

Plenary Talks

September 19th (Wed) Session Room VIII and IX

- MSJ Autumn Prize Awardee (15:30~16:30)
- Kengo Hirachi (Univ. of Tokyo)[#] Einstein equations and conformal invariants (16:45~17:45)

Invited Organized Talks

September 18th (Tue)

Session Room IX

- Chin-Lung Wang (Nat. Taiwan Univ.) Quantum Leray–Hirsch and analytic continuations (14:00~15:00)

Session Room II

- Shinichi Kobayashi (Tohoku Univ.)[#] p -adic approaches to the Birch and Swinnerton–Dyer conjecture (14:00~15:00)

September 20th (Thu)

Session Room IX

- Kaoru Ono (Kyoto Univ.)^{*} Spectral invariants for Hamiltonian diffeomorphisms and their applications (14:00~15:00)

Session Room II

- Kenjiro Yanagi (Yamaguchi Univ.)[#] Progress of quantum information theory —From classical information to quantum information— (14:00~15:00)

Session Room VI

- Hisashi Inaba (Univ. of Tokyo)[#] Mathematics of the basic reproduction number R_0 —Chasing a key parameter of population dynamics— (14:00~15:00)

September 21st (Fri)

Session Room VI

- Yuji Tachikawa (Univ. of Tokyo)[#] Mathematics and supersymmetric quantum field theory ... (14:00~15:00)

Session Room VII

- Yuichi Komori (Chiba Univ.)^{*} Small talks on mathematical logic for mathematician (14:00~15:00)

Invited Talks by Research Section and Special Session

September 18th (Tue)

Algebra (Session Room I)

- Yoichi Mieda (Kyoto Univ.)[#] Toward generalization of the non-abelian Lubin–Tate theory
 (16:30~17:30)

Geometry (Session Room VIII)

- Toshihiro Shoda (Saga Univ.)[#] On Morse index of minimal surfaces (16:15~17:15)

Complex Analysis (Session Room II)

- Toshiyuki Sugawa (Tohoku Univ.)[#] Generalization of the Schwarzian derivative —Towards more invariance and higher orders (16:30~17:30)

Functional Equations (Session Room III)

- Satoshi Tanaka (Okayama Univ. of Sci.)[#] Nonuniqueness of positive solutions of superlinear two-point boundary value problems - Symmetry-breaking of even positive solutions - (16:30~17:30)

Statistics and Probability (Session Room V)

- Toshihiro Uemura (Kansai Univ.)[#] On jump-type Markov processes and the associated Dirichlet forms (15:00~16:00)

- Kazumasa Kuwada (Ochanomizu Univ.)[#] Coupling methods for heat distributions and curvature-dimension conditions (16:15~17:15)

Applied Mathematics (Session Room VI)

- Yusuke Suzuki (Niigata Univ.)[#] 1-embedded graphs as seen from a viewpoint of re-embedding structures (16:50~17:50)

Topology (Session Room IX)

- Toshio Sumi (Kyushu Univ.)^{*} The Smith equivalence problem and Smith sets of Oliver groups (16:20~17:20)

Infinite Analysis (Session Room VII)

- Junichi Shiraishi (Univ. of Tokyo)[#] Vertex operators, Nekrasov partition functions and Macdonald polynomials (15:00~16:00)

September 19th (Wed)

Geometry (Session Room VIII and IX)

- Ken'ichi Ohshika (Osaka Univ.)[#] Topological structure of deformation spaces of Kleinian groups
 (10:50~11:50)

- Yukinobu Toda (Univ. of Tokyo)[#] Stability conditions and Donaldson–Thomas type invariants on Calabi–Yau 3-folds (13:15~14:15)

Complex Analysis (Session Room II)

- Hiroshi Yamaguchi (Shiga Univ.)[#] Pseudoconvex domains in the Hopf surface (13:15~14:15)

Functional Equations (Session Room III)

- Naoto Kumano-go (Kogakuin Univ.)[#] Phase space path integrals as analysis on path space (13:15~14:15)

Functional Analysis (Session Room IV)

- Kiyoomi Kataoka (Univ. of Tokyo) [#] A system of fifth-order partial differential equations describing a surface which contains several continuous families of circular arcs (13:00~14:00)

Infinite Analysis (Session Room VII)

- Yoshiyuki Kimura (Osaka City Univ.) [#] Quiver varieties and quantum cluster algebras (13:30~14:30)

September 20th (Thu)

Algebra (Session Room I)

- Hyohe Miyachi [#] Comparison between module categories over modular quantum general linear groups (17:00~18:00)
(Nagoya Univ./Osaka City Univ.)

Geometry (Session Room VIII)

- Atsushi Kasue (Kanazawa Univ.) ^{*} Embedding of graphs and Rayleigh monotonicity law (16:30~17:30)

Functional Equations (Session Room III)

- Hideyuki Miura (Osaka Univ.) On fundamental solutions for fractional diffusion equations with divergence free drift (16:30~17:30)

Real Analysis (Session Room II)

- Jürgen Appell (Univ. Würzburg) [#] Condensing operators and applications: old and new (15:50~16:50)

Functional Analysis (Session Room IV)

- Shūichi Ohno (Nippon Inst. of Tech.) ^{*} Topological structure of the space of weighted composition operators on H^∞ (16:30~17:30)

Statistics and Probability (Session Room V)

- Shogo Kato (Inst. of Stat. Math.) [#] The Cauchy distribution on the circle and related statistical models (14:30~15:30)

- Hidetoshi Murakami [#] Some saddlepoint approximations to the nonparametric tests and biased for two-sided alternatives (15:45~16:45)
(Nat. Defense Acad. of Japan)

Applied Mathematics (Session Room VI)

- Yuji Kodama (Ohio State Univ.) [#] KP solitons and Mach reflection in shallow water (16:50~17:50)

Topology (Session Room IX)

- Koya Shimokawa (Saitama Univ.) [#] Tangle analysis of site-specific recombinations (16:00~17:00)

September 21st (Fri)

Foundation of Mathematics and History of Mathematics (Session Room VII)

- Kenshi Miyabe (Kyoto Univ.) [#] Natural properties that a randomness notion should have (13:20~14:20)

Algebra (Session Room I)

- Yoshinori Gongyo (Univ. of Tokyo) [#] Log pluricanonical representations and abundance (11:00~12:00)

- Shigeru Kuroda (Tokyo Metro. Univ.) [#] Wild automorphisms of a polynomial ring (15:45~16:45)

Functional Equations (Session Room III)

Katsuyuki Ishii (Kobe Univ.)[#] Mathematical analysis of some algorithms for mean curvature flow (16:45~17:45)

Real Analysis (Session Room II)

Okihiro Sawada (Gifu Univ.)[#] The ill-posedness theory of the Navier–Stokes equations in the critical space (16:10~17:10)

Functional Analysis (Session Room IV)

Mutsumi Saito (Hokkaido Univ.)[#] Irreducible quotients of A -hypergeometric systems (14:15~15:15)

Applied Mathematics (Session Room VI)

Daisuke Tagami (Kyushu Univ.)[#] Numerical analysis of flow problems with finite element methods —From error analysis to parallel computations (16:45~17:45)

Lectures of Citizens

Organized: Mathematical Society of Japan

Co-organized: Faculty of Mathematics and Institute of Mathematics for Industry,
Kyushu University

Date: September 22nd (Sat) 14:00~16:30

Venue:

Program: Opening Speech:

Masaaki Yoshida (Kyushu Univ.) (14:00~14:10)

Lecture 1:

Kazushi Ahara (Meiji Univ.)

Survey of interactive geometry software (14:10~15:10)

Lecture 2:

Masaaki Takase (Kyushu Univ.)

TBA (15:30~16:30)

Web Page: <http://mathsoc.jp/en/meeting/kyushu12sept/>

MSJ–KMS Joint Meeting 2012

Organized: Mathematical Society of Japan, and
The Korean Mathematical Society

Supported: Faculty of Mathematics and Institute of Mathematics for Industry,
Kyushu University

Date: September 17th (Mon)

Venue: Centennial Hall, Kyushu Univeristy Medical School

Organizing Committee:

MSJ	KMS
Yoichi Miyaoka (Univ. of Tokyo)	JongHae Keum (KIAS)
Miyuki Koiso (Kyushu Univ.)	Yongjin Song (Inha Univ.)
Takayoshi Ogawa (Tohoku Univ.)	Dohan Kim (SNU)
Takashi Tsuboi (Univ. of Tokyo)	Dongsu Kim (KAIST)

Program

Plenary Talks — Main Hall

- 10:00~11:00 Gen Nakamura (Hokkaido Univ.)
Inversion schemes for diffusion equations
- 11:30~12:30 Jun-Muk Hwang (KIAS)
Compactifications of \mathbb{C}^n

Algebra Session — Main Hall

- 14:00~14:40 Yukinobu Toda (Univ. of Tokyo)
Stability conditions and birational geometry
- 14:50~15:30 Changheon KIM (Hanyang Univ.)
Arithmetic properties of weakly harmonic Maass forms
- 16:10~16:50 Shuji Saito (Tokyo Tech)
Higher dimensional Hasse principle and resolution of quotient singularities
- 17:00~17:40 Yongnam Lee (Sogang Univ.)
Q-Gorenstein deformation theory and its applications

Geometry and Topology Session — Hall 1

- 14:00~14:40 Shin-ichi Ohta (Kyoto Univ.)
Ricci curvature in Finsler geometry and applications
- 14:50~15:30 Sang-hyun Kim (KAIST)
Embeddability between right-angled Artin groups
- 16:10~16:50 Shigeyuki Morita (Univ. of Tokyo*)
Characteristic classes in low dimensional topology
—Prospects and computations—
- 17:00~17:40 Jaigyoung Choe (KIAS)
Higher dimensional versions of the Enneper surface, catenoid and helicoid

Analysis Session — Hall 2

- 14:00~14:40 Kenji Nakanishi (Kyoto Univ.)
Global dynamics of nonlinear dispersive equations
- 14:50~15:30 Ki-Ahm Lee (SNU)
Homogenization of the oscillating data on a lower dimensional surface
- 16:10~16:50 Yoshikazu Giga (Univ. of Tokyo)
Blow-up arguments and the Navier-Stokes equations
- 17:00~17:40 Kang Tae Kim (POSTECH)
On a generalization of Forelli's theorem

Probability Theory and Applied Mathematics Session — Hall 3

- 14:00~14:40 Makiko Sasada (Keio Univ.)
Microscopic dynamics for the porous medium equation and other degenerate parabolic equations
- 14:50~15:30 Jung Hee Cheon (SNU)
Discrete logarithm with auxiliary inputs
- 16:10~16:50 Takashi Kumagai (Kyoto Univ.)
Random walks on disordered media and their scaling limits
- 17:00~17:40 Hyeong In Choi (SNU)
Commodity Futures model and applications
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Foundation of Mathematics and History of Mathematics

