing change ····· 10

39 Ryo Hanaki (Nara Univ. of Edu.) — On scannable properties of the original knot from a knot shadow ····· 10

40 Noboru Ito (Univ. of Tokyo), Yusuke Takimura (Gakushuin Boys' Junior High School) — Any notrivial knot projection with no triple chords has a monogon or bigon ····· 10

41 Noboru Ito (Univ. of Tokyo) — Spaces of chord diagrams on spherical curves I ····· 15

42 Eri Matsudo (Nihon Univ.), Kazuhiro Ichihara (Nihon Univ.) — Minimal coloring number for $\mathbb{Z}$-colorable links ····· 10

43 Takuji Nakamura (Osaka Electro-Comm. Univ.), Yasutaka Nakanishi (Kobe Univ.), Shin Satoh (Kobe Univ.) — The minimum number of colors of Fox colorings for torus knots ····· 10

Infinite Analysis

September 15th (Thu) Conference Room VI

10:15–12:00

1 Masahiko Ito (Tokyo Denki Univ.)
Masatoshi Noumi (Kobe Univ.)
An elliptic generalization of the Gustafson–Rakha summation formula ····· 15

2 Azusa Ikeda (Aoyama Gakuin Univ.)
Tetsu Masuda (Aoyama Gakuin Univ.)
q-Painlevé systems of type A and their generalization ····· 15

3 Tetsu Masuda (Aoyama Gakuin Univ.)
Hypergeometric solutions to the q-Painlevé system of type $A_2^{(1)}$ and $A_3^{(1)}$ ····· 15

4 Ryo Kamiya (Univ. of Tokyo)
Masataka Kanki (Kansai Univ.)
Tetsuji Tokihiro (Univ. of Tokyo)
Takafumi Mase (Univ. of Tokyo)
Quasi-integrable generalization of the two-dimensional discrete Toda equation ····· 15

5 Saburo Kakei (Rikkyo Univ.)
Shuhei Kamioka (Kyoto Univ.)
Yosuke Katayama (Rikkyo Univ.)
Yasuhiro Ohta (Kobe Univ.)
Jeu de taquin slide and discrete 2-dimensional Toda equation ····· 15

6 Hideshi Yamane (Kwansei Gakuin Univ.)
Long-time asymptotics for the focusing integrable discrete nonlinear Schrödinger equation ····· 15

14:15–15:15

7 Atsushi Nobe (Chiba Univ.)
Mutations of the cluster algebra of type $A_1^{(1)}$ and the discrete Toda lattice ····· 15

8 Toshiki Nakashima (Sophia Univ.)
Kailash C. Misra (North Carolina State Univ.)
Affine geometric crystal of $A_n^{(1)}$ and limit of Kirillov–Reshetikhin perfect crystals ····· 15

9 Masato Okado (Osaka City Univ.)
Reiho Sakamoto (Tokyo Univ. of Sci.)
Anne Schilling (UC Davis)
Travis Scrimshaw (Univ. of Minnesota)
Bijection from paths to rigged configurations for type D ····· 15

10 Atsuo Kuniba (Univ. of Tokyo)
Vladimir Mangazeev (Australia Nat. Univ.)
Shouya Maruyama (Univ. of Tokyo)
Masato Okado (Osaka City Univ.)
Stochastic R matrix for $U_q(A_n^{(1)})$ ····· 15

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

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

September 16th (Fri) Conference Room VI

10:15–11:45

11 Taichiro Takagi (Nat. Defense Acad. of Japan)
Takuma Yoshikawa (Nat. Defense Acad. of Japan)
Generalized Wick theorems in conformal field theory and the Borcherds identity · · · · · 15

12 Kanehisa Takasaki (Kinki Univ.)
Toshio Nakatsu (Setsunan Univ.)
Quantum mirror curve of closed topological vertex and Kac–Schwarz operator of q-difference type · · · · · 15

13 Ryosuke Kodera (Kyoto Univ.) *
Hiraku Nakajima (Kyoto Univ.)
Cherednik algebras and quantized Coulomb branches · · · · · 15

14 Takeshi Ikeda (Okayama Univ. of Sci.)
Pieri rule for the K-theoretic P-functions · · · · · 15

15 Ivan Ip (Kyoto Univ.)
Positive representations of split real quantum groups · · · · · 15

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

Tatsuyuki Hikita (Kyoto Univ.) ♭
On the cohomology of conical symplectic resolutions