September 20th (Thu) Session Room VII

9:00–11:20

- 1 Shigeru Masuda (Kyoto Univ.)[#] Traditional diversion of real to imaginary since Euler, and innovative strictness by Poisson's sense 20
- 2 Shigeru Masuda (Kyoto Univ.)[#] Proofs and applications relating to describability of an arbitrary function by trigonometric series in the 19C 20
- 3 Teruaki Asai (Nara Univ. of Edu.)^{*} On the $2/n$ table of the Rhind Mathematical Papyrus 10
- 4 Shunji Horiguchi [#] The surveyings of Gonemon Higuchi and his pupils 15
(Niigata Sangyo Univ.)
- 5 Shunji Horiguchi [#] The mariner's compass of Seizaemon Kanazawa and that of Yoemon
(Niigata Sangyo Univ.) Shizuno 15
- 6 Hideyuki Majima (Ochanomizu Univ.)[#] On the determinat by SEKI Takakazu in "Sangaku-genkun" 30

11:25–12:25 Mathematics History Team Meeting

14:15–17:05

- 7 Tsukane Ogawa (Yokkaichi Univ.)[#] Geometry studied in the Shisei-Sanka School 25
- 8 Shotaro Tanaka ^{*} Representation of fractional function in power series —De Moivre, L. Euler, G. H. Hardy, Y. Wada, M. Fujiwara— 20
- 9 Toshimichi Usuba (Nagoya Univ.)[#] Large cardinals and indestructibly Lindeöf spaces 15
- 10 Takahiro Seki (Niigata Univ.)[#] On relations among double negation translations in substructural logics 15
- 11 Takayuki Kihara (JAIST)[#] Strong measure zero sets in computability theory I —Lightface Π_1^0 sets
Kojiro Higuchi (Tohoku Univ.) and the perfect set property— 15
- 12 Takayuki Kihara (JAIST)[#] Strong measure zero sets in computability theory II —Kolmogorov com-
Kenshi Miyabe (Kyoto Univ.) plexity and triviality— 20
- 13 Toshio Suzuki (Tokyo Metro. Univ.)[#] The eigen distribution of an AND-OR tree under directional algorithms
Ryota Nakamura (Tokyo Metro. Univ.) 15
- 14 Toshio Suzuki (Tokyo Metro. Univ.)[#] Resource-bounded randomness and computable Dowd-type generic sets
Masahiro Kumabe
(Open Univ. of Japan) 15

September 21st (Fri) Session Room VII

9:00–11:40

- 15 Yoshihiro Abe (Kanagawa Univ.)[#] Restricted structural properties of ideals on $\mathcal{P}_\kappa\lambda$ and weak normality 15
- 16 Tatsuya Shimura (Nihon Univ.)[#] Admissible rules for one variable formulas and disjunction property .. 15
- 17 Katsumi Sasaki (Nanzan Univ.)[#] The exact model constructed from normal forms in normal modal logics containing **K4** 10

- 18 Keita Yokoyama (Tokyo Tech) [#] Ramsey's theorem without Σ_1 -induction 10
- 19 Keita Yokoyama (Tokyo Tech) [#] Some versions of Friedman's self-embedding theorem 10
- 20 Keita Yokoyama (Tokyo Tech) [#] A generalization of Schnorr's theorem 10
- 21 Kenji Fukuzaki ^{*} Definability of the ring of integers in some infinite algebraic extensions
(Int. Univ. of Kagoshima) of the rationals 15
- 22 Yoshihito Tanaka [#] Conservativity of Boolean algebras with operators over semilattices with
(Kyushu Sangyo Univ.) operators 15
Agi Kurucz (King's Coll. London)
Frank Wolter (Univ. of Liverpool)
Michael Zakharyashev
(Birkbeck Coll. London)
- 23 Hiroaki Minami [#] Mathias–Prikrý forcing and dominating reals 15
Michael Hrušák
(Univ. Nacional Autónoma de México)
- 24 Hirotaka Kikyo (Kobe Univ.) [#] On small superstable generic structures 15

11:45–12:15 Research Section Assembly**13:20–14:20 Invited Talk by Research Section**

- Kenshi Miyabe (Kyoto Univ.) [#] Natural properties that a randomness notion should have

Algebra

September 18th (Tue) Session Room I

9:00–12:00

- 1 Yukio Ohkubo [#] Distribution of the first digits of prime numbers 10
(Int. Univ. of Kagoshima)
- 2 Yoshifumi Tsuchimoto (Kochi Univ.) ^{*} On splitting behaviors of polynomials at primes 15
Hajime Kuroiwa (Kochi Univ.)
Tatsuya Itagaki (Kochi Univ.)
Yuusuke Watou (Kochi Univ.)
- 3 Kenichi Shimizu ^{*} Prime values of quadratic polynomials and imaginary quadratic fields
..... 10
- 4 Soichi Ikeda (Nagoya Univ.) ^{*} On transcendental numbers generated by certain integer sequences ... 10
Kaneaki Matsuoka (Nagoya Univ.)
- 5 Kazuhito Kozuka ^{*} Knopp type identities for generalized multiple Dedekind type sums at-
(Miyakonojo Nat. Coll. of Tech.) tached to matrices and Dirichlet characters 10
- 6 Yoshinori Hamahata [#] Continued fractions and Dedekind sums for function fields 10
(Ritsumeikan Univ.)

- 7 Masanori Katsurada (Keio Univ.)[#] Shintani zeta-functions of several variables and Lauricella hypergeometric functions II 10
- 8 Tomoya Machide (Kinki Univ.)[#] On a parameterized sum formula for triple zeta values 10
- 9 Tomoya Machide (Kinki Univ.)[#] On a relation between multiple zeta values and the gamma function 10
- 10 Yoshio Tanigawa (Nagoya Univ.)^{*} On relations among Dirichlet and multiple L -values mod 4 10
Jun Furuya
(Okinawa Nat. Coll. of Tech.)
Makoto Minamide
(Kyoto Sangyo Univ.)
- 11 Ick Sun Eum (KAIST)[#] Some applications of modular units 15
Ja Kyung Koo (KAIST)
Dong Hwa Shin
(Hankuk Univ. of Foreign Studies)
- 12 Yuichi Sakai (Kyushu Univ.)^{*} The Ramanujan–Serre differential operators and certain elliptic curves 10
Masanobu Kaneko (Kyushu Univ.)
- 13 Tomoyoshi Ibukiyama (Osaka Univ.)[#] A lift to vector valued Siegel modular forms of half integral weight and Shimura type conjecture revisited 10
- 14 Toshiyuki Kikuta (Osaka Inst. of Tech.)^{*} On Ramanujan type congruences for modular forms with several variables 10
Shoyu Nagaoka (Kinki Univ.)
- 15 Shoyu Nagaoka (Kinki Univ.)^{*} On p -adic properties of Siegel modular forms 10
Siegfried Böcherer
(Univ. Mannheim/Univ. of Tokyo)
- 14:15–16:15**
- 16 Daisuke Shiomi (Tokyo Univ. of Sci.)^{*} On the Hasse–Witt invariants of the maximal real subfields of cyclotomic function fields 10
- 17 Hizuru Yamagishi (Tokyo Denki Univ.)[#] On hyperelliptic curves of Chebyshev type 15
- 18 Shinnya Okumura (Kyushu Univ.)[#] On the number of \mathbb{F}_p -valued points of elliptic curves 15
- 19 Yuki Kato (Tohoku Gakuin Univ.)^{*} The isomorphism between motivic cohomology and K -groups for equi-characteristic regular local rings 10
- 20 Yoshiyasu Ozeki (Kyoto Univ.)[#] Full faithfulness theorem for torsion crystalline representations 10
- 21 Manabu Yoshida (Kyushu Univ.)[#] A refinement of the local class field theory of Serre and Hazewinkel ... 10
- 22 Yuto Takahashi (Nagoya Univ.)[#] Infiniteness of class field towers degrees of extensions of which are restricted to products of 2 and 3 10
- 23 Mitsul Tohkailin (Kinki Univ.)[#] A characterization of some number fields of infinite degree using absolute Galois groups 15
Manabu Ozaki (Waseda Univ.)
- 24 Teruhisa Kadokami[#] Iwasawa invariants of cyclic branched covers of links 10
(East China Norm. Univ.)
Yasushi Mizusawa
(Nagoya Inst. of Tech.)

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

- Yoichi Mieda (Kyoto Univ.)[#] Toward generalization of the non-abelian Lubin–Tate theory

September 19th (Wed) Session Room I

9:00–12:00

- 25 Akinari Hoshi (Rikkyo Univ.)[#] Noether's problem and unramified Brauer groups 10
 Ming-chang Kang (Nat. Taiwan Univ.)
 Boris E. Kunyavskii (Bar-Ilan Univ.)
- 26 Aiichi Yamasaki (Kyoto Univ.)[#] Table of conjugacy classes of finite groups in $GL(5, \mathbb{Z})$, $GL(6, \mathbb{Z})$ and
 some calculations on elliptic curves 10
- 27 Akinari Hoshi (Rikkyo Univ.) Rationality problem for algebraic tori 10
 Aiichi Yamasaki (Kyoto Univ.)
- 28 Yasushi Gomi (Sophia Univ.)[#] q -analogue of Gauss sums on the symmetric groups 10
- 29 Tomoyuki Arakawa (Kyoto Univ.)[#] Zhu's algebra and C_2 -algebra of parafermion vertex operator algebras
 Ching Hung Lam (Academia Sinica) 15
 Hiromichi Yamada (Hitotsubashi Univ.)
- 30 Kenichi Shimizu (Nagoya Univ.)[#] Real representations of Hopf $*$ -algebras 20
- 31 Masao Kiyota (Tokyo Med. Dent. Univ.)^{*} The heights of irreducible Brauer characters in 2-blocks of the symmetric
 Tetsuro Okuyama groups 15
 (Hokkaido Univ. of Edu.)
 Tomoyuki Wada
 (Tokyo Univ. of Agri. and Tech.)
- 32 Seok-Jin Kang (Seoul Nat. Univ.)[#] Geometric realization of Khovanov–Lauda–Rouquier algebras associ-
 Masaki Kashiwara ated with Borchers–Cartan data 15
 (Kyoto Univ./Seoul Nat. Univ.)
 Euiyong Park (Seoul Nat. Univ.)
- 33 Myungho Kim (KIAS)[#] Khovanov–Lauda–Rouquier algebras and R-matrices 15
 Seok-Jin Kang (Seoul Nat. Univ.)
 Masaki Kashiwara
 (Kyoto Univ./Seoul Nat. Univ.)
- 34 Masahide Konishi (Nagoya Univ.)[#] Level 1 cyclotomic KLR algebras of cyclic quivers 10
- 35 Sei-Qwon Oh (Chungnam Nat. Univ.)[#] Poisson brackets and Poisson spectra in polynomial algebras 15

September 20th (Thu) Session Room I

10:00–11:30

- 36 Manabu Matsuoka ^{*} Polynomial realization of sequential codes 10
 (Kuwana-Kita High School)
- 37 Yasuyuki Hirano [#] On rings with primitive idempotents 10
 (Naruto Univ. of Edu.)
- 38 Satoshi Yamanaka (Okayama Univ.)[#] On Galois polynomials of degree p in skew polynomial rings of derivation
 Shūichi Ikehata (Okayama Univ.) type 10
- 39 Akira Ueda (Shimane Univ.)^{*} Skew Rees rings which are maximal orders 10
 Monika Rianti Helmi (Andalas Univ.)
 Hidetoshi Marubayashi
 (Tokushima Bunri Univ.)

11 Algebra

- 40 Takao Sumiyama (Aichi Inst. of Tech.) On Szele matrices of finite rings 10
- 41 Tsunekazu Nishinaka # On primitivity of group rings of one-relator groups 10
(Okayama Shoka Univ.)
- 42 Kazutoshi Koike # Morita duality and finite ring extensions 10
(Okinawa Nat. Coll. of Tech.)
- 43 Hiroaki Komatsu * A characterization of separable algebras by generalized derivations ... 10
(Okayama Pref. Univ.)

11:30–12:00 Research Section Assembly**14:15–16:45**

- 44 Ryo Akiyama (Shizuoka Univ.) # 3-iterated quadratic Ore extensions 10
- 45 Kenta Ueyama (Shizuoka Univ.) # Fixed subalgebras of AS-regular algebras under finite cyclic group actions 15
- 46 Yasuhiko Takehana # A generalization of stable torsion theory 10
(Hakodate Nat. Coll. of Tech.)
- 47 Hideto Asashiba (Shizuoka Univ.) # Derived equivalence classification of generalized multifold extensions of
Mayumi Kimura (Shizuoka Univ.) piecewise hereditary algebras of tree type 10
- 48 Hideto Asashiba (Shizuoka Univ.) # Induced pseudofunctors and derived equivalences of oplax 2-representations
of a category 15
- 49 Hiroki Abe (Oyama Nat. Coll. of Tech.) # Tilting modules arising from two-term tilting complexes 10
- 50 Masahide Konishi (Nagoya Univ.) # Selfinjectivity of algebras arising from tiling quivers and their potentials
..... 10
- 51 So Okada (Kyoto Univ.) # On Euler characteristics for large Kronecker quivers 10
- 52 Takahiko Furuya (Tokyo Univ. of Sci.) * Hochschild cohomology of cluster-tilted algebras of types A and D ... 15
Takao Hayami (Hokkai-Gakuen Univ.)
- 53 Takuma Aihara (Chiba Univ.) Dimensions of triangulated categories with respect to subcategories .. 15
Tokuji Araya (Tokuyama Coll. of Tech.)
Osamu Iyama (Nagoya Univ.)
Ryo Takahashi (Nagoya Univ./MSRI)
Michio Yoshiwaki (Osaka City Univ.)

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

- Hyohe Miyachi # Comparison between module categories over modular quantum general
(Nagoya Univ./Osaka City Univ.) linear groups

September 21st (Fri) Session Room I

9:00–11:00

- 54 Tomohiro Iwami * Certain refinements of a projectivity criterion according to V. V. Shokurov
(Kyushu Sangyo Univ.) and the log minimal model program for slc pairs 10
- 55 Makoto Sakurai # Geometric quantization of Wess–Zumino–Witten model and virtual lo-
calization formula 15
- 56 Shigeru Iitaka (Gakushuin Univ.) # sharp estimate of the birational invariant k in terms of $(2,1)$ genera .. 15

- 57 Takanori Ayano (Osaka Univ.)[#] On series expansion around the origin of sigma functions for telescopic curves 10
- 58 Tohru Gotoh (Nat. Defense Acad. of Japan)^{*} A holomorphic section relating to 2-pointed Weierstrass gap set 10
- 59 Kenta Watanabe (Osaka Univ.)^{*} On the Weierstrass semigroups for pointed curves on K3 surfaces with Picard number one 10
- 60 Ryo Kawaguchi (Kyushu Sangyo Univ.)[#] Weierstrass gap sequences at total ramification points on curves on a toric surface 15
- 61 Katsuhisa Furukawa (Waseda Univ.)[#] Duality with expanding maps and shrinking maps, and its applications to Gauss maps 15

11:00–12:00 Invited Talk by Research Section

Yoshinori Gongyo (Univ. of Tokyo)[#] Log pluricanonical representations and abundance

14:15–15:45

- 62 Takayuki Hibi (Osaka Univ.)[#] Toric rings arising from cyclic polytopes 15
 Akihiro Higashitani (Osaka Univ.)
 Lukas Katthän (Univ. Marburg)
 Ryota Okazaki (Osaka Univ.)
- 63 Kazunori Matsuda (Nagoya Univ.)^{*} Characterization of Gorenstein strongly Koszul Hibi rings by invariants of F -singularities 15
 Takahiro Chiba (Nagoya Univ.)
- 64 Futoshi Hayasaka (Kagoshima Nat. Coll. of Tech.)^{*} Asymptotic periodicity of primes associated to multigraded modules .. 10
- 65 Ryota Okazaki (Osaka Univ.)[#] On a minimal free resolution of a Borel fixed ideal and its supporting CW complex 15
 Kohji Yanagawa (Kansai Univ.)
- 66 Yosuke Kuratomi (Kitakyushu Nat. Coll. of Tech.)^{*} On Goldie extending modules and extending modules 10
- 67 Yousuke Kuratomi (Kitakyushu Nat. Coll. of Tech.)^{*} On semi-lifting modules 10

15:45–16:45 Invited Talk by Research Section

Shigeru Kuroda (Tokyo Metro. Univ.)[#] Wild automorphisms of a polynomial ring

Geometry

September 18th (Tue) Session Room VIII

9:00–12:00

- 1 Sadahiro Maeda (Saga Univ.)^{*} Some characterizations of isoparametric hypersurfaces in a sphere 15
- 2 Sadahiro Maeda (Saga Univ.)^{*} Congruence classes of minimal ruled real hypersurfaces in a nonflat complex space form 15
 Toshiaki Adachi (Nagoya Inst. of Tech.)
 Tuya Bao (Inner Mongolia Univ. for Nat.)

13 Geometry

- 3 Kazuhiro Okumura [#] η -Einstein real hypersurfaces in a nonflat complex space form 10
(Asahikawa Nat. Coll. of Tech.)
- 4 Kazuyuki Enomoto [#] Total torsion of curves in E^3 15
(Tokyo Univ. of Sci.)
Jin-ichi Itoh (Kumamoto Univ.)
- 5 Naoyuki Koike (Tokyo Univ. of Sci.) * The classifications of certain kind of isoparametric submanifolds in non-compact symmetric spaces 15
- 6 Makiko Tanaka (Tokyo Univ. of Sci.) * The intersection of two real forms in Hermitian symmetric spaces of compact type II 15
Hiroyuki Tasaki (Univ. of Tsukuba)
- 7 Hiroshi Iriyeh (Tokyo Denki Univ.) * On the structure of the intersection of real flag manifolds in a complex flag manifold 10
Takashi Sakai (Tokyo Metro. Univ.)
Hiroyuki Tasaki (Univ. of Tsukuba)
- 8 Akira Kubo (Hiroshima Univ.) [#] Congruency of orbits of the solvable parts of parabolic subgroups 10
Hiroshi Tamaru (Hiroshima Univ.)
- 9 Kastuei Kemnotsu (Tohoku Univ.) * On the global existence of generalized rotational hypersurfaces with prescribed mean curvature in the Euclidean 15
Takeyuki Nagasawa (Saitama Univ.)
- 10 Sung-Hong Min (KIAS) [#] Optimal isoperimetric inequalities for complete proper minimal submanifolds in hyperbolic space 15
Keomkyo Seo
(Sookmyung Women's Univ.)
- 11 Keomkyo Seo [#] Geometric inequalities for submanifolds with bounded mean curvature 15
(Sookmyung Women's Univ.)
- 14:15–16:00**
- 12 Hironori Kumura (Shizuoka Univ.) Exit radii of submanifolds from cylindrical domains in warped product manifolds 15
- 13 Hiraku Nozawa (IHÉS) [#] On Haefliger cohomology of Riemannian foliations 15
José Ignacio Royo Prieto
(Univ. Basque Country)
- 14 Oliver Goertsches (Univ. Hamburg) [#] On vanishing and rigidity of basic cohomology of Sasakian manifolds 15
Hiraku Nozawa (IHÉS)
Dirk Töben (Univ. São Paulo)
- 15 Jesús Antonio Álvarez López [#] Characteristic classes of transversely homogeneous foliations 15
(Univ. Santiago de Compostela)
Hiraku Nozawa (IHÉS)
- 16 Seoung Dal Jung (Jeju Nat. Univ.) [#] Transverse Killing forms on foliated Riemannian manifolds 15
- 17 Hiraku Abe (Tokyo Metro. Univ.) [#] Schubert calculus for weighted Grassmannians 15
Tomoo Matsumura (KAIST)
- 16:15–17:15 Invited Talk by Research Section**
- Toshihiro Shoda (Saga Univ.) [#] On Morse index of minimal surfaces

September 19th (Wed) Session Room VIII and IX

10:30–10:45 Presentation Ceremony for 2012 Geometry Prize**10:50–11:50 Award Lecture for 2012 Geometry Prize**Ken'ichi Ohshika (Osaka Univ.)[#] Topological structure of deformation spaces of Kleinian groups**13:15–14:15 Award Lecture for 2012 Geometry Prize**Yukinobu Toda (Univ. of Tokyo)[#] Stability conditions and Donaldson–Thomas type invariants on Calabi–Yau 3-folds

September 20th (Thu) Session Room VIII

9:00–12:00

- 18 Hiroaki Izumi (Elpida Memory, Inc.)[#] The mathematical full solution of business cycle as a phase transition 15
- 19 Tetsuya Nagano (Univ. of Nagasaki)[#] Linear parallel displacements along a infinitesimal parallelogram and “curvature” 15
- 20 Tomoyo Kanazawa (Tokyo Univ. of Sci.)[#] Wigner function of the MIC-Kepler problem 10
Akira Yoshioka (Tokyo Univ. of Sci.)
- 21 Tsukasa Takeuchi (Tokyo Univ. of Sci.)[#] A recursion operator for the geodesic flow of Schwarzschild metric 10
Kiyonori Hosokawa (Tokyo Univ. of Sci.)
Shinsuke Takatani (Tokyo Univ. of Sci.)
- 22 Yukiko Konishi (Kyoto Univ.)^{*} Mixed Frobenius structure and local A-model 15
Satoshi Minabe (Tokyo Denki Univ.)
- 23 Tomoaki Yatsui (Asahikawa Med. Univ.)[#] On the prolongations of free pseudo-product fundamental graded Lie algebras 10
- 24 Yuichiro Tanaka (Univ. of Tokyo)^{*} Visible actions on flag varieties and a generalization of the Cartan decomposition 15
- 25 Yoshihiko Matsumoto (Univ. of Tokyo)[#] The second variational formula of the total Q -curvature in conformal geometry 15
- 26 Hiroaki Ishida (Osaka City Univ.)[#] Complex manifolds with maximal torus actions 15
- 27 Sanae Kurosu (Tokyo Univ. of Sci.)^{*} A characterization of a pluriharmonic affine immersion of codimension two 10
- 28 Hiroshi Matsuzoe (Nagoya Inst. of Tech.)^{*} Quasi-statistical manifolds and geometry of affine distributions 10
Takashi Kurose (Kwansei Gakuin Univ.)
Masayuki Henmi (Inst. of Stat. Math.)
- 29 Hiroshi Matsuzoe (Nagoya Inst. of Tech.)^{*} Generalized conformal structures on statistical manifolds and geometry of q -exponential families 10
Atsumi Ohara (Univ. of Fukui)
Shun-ichi Amari (RIKEN)

14:15–16:15

- 30 Shin Kikuta (Sophia Univ.) Numerical comparison between Carathéodory measure hyperbolicity and positivity of canonical bundle along subvarieties 20
- 31 Mitsuhiro Imada (Keio Univ.)[#] Normality of complex contact manifolds 15
- 32 Yohsuke Imagi (Kyoto Univ.)* On the boundary of the Moduli space of special Lagrangian submanifolds 15
- 33 Hisashi Kasuya (Univ. of Tokyo)* Vaisman metrics on solvmanifolds and Oeljeklaus–Toma manifolds . . . 15
- 34 Mitsuhiro Itoh (Univ. of Tsukuba)[#] Rigidity, volume entropy and Kähler, quaternionic Kähler Hadamard
Hiroyasu Satoh (Tokyo Denki Univ.) manifolds 10
Young Jin Suh (Kyungpook Nat. Univ.)
- 35 Peng Fei Bai (Nagoya Inst. of Tech.)* On volumes of trajectory-balls for Kaehler magnetic fields 10
Toshiaki Adachi (Nagoya Inst. of Tech.)
- 36 Ayato Mitsuishi (Tohoku Univ.)* Locally Lipschitz contractibility of Alexandrov spaces and its applica-
Takao Yamaguchi (Univ. of Tsukuba) tions 20

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

- Atsushi Kasue (Kanazawa Univ.)* Embedding of graphs and Rayleigh monotonicity law

Complex Analysis

September 18th (Tue) Session Room II

10:00–12:00

- 1 Hitoshi Shiraishi (Kinki Univ.)[#] Extensions of Nunokawa lemma for argument properties 15
- 2 Toshio Hayami (Kinki Univ.)[#] A sufficient condition for p -valently harmonic functions 15
- 3 Tsubasa Itoh (Hokkaido Univ.)[#] Modulus of continuity of p -Dirichlet solutions in a metric measure space
. 15
- 4 Rikio Yoneda (Otaru Univ. of Commerce)* Toeplitz and Hankel operators on the Bergman spaces with closed range
. 15
- 5 Fumi-Yuki Maeda (Hiroshima Univ.)* Approximate identities and Young type inequalities in Musielak–Orlicz
Mizuta Yoshihiro spaces 15
(Hiroshima Inst. of Tech.)
Takao Ohno (Oita Univ.)
Tetsu Shimomura (Hiroshima Univ.)

14:30–16:15

- 6 Yoshihiko Shinomiya (Tokyo Tech)[#] Veech holomorphic families of Riemann surfaces and Diophantine problems 15
- 7 Masahiro Yanagishita (Waseda Univ.)[#] Teichmüller distance and Kobayashi distance on subspaces of the universal Teichmüller space 15
- 8 Hideki Miyachi (Osaka Univ.)[#] A Characterization of biholomorphic automorphisms of Teichmüller space 15
- 9 Yohei Komori (Waseda Univ.)[#] On growth rates of 3-dimensional hyperbolic Coxeter prisms 15
- 10 Katsuhiko Matsuzaki (Waseda Univ.)[#] Conjugation of a circle diffeomorphism group to a Moebius group 15

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

- Toshiyuki Sugawa (Tohoku Univ.)[#] Generalization of the Schwarzian derivative —Towards more invariance and higher orders

September 19th (Wed) Session Room II

10:00–12:00

- 11 Yan-Yan Wang (Nagoya Univ.)^{*} Variations of Bergman kernels for some explicitly given families of planar domains 20
- 12 Shin Kikuta (Sophia Univ.) On restricted Carathéodory pseudo-volume forms (corrections) 20
- 13 Sachiko Hamano (Fukushima Univ.)[#] Log-plurisubharmonicity of metric deformations induced by Schiffer and harmonic spans 15
- 14 Peter Duren (Univ. of Michigan)[#] Two-point distortion theorems for harmonic and pluriharmonic mappings 15
Hidetaka Hamada
(Kyushu Sangyo Univ.)
Gabriela Kohr (Babeş-Bolyai Univ.)
- 15 Ian Graham (Univ. of Toronto)[#] Extension operators and subordination chains 15
Hidetaka Hamada
(Kyushu Sangyo Univ.)
Gabriela Kohr (Babeş-Bolyai Univ.)
- 16 Satoru Shimizu (Tohoku Univ.) Diffeomorphisms between Siegel domains of the first kind preserving the holomorphic automorphism groups and applications 15
Akio Kodama (Kanazawa Univ.)

13:15–14:15 Invited Talk by Research Section

- Hiroshi Yamaguchi (Shiga Univ.)[#] Pseudoconvex domains in the Hopf surface

Functional Equations

September 18th (Tue) Session Room III

9:00–12:00

- 1 Takashi Oyabu 10 talks including “Evolution equations of parabolic type” 5

2	Hidetoshi Tahara (Sophia Univ.) * Hiroshi Yamazawa (Shibaura Inst. of Tech.)	Summability of formal solutions of some linear partial differential equations	10
3	Masashi Yamaguchi (Univ. of Tokyo) # Sakai Hidetaka (Univ. of Tokyo)	Rigidity index and q -middle convolution of linear q -difference equations	10
4	Yoko Umeta (Hokkaido Univ.) *	Construction of general formal solutions for equations of the second Painlevé hierarchy	10
5	Tomonari Sei (Keio Univ.) # Akimichi Takemura (Univ. of Tokyo) Katsuyoshi Ohara (Kanazawa Univ.) Nobuki Takayama (Kobe Univ.)	Holonomic gradient descent for Fisher distribution on the rotation group $SO(3)$	10
6	Tamio Koyama (Kobe Univ./JST CREST) # Hiromasa Nakayama (Kobe Univ./JST CREST) Kenta Nishiyama (Osaka Univ./JST CREST) Nobuki Takayama (Kobe Univ./JST CREST)	The holonomic rank of the Fisher–Bingham system of differential equations	10
7	Mika Tanda (Kinki Univ.) # Takashi Aoki (Kinki Univ.)	Borel sums of Voros coefficients and parametric Stokes phenomena for hypergeometric differential equations	10
8	Kana Ando (Chiba Univ.) *	Numerical computation of Stokes multipliers	10
9	Shinji Sasaki (Kyoto Univ.) #	On the Borel summability of WKB-theoretic transformation series concerning fixed singularities	10
10	Masafumi Yoshino (Hiroshima Univ.) #	On connection problem of some Hamiltonian system	10
11	Hisashi Morioka (Univ. of Tsukuba) # Hiroshi Isozaki (Univ. of Tsukuba)	A Rellich type theorem for discrete Schrödinger operators	10
12	Hironori Kumura (Shizuoka Univ.) *	Limiting absorption principle on manifolds having ends with various measure growth rate limits	10
13	Haruya Mizutani (Kyoto Univ.) #	On Strichartz estimates for Schrödinger equations with unbounded electromagnetic potentials	10
14	Haruya Mizutani (Kyoto Univ.) #	Remarks on Strichartz estimates for Schrödinger equations on manifolds with ends	10
14:15–16:15			
15	Takehiro Nagaoka (Kyoto Univ.) # Yorimasa Oshime (Doshisha Univ.)	Asymptotic behavior of solutions of linear differential systems	10
16	Hideaki Matsunaga (Osaka Pref. Univ.) # Satoru Murakami (Okayama Univ. of Sci.) Yutaka Nagabuchi (Okayama Univ. of Sci.)	Formal adjoint operators and asymptotic formula for solutions of integral equations	10
17	Jitsuro Sugie (Shimane Univ.) # Tsunehiko Shimadu (Shimane Univ.) Takashi Yamasaki (Shimane Univ.)	Criteria for global asymptotic stability of damped superlinear oscillators	10

- 18 Kunihiko Taniguchi (Mojigakuen Senior High School) * Extinction in a two-species nonautonomous Lotka–Volterra competition system 10
 Hiroyuki Usami (Gifu Univ.)
- 19 Shinji Adachi (Shizuoka Univ.) * Uniqueness and non-degeneracy of positive solutions for a class of quasi-linear elliptic equations with general nonlinearities 10
 Masataka Shibata (Tokyo Tech)
 Tatsuya Watanabe (Kyoto Sangyo Univ.)
- 20 Naoki Sioji (Yokohama Nat. Univ.) * Radial symmetry of n -mode positive solutions for semilinear elliptic equations in a disc and its applications to the Hénon equation 10
 Kohtaro Watanabe (Nat. Defense Acad. of Japan)
- 21 Ryuji Kajikiya (Saga Univ.) * Multiple bifurcations of solutions for one-dimensional p -Laplace equation 10
- 22 Ryuji Kajikiya (Saga Univ.) * Least energy solutions of the Hénon equation in point symmetric or reflectionally symmetric domains 10
- 23 Ryuji Kajikiya (Saga Univ.) * Asymmetry of solutions for the Hénon equation in general symmetric domains 10

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

- Satoshi Tanaka (Okayama Univ. of Sci.)[#] Nonuniqueness of positive solutions of superlinear two-point boundary value problems - Symmetry-breaking of even positive solutions -

September 19th (Wed) Session Room III

9:00–12:00

- 24 Toru Kan (Tohoku Univ.) * On non-radially symmetric solutions of the Liouville–Gel’fand equation on a two-dimensional annular domain 10
- 25 Mieko Tanaka (Tokyo Univ. of Sci.) * The antimaximum principle and the existence of a solution for the generalized p -Laplace equations with indefinite weight 10
- 26 Mieko Tanaka (Tokyo Univ. of Sci.) * Multiple existence results of solutions for quasilinear elliptic equations with a nonlinearity depending on a parameter 10
 Dumitru Motreanu (Univ. de Perpignan)
- 27 Tetsutaro Shibata (Hiroshima Univ.) * Critical exponents of the asymptotic formulas for two-parameter variational eigencurves 10
- 28 Futoshi Takahashi (Osaka City Univ.)[#] On the number of maximum points of least energy solution to a two-dimensional Hénon equation with large exponent 10
- 29 Shuichi Jimbo (Hokkaido Univ.)[#] Regular domain variation and electromagnetic frequencies 10
- 30 Yasuhito Miyamoto (Keio Univ.)[#] Global branches of sign-changing solutions to a semilinear Dirichlet problem in a disk 10
- 31 Yasuhito Miyamoto (Keio Univ.)[#] A planar convex domain with many isolated hot spots on the boundary 10
- 32 Goro Akagi (Kobe Univ.)[#] Symmetry and stability of asymptotic profiles for fast diffusion equations 10
 Ryuji Kajikiya (Saga Univ.)
- 33 Goro Akagi (Kobe Univ.)[#] Symmetry breaking of least energy solutions of Emden–Fowler equations 10
 Ryuji Kajikiya (Saga Univ.)

- 34 Yuki Kaneko (Waseda Univ.)[#] A free boundary problem related to an ecological model in multi-dimensional annulus 10
 Yoshio Yamada (Waseda Univ.)
- 35 Kazuhiro Oeda (Waseda Univ.)^{*} Stationary solutions for a prey-predator model with nonlinear diffusion and a protection zone 10
- 36 Yan-Yu Chen (Meiji Univ.)[#] Existence and uniqueness of rigidly rotating spiral waves by a wave front interaction model 10
 Jong-Shenq Guo (Tamkang Univ.)
 Hirokazu Ninomiya (Meiji Univ.)
- 37 Keisuke Takasao (Hokkaido Univ.)^{*} The existence of the weak solution for mean curvature flow with transport term 10
 Yoshihiro Tonegawa (Hokkaido Univ.)
- 38 Masashi Mizuno (Nihon Univ.)^{*} Boundary monotonicity formula for the Allen–Cahn equation with Neumann boundary condition 10
 Yoshihiro Tonegawa (Hokkaido Univ.)

13:15–14:15 Invited Talk by Research Section

- Naoto Kumano-go (Kogakuin Univ.)[#] Phase space path integrals as analysis on path space

September 20th (Thu) Session Room III

9:00–12:00

- 39 Michiaki Onodera (Tohoku Univ.)[#] A variational problem and a related geometric evolution equation 10
- 40 Aya Ishizeki (Saitama Univ.)^{*} The removability of singularity of density and the absolute integrability of variational formulae for Möbius energy 10
 Takeyuki Nagasawa (Saitama Univ.)
- 41 Sachiko Ishida (Tokyo Univ. of Sci.)[#] Possibility of the blow-up in quasilinear degenerate Keller–Segel systems 10
 Takashi Ono
 (Tokyo Jitsugyo High School)
 Tomomi Yokota (Tokyo Univ. of Sci.)
- 42 Takashi Suzuki (Osaka Univ.)[#] Exclusion of boundary blowup for 2D chemotaxis system provided with Dirichlet boundary condition for the Poisson part 10
- 43 Masahiko Shimojo (Hokkaido Univ.)[#] Control of blow-up set by spatial inhomogeneous coefficient for a semi-linear parabolic equation 10
 Jong-Shenq Guo (Tamkang Univ.)
 Chang-Shou Lin
 (Nat. Taiwan Normal Univ.)
 Yung-Jen Lin Guo
 (Nat. Taiwan Normal Univ.)
- 44 Kazushige Nakagawa (Tohoku Univ.)^{*} The Phragmén–Lindelöf theorem of fully nonlinear systems for L^p -viscosity solutions with unbounded ingredients 10
- 45 Hiroyoshi Mitake (Fukuoka Univ.)^{*} On the large time behavior of solutions of Hamilton–Jacobi equations associated with nonlinear boundary conditions 10
 Hitoshi Ishii (Waseda Univ.)
 Guy Barles (Univ. de Tours)
- 46 Hiroyoshi Mitake (Fukuoka Univ.)^{*} Remarks on the large time behavior of viscosity solutions of quasi-monotone weakly coupled systems of Hamilton–Jacobi equations 10
 Hung Vinh Tran (UC, Berkeley)
- 47 Atsushi Nakayasu (Univ. of Tokyo)^{*} Eikonal equations in metric spaces 10
 Yoshikazu Giga (Univ. of Tokyo)
 Nao Hamamuki (Univ. of Tokyo)
- 48 Gen Nakamura (Hokkaido Univ.)[#] Linear sampling method for identifying cavities in a heat conductor . . 10
 Haibing Wang (Hokkaido Univ.)

49	Junichi Harada (Waseda Univ.) *	Some blow-up solutions of the heat equation with nonlinear boundary conditions	10
50	Yusuke Yamauchi (Waseda Univ.) *	Life span of positive solutions for the Cauchy problem for the parabolic equations	10
51	Masakazu Yamamoto (Hirosaki Univ.) *	Asymptotic behavior of solutions to the dissipative equation with anomalous diffusion	10
52	Michiyuki Watanabe (Niigata Univ.) *	Inverse scattering at fixed amplitude for nonlinear Schrödinger equations	10
53	Tomoyuki Niizato (Osaka Univ.) *	The decay rates of solutions to the non-linear dissipative-dispersive wave equations	10

12:10–12:30 Presentation Ceremony for 2012 Analysis Prize

14:15–16:15

54	Yoshihisa Nakamura (Kumamoto Univ.) Naoyasu Kita (Univ. of Miyazaki)	* Large time behavior of small solutions to multi-component nonlinear Schrödinger equations	10
55	Kota Uriya (Tohoku Univ.) * Takayoshi Ogawa (Tohoku Univ.)	Asymptotic behavior of a solution to a nonlinear Schrödinger system	10
56	Hironobu Sasaki (Chiba Univ.) *	Scattering problems for the one-dimensional nonlinear Dirac equation with power nonlinearity	10
57	Toshiyuki Suzuki (Tokyo Univ. of Sci.) †	Energy methods for Hartree type equations with inverse-square potentials	10
58	Masahiro Ikeda (Osaka Univ.) † Yuta Wakasugi (Osaka Univ.)	Remark on nonrelativistic limit for nonlinear Klein–Gordon system with mass resonance	10
59	Nakao Hayashi (Osaka Univ.) *	Asymptotic behavior of solutions to nonlinear Klein–Gordon equations in 1d	10
60	Norihisa Ikoma (Tohoku Univ.) *	On compactness of minimizing sequences for some nonlinear Schrödinger system	10
61	Yohei Yamazaki (Kyoto Univ.) †	Transverse instability for a system of nonlinear Schrödinger equations	10
62	Satoshi Masaki (Gakushuin Univ.) †	On minimal non-scattering solution for L^2 subcritical nonlinear Schrödinger equation.	10
63	Shingo Ito (Tokyo Univ. of Sci.) * Keiichi Kato (Tokyo Univ. of Sci.) Masaharu Kobayashi (Yamagata Univ.)	Estimates on modulation spaces for Schroedinger evolution operators with a potential	10

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

Hideyuki Miura (Osaka Univ.)	On fundamental solutions for fractional diffusion equations with divergence free drift
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September 21st (Fri) Session Room III

9:00–12:00

64	Ryosuke Hyakuna (Waseda Univ.) *	On global solutions to the nonlinear Schrödinger equation with L^p -initial data	10
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65	Tsukasa Iwabuchi (Chuo Univ.) Takayoshi Ogawa (Tohoku Univ.)	* Ill-posedness for the nonlinear Schrödinger equations in one and two space dimensions	10
66	Mamoru Okamoto (Kyoto Univ.)	# Well-posedness of the Cauchy problem for the Chern–Simons–Dirac system	10
67	Shuji Machihara (Saitama Univ.) Takayoshi Ogawa (Tohoku Univ.)	# Time global solutions in L^p for Chern–Simons–Dirac equation in $1 + 1$ dimension	10
68	Takamori Kato (Kyoto Univ.) Kotaro Tsugawa (Nagoya Univ.)	# Unconditional well-posedness of the fifth order modified KdV equation with periodic boundary condition	10
69	Eiji Onodera (Kochi Univ.) Hiroyuki Chihara (Kagoshima Univ.)	* A fourth-order dispersive flow into Kähler manifolds	10
70	Eiji Onodera (Kochi Univ.)	* A fourth-order dispersive flow for closed curves on compact Riemann surfaces	10
71	Jun-ichi Segata (Tohoku Univ.)	* Well-posedness for the fourth order nonlinear Schrödinger type equation on torus	10
72	Yusuke Sugiyama (Tokyo Univ. of Sci.)	# Global solvability for some quasilinear wave equation in one space dimension	10
73	Hideo Kubo (Tohoku Univ.) Ayako Osaka (Tohoku Univ.) Muhammet Yazici (Tohoku Univ.)	# Existence and blow-up of solutions to nonlinear wave equations in one space dimension	10
74	Hiroyuki Takamura (Future Univ.-Hakodate) Kyouhei Wakasa (Future Univ.-Hakodate)	* The lifespan of solutions of a nonlinear wave equations with a quadratic term of non-single and indefinite sign in four space dimensions	10
75	Erika Ushikoshi (Tohoku Univ.)	* Hadamard variational formula for the Green function for the velocity and pressure of the Stokes equations with the Dirichlet boundary condition	10
76	Ken Abe (Univ. of Tokyo) Yoshikazu Giga (Univ. of Tokyo)	* The L^∞ -Stokes semigroup in exterior domains	10
77	Hirokazu Saito (Waseda Univ.)	# On the L_p - L_q maximal regularity of the Neumann–Dirichlet problem for the Stokes equations in an infinite layer	10
78	Miho Murata (Waseda Univ.) Yoshihiro Shibata (Waseda Univ.)	# On the sectorial \mathcal{R} -boundedness of the Stokes operator for the compressible viscous fluid flow	10
14:15–16:30			
79	Tomoyuki Nakatsuka (Nagoya Univ.)	* Uniqueness of steady Navier–Stokes flows in exterior domains	10
80	Hajime Koba (Univ. of Tokyo)	* Nonlinear stability of Ekman boundary layers in rotating stratified fluids	10
81	Tsukasa Iwabuchi (Chuo Univ.) Ryo Takada (Kyoto Univ.)	* Time periodic solutions to the Navier–Stokes equations in the rotational framework	10
82	Tsukasa Iwabuchi (Chuo Univ.) Ryo Takada (Kyoto Univ.)	* Global solutions for the Navier–Stokes equations in the rotational framework	10
83	Tsuyoshi Yoneda (Hokkaido Univ.)	* A mathematical clue to the separation phenomena on the two-dimensional Navier–Stokes equation	10

- 84 Kei Matsuura (Waseda Univ.)* Mitsuharu Ôtani (Waseda Univ.) Initial-boundary value problem for micropolar fluid equations with spin-vorticity interaction boundary condition 10
- 85 Noboru Chikami (Tohoku Univ.)* The local existence and blow-up criterion of the compressible Navier–Stokes system with a Yukawa-potential 10
- 86 Jan Brezina (Kyushu Univ.)# Yoshiyuki Kagei (Kyushu Univ.) Asymptotic behavior of solutions to the compressible Navier–Stokes equation around a time-periodic parallel flow 10
- 87 Masashi Ohnawa (Waseda Univ./Tokyo Tech) Shinya Nishibata (Tokyo Tech)* On the convergence rates towards traveling waves for a model system of radiating gas 10
- 88 Masashi Ohnawa (Waseda Univ./Tokyo Tech) Shinya Nishibata (Tokyo Tech)* Asymptotic stability of a stationary solution to the Euler–Poisson equations including fluid-boundary interaction 10
- 89 Masahiro Suzuki (Tokyo Tech)* Masahiro Takayama (Keio Univ.) Bongsuk Kwon (Ulsan Nat. Inst. of Sci. and Tech.) Asymptotic behavior of solutions to a shallow water equation 10
- 90 Tetu Makino (Yamaguchi Univ.)* Application of Nash–Moser theory to gasdynamics 10

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

- Katsuyuki Ishii (Kobe Univ.)# Mathematical analysis of some algorithms for mean curvature flow

Real Analysis

September 20th (Thu) Session Room II

10:00–11:45

- 1 Yuichi Kanjin (Kanazawa Univ.)# Kunio Sato (Yamagata Univ.) Hardy-type inequalities for the generalized Mehler transform 15
- 2 Yutaka Terasawa (Univ. of Tokyo)# Hitoshi Tanaka (Univ. of Tokyo) Positive operators and maximal operators in a filtered measure space 15
- 3 Yoshihiro Mizuta (Hiroshima Inst. of Tech.) Eiichi Nakai (Ibaraki Univ.) Yoshihiro Sawano (Tokyo Metro. Univ.) Tetsu Shimomura (Hiroshima Univ.)# Gagliardo–Nirenberg inequality for generalized Riesz potentials of functions in Musielak–Orlicz spaces 15
- 4 Yohei Tsutsui (Waseda Univ.) Weighted inequalities for convolution operators with smooth functions on Hardy spaces and an application to decay property of solutions to Navier–Stokes equations 15
- 5 Takanori Yamamoto (Hokkai-Gakuen Univ.) Takahiko Nakazi (Hokusei Gakuen Univ.)* An argument of a function in $H^{1/2}$ 15
- 6 Shinya Moritoh (Nara Women's Univ.)* Mulholland's inequality revisited 10

14:15–15:40

- 7 Aoi Honda (Kyushu Inst. of Tech.)[#] On the linearity and metrics of a new sequence space $\Lambda_2(f)$ 15
 Yoshiaki Okazaki
 (Kyushu Inst. of Tech.)
 Hiroshi Sato (Kyushu Univ.)
- 8 Mikio Kato (Shinshu Univ.)^{*} Weak nearly uniform smoothness of direct sums of Banach spaces 15
 Takayuki Tamura (Chiba Univ.)
- 9 Mikio Kato (Shinshu Univ.)^{*} On relations between $C_{NJ}(X)$ and $J(X)$ and a new geometric constant
 Yasuji Takahashi (Okayama Pref. Univ.) $A(X)$ 15
- 10 Koji Aoyama (Chiba Univ.)[#] Strong convergence of an iterative sequence for maximal monotone operators in a Hilbert space 15
- 11 Sachiko Atsushiba[#] Nonlinear mean convergence theorems for nonlinear mappings 15
 (Univ. of Yamanashi)

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

- Jürgen Appell (Univ. Würzburg)[#] Condensing operators and applications: old and new

September 21st (Fri) Session Room II

9:40–12:00

- 12 Toshikazu Watanabe (Niigata Univ.)[#] On non-additive measures which take values in an ordered topological vector space 15
- 13 Yasunori Kimura (Toho Univ.)[#] Convergence of subsets of a complete geodesic space with curvature
 Kenzi Satô (Tamagawa Univ.) bounded above and its applications 15
- 14 Yoichi Miyazaki (Nihon Univ.)^{*} A Method to evaluate resolvent kernels of elliptic operators 12
- 15 Noriaki Yamazaki (Kanagawa Univ.)[#] Optimal control of positive solutions to second order impulsive differential equations 15
 Lingling Zhang (Taiyuan Univ. of Tech.)
 Chengbo Zhai (Shanxi Univ.)
- 16 Makoto Nakamura (Tohoku Univ.)^{*} Remarks on global solutions for nonlinear wave equations under the standard null conditions 10
- 17 Makoto Nakamura (Tohoku Univ.)^{*} The Cauchy problem for dissipative wave equations with weighted nonlinear terms 10
 Hidemitsu Wadade (Gifu Univ.)
- 18 Yukino Tomizawa (Chuo Univ.)[#] Unique solutions to nonautonomous differential equations in Banach spaces 20
 Yoshikazu Kobayashi (Chuo Univ.)
 Naoki Tanaka (Shizuoka Univ.)
- 19 Motohiro Sobajima[#] Generalized Hardy–Rellich inequalities in \mathbb{R}^N for operators with singular first order terms 15
 (Tokyo Univ. of Sci.)
- 20 Risei Kano (Kochi Univ.)[#] Asymptotic behavior of solutions for the tumor invasion models 15
 Akio Ito (Kinki Univ.)

14:15–16:00

- 21 Hiroshi Watanabe (Salasian Polytecnic) [#] Entropy solutions to initial value problems for strongly degenerate parabolic equations with discontinuous coefficients 15
- 22 Naoki Sato [#] On a one dimensional free boundary problem for adsorption phenomena
(Nagaoka Nat. Coll. of Tech.) 20
Toyohiko Aiki (Japan Women's Univ.)
Yusuke Murase (Meijo Univ.)
- 23 Yusuke Murase (Meijo Univ.) [#] Existence results for a mathematical modeling for brewing process of
Akio Ito (Kinki Univ.) Japanese Sake 15
- 24 Shun Uchida (Waseda Univ.) * The solvability of double-diffusive convection system with Soret's coef-
Mitsuharu Ôtani (Waseda Univ.) ficient depending on the concentration of solute 15
- 25 Goro Akagi (Kobe Univ.) [#] Doubly nonlinear parabolic equations involving variable exponents ... 15
- 26 Kota Kumazaki [#] On a mathematical model of moisture transport with a time-dependent
(Tomakomai Nat. Coll. of Tech.) porosity in concrete carbonation process 15

16:10–17:10 Invited Talk by Research Section

- Okiihiro Sawada (Gifu Univ.) [#] The ill-posedness theory of the Navier–Stokes equations in the critical space

Functional Analysis

September 19th (Wed) Session Room IV

9:45–11:50

- 1 Kazunori Ando (Univ. of Tsukuba) [#] Inverse scattering theory for discrete Schrödinger operators on the hexagonal lattice 15
- 2 Hisashi Morioka (Univ. of Tsukuba) [#] Inverse scattering at a fixed energy for discrete Schrödinger operators
Hiroshi Isozaki (Univ. of Tsukuba) on the square lattice 15
- 3 Yuji Nomura (Ehime Univ.) [#] Landau levels of Schrödinger operators with periodic Aharonov–Bohm
Takuya Mine (Kyoto Inst. Tech.) magnetic fields on the hyperbolic plane 15
- 4 Toshihisa Kubo (Univ. of Tokyo) [#] Conformally invariant systems of second-order differential operators .. 20
- 5 Yoshinori Kametaka (Osaka Univ.) [#] The best constant of discrete Sobolev inequality on a small Fullerene
and Carbon nano tube 15
- 6 Jun Hong Ha (Korea Tech.) [#] Unique identification for linearized sine-Gordon equation 15
Semion Gutman (Univ. of Oklahoma)
- 7 Shin-ichi Nakagiri (Kobe Univ.) [#] Identifiability of advection-diffusion equations 15

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

- Kiyoomi Kataoka (Univ. of Tokyo) [#] A system of fifth-order partial differential equations describing a surface which contains several continuous families of circular arcs

September 20th (Thu) Session Room IV

9:30–11:50

- 8 Kengo Matsumoto (Joetsu Univ. of Edu.) * Full groups of one-sided topological Markov shifts and classification of Cuntz–Krieger algebras 15
- 9 Takahiro Sudo (Univ. of Ryukyus) # Corona rank for Banach or C^* -algebras 15
- 10 Rui Okayasu (Osaka Kyoiku Univ.) # Free group C^* -algebras associated with ℓ_p 15
- 11 Yusuke Isono (Univ. of Tokyo) # Weak exactness for C^* -algebras and application to condition (AO) ... 15
- 12 Norio Nawata (Chiba Univ.) # Fundamental group of uniquely ergodic Cantor minimal systems 15
- 13 Tsuyoshi Kajiwara (Okayama Univ.) # Ideals of the core of C^* -algebras associated with self-similar maps ... 15
Yasuo Watatani (Kyushu Univ.)
- 14 Hiroki Sako (Kyoto Univ.) * Property A and the operator norm localization property for discrete metric spaces 15
- 15 Takahiro Hasebe (Kyoto Univ.) # Cumulants for spreadability system 15
Franz Lehner (Graz Univ. of Tech.)

14:15–16:30

- 16 Masaru Nagisa (Chiba Univ.) * Characterization of the diagonality for operators 10
Takashi Itoh (Gunma Univ.)
- 17 Masaru Nagisa (Chiba Univ.) # Some operator monotone functions 10
Masato Kawasaki (Chiba Univ.)
- 18 Takeaki Yamazaki (Toyo Univ.) # On some matrix inequalities for the matrix power and Karcher means
Yongdo Lim (Kyungpook Nat. Univ.) 10
- 19 Yuki Seo (Osaka Kyoiku Univ.) # The Jensen inequality in an external formula 10
- 20 Mitsuru Uchiyama (Shimane Univ.) # The principal inverse of the gamma function 15
- 21 Keiichi Watanabe (Niigata Univ.) * An inequality between products of $x^p - 1$ 15
- 22 Kei Ji Izuchi (Niigata Univ.) * Sums of weighted composition operators on H^∞ 10
Shūichi Ohno (Nippon Inst. of Tech.)
- 23 Takuya Hosokawa (Ibaraki Univ.) * Differences of weighted composition operators from the Bloch space to
Shūichi Ohno (Nippon Inst. of Tech.) H^∞ 15

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

- Shūichi Ohno (Nippon Inst. of Tech.) * Topological structure of the space of weighted composition operators on H^∞

September 21st (Fri) Session Room IV

9:30–11:50

- 24 Masatoshi Enooto (Koshien Univ.) * Brick Hilbert representaions of the Kronecker quiver by perturbation of
Yasuo Watatani (Kyushu Univ.) a finite rank operator 15
- 25 Reiji Tomatsu (Hokkaido Univ.) # On a classification of Rohlin flows on von Neumann algebras 15

26	Satoshi Goto (Sophia Univ.) [#]	On a mixed quantum double construction of subfactors	10
27	Satoshi Goto (Sophia Univ.) [#]	On a generalization of quantum multiple construction of subfactors . . .	10
28	Yoshikata Kida (Kyoto Univ.) [*]	Orbit equivalence invariants for actions of Baumslag–Solitar groups . .	15
29	Yoshikata Kida (Kyoto Univ.) [*]	Stability in orbit equivalence for Baumslag–Solitar groups and Vaes groups	15
30	Masafumi Sakao (Chiba Univ.) [#] Tatsuya Tsurii (Osaka Pref. Univ.) Satoe Yamanaka (Osaka Pref. Univ.) Satoshi Kawakami (Nara Univ. of Edu.)	The extension problem of discrete Abelian groups by hypergroups of order two	15
31	Akihito Wachi (Hokkaido Univ. of Edu.) [*]	Capelli identities of odd type	15
32	Hiroshi Yamashita (Hokkaido Univ.) [#] Fuhai Zhu (Nankai Univ.)	Quantization of singular quaternionic nilpotent K -orbits	15

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

	Mutsumi Saito (Hokkaido Univ.) [#]	Irreducible quotients of A -hypergeometric systems	
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Statistics and Probability

September 18th (Tue) Session Room V

9:15–12:00

1	Tomoko Takemura (Nara Women's Univ.) [*] Matsuyo Tomisaki (Nara Women's Univ.)	Lévy measure density corresponding to inverse local time	15
2	Yuji Hamana (Kumamoto Univ.) [*] Hiroyuki Matsumoto (Aoyama Gakuin Univ.)	On the distributions of the first hitting times of Bessel processes	15
3	Yuji Hamana (Kumamoto Univ.) [*] Hiroyuki Matsumoto (Aoyama Gakuin Univ.)	On the expected volume of the Wiener sausage in even dimensions . . .	15
4	Katusi Fukuyama (Kobe Univ.) [*] Sho Miyamoto	Metric discrepancy results for Erdős–Fortet sequence	5
5	Satoshi Ishiwata (Yamagata Univ.) [*] Hiroshi Kawabi (Okayama Univ.) Tsubasa Teruya (Okinawa Kaiho Bank)	An effect of fragile non-symmetry to the transition probability of random walks on the triangular lattice	15
6	Naoki Kubota (Nihon Univ.) [#]	Large deviations for simple random walk on supercritical percolation clusters	15
7	Daisuke Shiraishi (Kyoto Univ.) [#]	Cut points for simple random walks	15
8	Sergio Albeverio (Univ. Bonn) [#] Minoru W Yoshida (Tokyo City Univ.)	Probabilistic conclusion of constructive Euclidean $(\Phi_4)^4$ quantum field theory I	15
9	Itaru Mitoma (Saga Univ.) [#]	Asymptotic expansion for oscillatory integrals of Wiener functionals . .	25

14:15–14:45

- 10 Naoyuki Ichihara (Hiroshima Univ.)* Criticality of Hamilton–Jacobi–Bellman equations and stochastic ergodic control 15
- 11 Masaaki Tsuchiya (Kanazawa Univ.)* Probabilistic representation of weak solutions to a parabolic equation with a mixed boundary condition 15

15:00–16:00 Invited Talk by Research Section

Toshihiro Uemura (Kansai Univ.)# On jump-type Markov processes and the associated Dirichlet forms

16:15–17:15 Invited Talk by Research Section

Kazumasa Kuwada (Ochanomizu Univ.)# Coupling methods for heat distributions and curvature-dimension conditions

September 19th (Wed) Session Room V

9:15–12:00

- 12 Takahiro Hasebe (Kyoto Univ.)# Examples of infinitely divisible distributions in free probability 15
Noriyoshi Sakuma
(Aichi Univ. of Edu.)
Octavio Arizmendi
(Univ. des Saarlandes)
- 13 Sho Matsumoto (Nagoya Univ.)# Correlation functions for real zeros of a Gaussian power series and Pfaffians 15
Tomoyuki Shirai (Kyushu Univ.)
- 14 Akihiko Inoue (Hiroshima Univ.)# Multivariate completely nondeterministic stationary processes 15
Yukio Kasahara (Hokkaido Univ.)
Mohsen Pourahmadi
(Texas A&M Univ.)
- 15 Hiroki Hashiguchi (Saitama Univ.)# Holonomic gradient method for the distribution function of the largest root of a Wishart matrix 15
Yasuhide Numata
(Univ. of Tokyo/JST CREST)
Nobuki Takayama (Kobe Univ.)
Akimichi Takemura (Univ. of Tokyo)
- 16 Tamio Koyama (Kobe Univ.)# Calculation of the orthant probability by the holonomic gradient method 15
Akimichi Takemura (Univ. of Tokyo)
- 17 Hajime Yamato (Kagoshima Univ.)# Asymptotic distribution of number of distinct observations among a sample from mixture of Dirichlet processes 10
- 18 Yoichi Nishiyama (Inst. of Stat. Math.)# Moment convergence of Z -estimators 15
- 19 Yoichi Nishiyama (Inst. of Stat. Math.)# Z -process method for change point problems 15
- 20 Akio Tanikawa (Osaka Inst. of Tech.)# On the rate of convergence of the sequential quadratic method for differential games 10
Hiro Mukai (Washington Univ.)
Min Xu (Washington Univ.)
- 21 Satoshi Suzuki (Shimane Univ.)# On surrogate duality for quasiconvex programming 20
Daishi Kuroiwa (Shimane Univ.)

12:05–12:35 Research Section Assembly

September 20th (Thu) Session Room V

9:15–12:00

- 22 Yoshifumi Hyodo # Existence conditions for balanced fractional 2^m factorial designs of resolution $2\ell + 1$ derived from simple arrays 15
 (Okayama Univ. of Sci./Int. Inst. for Nat. Sci.)
 Hiromu Yumiba (Int. Inst. for Nat. Sci.)
 Masahide Kuwada
 (Int. Inst. for Nat. Sci.)
- 23 Sanpei Kageyama # The existence of 2 pairwise additive BIB designs 15
 (Hiroshima Inst. of Tech.)
 Kazuki Matsubara (Hiroshima Univ.)
- 24 Ryota Shinjo (Tokyo Univ. of Sci.) # Improved measure on extended marginal homogeneity for square contingency tables with ordered categories 10
 Kouji Yamamoto (Osaka Univ.)
 Sadao Tomizawa (Tokyo Univ. of Sci.)
- 25 Kouji Yamamoto (Osaka Univ.) # Generalized asymmetry model for cumulative probabilities and its decomposition for square tables 10
 Kouji Tahata (Tokyo Univ. of Sci.)
 Sadao Tomizawa (Tokyo Univ. of Sci.)
- 26 Kouji Tahata (Tokyo Univ. of Sci.) # Decomposition of symmetry using palindromic symmetry model for square contingency tables 10
 Kouji Yamamoto (Osaka Univ.)
 Sadao Tomizawa (Tokyo Univ. of Sci.)
- 27 Nobuhiro Taneichi (Kagoshima Univ.) # On asymptotic expansions of the null distributions of ϕ -divergence statistics for testing a logistic regression model 15
 Yuri Sekiya (Hokkaido Univ. of Edu.)
- 28 Kazuyoshi Yata (Univ. of Tsukuba) # PCA consistency for high-dimensional data under generalized models 15
 Makoto Aoshima (Univ. of Tsukuba)
- 29 Kenta Hamada (Waseda Univ.) # Shrinkage estimation and prediction for time series 15
 Masanobu Taniguchi (Waseda Univ.)
- 30 Yoshihide Kakizawa (Hokkaido Univ.) # Generalized Cordeiro–Ferrari Bartlett-type adjustment 10
- 31 Yoshihide Kakizawa (Hokkaido Univ.) # Third-order local powers of several Bartlett-type adjusted tests 15
- 32 Hiroki Masuda (Kyushu Univ.) # On self-normalized residuals of SDE 10

14:30–15:30 Invited Talk by Research Section

Shogo Kato (Inst. of Stat. Math.) # The Cauchy distribution on the circle and related statistical models

15:45–16:45 Invited Talk by Research SectionHidetoshi Murakami # Some saddlepoint approximations to the nonparametric tests and biased for two-sided alternatives
 (Nat. Defense Acad. of Japan)

Applied Mathematics

September 18th (Tue) Session Room VI

9:30–12:00

- 1 Takamichi Sushida (Ryukoku Univ.)[#] Triangular spiral tilings 20
Akio Hizume (Ryukoku Univ.)
Yoshikazu Yamagishi (Ryukoku Univ.)
- 2 Midori Kobayashi (Univ. of Shizuoka)[#] Dudeney's round table problem and neighbour-balanced Hamilton de-
Nobuaki Mutoh (Univ. of Shizuoka) compositions 10
Gisaku Nakamura (Univ. of Shizuoka)
- 3 Tomoki Nakamigawa [#] A Ramsey type problem for multiple disjoint copies of induced sub-
(Shonan Inst. of Technology) graphs 10
- 4 Shuya Chiba (Tokyo Univ. of Sci.)[#] Tutte cycles and Hamiltonicity of 4-connected claw-free graphs 20
Roman Čada (Univ. of West Bohemian)
Kenta Ozeki (Nat. Inst. of Information)
Petr Vrána (Univ. of West Bohemian)
Kiyoshi Yoshimoto (Nihon Univ.)
- 5 Norio Konno (Yokohama Nat. Univ.)[#] The graph isomorphism problem and quantum walk 15
Iwao Sato (Oyama Nat. Coll. of Tech.)
- 6 Iwao Sato (Oyama Nat. Coll. of Tech.)[#] Weighted zeta functions for quotients of regular coverings of graphs .. 15
Seiya Negami (Yokohama Nat. Univ.)
- 7 Hye Jin Jang (POSTECH)[#] On fat Hoffman graphs with smallest eigenvalue at least -3 10
Jack Koolen (POSTECH)
Akihiro Munemasa (Tohoku Univ.)
Tetsuji Taniguchi
(Matsue Coll. of Tech.)
- 8 Chie Nara (Tokai Univ.)[#] Refold rigidity of convex polyhedra 15
Jin-ichi Itoh (Kumamoto Univ.)
Erik D. Demaine (MIT)
Martin L. Demaine (MIT)
Anna Lubiw (Univ. Waterloo)
Joseph O'Rourke (Smith Coll.)
- 9 Kazuhiko Ushio (Kinki Univ.)[#] Balanced (C_7, C_{12}) -foil designs and related designs 15

14:15–16:40

- 10 Yutaka Sueyoshi (Nagasaki Univ.)[#] On a construction of equitable round-robin tournaments with home-
Ryuichi Harasawa (Nagasaki Univ.) away assignments 20
Aichi Kudo (Nagasaki Univ.)
- 11 Yasuo Katsumata (Asia Univ.)^{*} Analysis of a fuzzy Shapley value and its application 10
Sakae Tsuda (Kokugauin High School)
Kenichi Nagashima (Waseda Univ.)
Hajime Yamashita (Waseda Univ.)

- 12 Hiromasa Nakayama (Kobe Univ./JST CREST) # Holonomic gradient descent method for the Fisher–Bingham distribution on the n -dimensional sphere 15
 Tamio Koyama (Kobe Univ.)
 Kenta Nishiyama (Osaka Univ./JST CREST)
 Nobuki Takayama (Kobe Univ.)
- 13 Myoungnyoun Kim (NIMS) # Improving reconstruction image using weighted voxel specific signal-to-noise ratios in MREIT 15
 Tae Young Ha (NIMS)
 Eung Je Woo (Kyung-Hee Univ.)
 Oh In Kwon (Konkuk Univ.)
- 14 Hidehiro Shinohara (Tohoku Univ.) # Square Lehman matrices which are not cores of minimally non-ideal clutters 15
- 15 Akira Saito (Nihon Univ.) # Star-factors with large components 15
 Mikio Kano (Ibaraki Univ.)
- 16 Kenta Noguchi (Keio Univ.) # Relations between current graphs, voltage graphs and cycle parities .. 15
- 17 Kenta Ozeki (Nat. Inst. of Information) # Hamiltonicity of k -prism, a k -tree, a k -walk and a k -cycle cover of graphs 15

16:50–17:50 Invited Talk by Research Section

- Yusuke Suzuki (Niigata Univ.) # 1-embedded graphs as seen from a viewpoint of re-embedding structures

September 19th (Wed) Session Room VI

9:30–12:15

- 18 Shunji Horiguchi (Niigata Sangyo Univ.) # Convergence comparison in the conditional expressions II of Tsuchikura–Horiguchi’s method (Yoshimasu Murase–Newton type’s first enhancing recurrence formula) 15
- 19 Shunji Horiguchi (Niigata Sangyo Univ.) # Nnumerical computations concerning elementary functions of a general convergence comparison in the conditional expression II of Tsuchikura–Horiguchi’s method 15
- 20 Yuji Katsuta (Ube Nat. Coll. of Tech.) # An analysis of a eight-order nonlinear symmetrical differential equation with dihedral group D_4 and odd function 20
 George Miyake (Ube Nat. Coll. of Tech.)
- 21 Hirotake Yaguchi (Mie Univ.) * Construction and security of hash functions based on β -transformations on $[1,2)$ 15
- 22 Shy-Der Lin (Chung Yuan Christian Univ.) * Particular solutions of associated Cauchy–Euler fractional partial differential equation 15
 Chia-Hung Lu (Chung Yuan Christian Univ.)
- 23 Noppharat Chaifong (Chuo Univ.) # A dynamical model of human immune response to two type influenza virus infections 15
- 24 Eunok Jung (Konkuk Univ.) # Mathematical models of circulatory systems 15
 Wanho Lee (Konkuk Univ.)
 Yongsam Kim (Chung-Ang Univ.)

25	Jeongwhan Choi (Korea Univ.) [#] Shu-Ming Sun (Virginia PolyTech) Sungim Whang (Ajou Univ.)	Supercritical surface waves generated by a negative or oscillatory forcing	15
26	Prashant Kumar (POSTECH) [#] Kim Kwang Ik (POSTECH)	Mathematical modelling of the ship hydrodynamics in Pohang New Har- bor	15

September 20th (Thu) Session Room VI

9:30–12:00

27	Kiyohisa Tokunaga (Fukuoka Inst. of Tech.) [#]	The curl theorem of a triangular integral	15
28	Yoshihiro Saito (Gifu Shotoku Gakuen Univ.) [#]	Numerical asymptotic stability of the θ -Maruyama simplified scheme	15
29	Shingo Saito (Kyushu Univ.) [*]	Relation between the premium principle based on Wang's transform and the Hermite polynomials	10
30	Koya Sakakibara (Meiji Univ.) [#]	A new method approximating holomorphic functions by linear combi- nations of $1/(z - \zeta)$ I —Analysis in an elliptic domain—	15
31	Koya Sakakibara (Meiji Univ.) [#]	A new method approximating holomorphic functions by linear combi- nations of $1/(z - \zeta)$ II —Analysis in an annular domain—	15
32	Shingo Iwami (Kyushu Univ.) [#]	Modeling acute phase of viral infection	20
33	Michiel Bertsch (Univ. Rome Tor Vergata) [#] Danielle Hilhorst (Univ. de Paris-Sud) Hirofumi Izuhara (Meiji Univ.) Masayasu Mimura (Meiji Univ.) Tohru Wakasa (Kyushu Inst. of Tech.)	Traveling wave solutions arising in a tumour growth model with contact inhibition	15
34	Tatsuki Mori (Ryukoku Univ.) [#] Shoji Yotsutani (Ryukoku Univ.)	Numerical study on stationary solutions and the stability of a 2d SKT cross-diffusion equation	15

14:15–16:40 Special Session —Medicine and Mathematics—

Yasushi Okada (RIKEN) [#]	Understanding the functions of biological molecular motors through modeling	45
Motohisa Osaka (Nippon Veterinary and Life Sci. Univ.) [#]	Applied mathematics on sudden cardiac death and rhythm	45
Jun-ichi Okada (Univ. of Tokyo) [#]	Multiscale multiphysics heart simulator based on finite element method	45

16:50–17:50 Invited Talk by Research Section

Yuji Kodama (Ohio State Univ.) [#]	KP solitons and Mach reflection in shallow water
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September 21st (Fri) Session Room VI

9:00–12:00

35	Junichi Nakagawa (Nippon Steel Corp.) [#] Gen Nakamura (Hokkaido Univ.) Satoshi Sasayama (Hokkaido Univ.) Haibing Wang (Hokkaido Univ.)	Evolution of local maximums of non-symmetric solutions to some reaction- diffusion systems	10
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- 36 Kazumi Tanuma (Gunma Univ.)* Perturbation of phase velocity of Rayleigh waves and Stoneley waves in
Chi-Sing Man (Univ. of Kentucky) anisotropic elastic media with orthorhombic principal part 15
Wenwen Du (Univ. of Kentucky)
- 37 Nobuyuki Higashimori # A direct numerical method for solving the initial boundary value prob-
(Hitotsubashi Univ.) lem of the three dimensional radiative transport equation 15
Hiroshi Fujiwara (Kyoto Univ.)
- 38 Xiao-Yu Zhang # Effective condition numbers of finite difference methods for elliptic equa-
(Beijing Forestry Univ./Yamagata Univ.) tions with singularities 15
Qing Fang (Yamagata Univ.)
- 39 Masashi Katsurada (Meiji Univ.)# Eigenvalue problems of the biharmonic operator in a square region —
Yuki Hirano (Anjo Higashi High School) Finite difference analysis of chladni figures 15
- 40 Kaname Matsue (Tohoku Univ.)# Rigorous numerical verification of saddle-saddle connections 20
Nobito Yamamoto
(Univ. of Electro-Comm.)
- 41 Tomohiro Hiwaki # Numerical verification of a domain included by the basin of a limit cycle
(Univ. of Electro-Comm.) 20
Nobito Yamamoto
(Univ. of Electro-Comm.)
- 42 Takehiko Kinoshita (Kyoto Univ.)# A numerical verification method for solutions of IVP for ODEs using a
Takuma Kimura (Waseda Univ.) linearized inverse operator 15
Mitsuhiro T. Nakao
(Sasebo Nat. Coll. of Tech.)
- 14:15–16:30**
- 43 Yoshitaka Watanabe (Kyushu Univ.)# A numerical verification of the invertibility of linear operators with in-
Mitsuhiro T. Nakao verse norm estimations 15
(Sasebo Nat. Coll. of Tech.)
- 44 Kenta Kobayashi (Hitotsubashi Univ.)# The circumradius condition on triangular elements and its applications
Takuya Tsuchiya (Ehime Univ.) 20
- 45 Fumio Kikuchi # Strong L^p convergence associated with Rellich-type discrete compact-
(Hitotsubashi Univ./Univ. of Tokyo) ness for discontinuous Galerkin FEM 20
Daisuke Koyama
(Univ. of Electro-Comm.)
- 46 Daisuke Koyama # An optimized Schwarz method for acoustic radiation problems 20
(Univ. of Electro-Comm.)
- 47 Hirofumi Notsu (Waseda Univ.)# Error estimates of a pressure-stabilized characteristics finite element
Masahisa Tabata (Waseda Univ.) scheme for the Oseen equations 20
- 48 Hiroshi Kanayama (Kyushu Univ.)# Domain decomposition computation of thermal convection problems
based on the characteristic curve method 20
- 16:45–17:45 Invited Talk by Research Section**
- Daisuke Tagami (Kyushu Univ.)# Numerical analysis of flow problems with finite element methods —From
error analysis to parallel computations
-

Topology

September 18th (Tue) Session Room IX

9:15–12:00

- 1 Masayuki Kawashima (Tokyo Univ. of Sci.)[#] On torus decompositions and line degenerated torus curves 10
- 2 Misako Yokoyama (Shizuoka Univ.)[#] Finding a system of essential 2-suborbifolds 15
Yoshihiro Takeuchi (Aichi Univ. of Edu.)
- 3 Selman Akbulut (Michigan State Univ.)^{*} Gluck twisting 4-manifolds with odd intersection form 10
Kouichi Yasui (Hiroshima Univ.)
- 4 Takuya Sakasai (Univ. of Tokyo)[#] The abelianization of the symplectic derivation Lie algebra of the free
Masaaki Suzuki (Akita Univ.) associative algebra 15
Shigeyuki Morita (Univ. of Tokyo)
- 5 Kazuki Toda (Univ. of Tokyo)^{*} The second cohomology of the homological Goldman Lie algebra 10
- 6 Nariya Kawazumi (Univ. of Tokyo)[#] On the Turaev cobracket and the Morita traces 20
Yusuke Kuno (Tsuda Coll.)
- 7 Jong Bum Lee (Sogang Univ.)[#] The geometry of Sol^3 15
- 8 Suyoung Choi (Ajou Univ.)[#] Rational homology of real toric variety over graph associahedra 15
Hanchul Park (Ajou Univ.)
- 9 Junhui Kim (Wonkwang Univ.)[#] A non-2-starcompact Tychonoff space whose hyperspace is 2-starcompact
..... 15

14:15–16:00

- 10 Kenshi Ishiguro (Fukuoka Univ.)[#] Pairings and monomorphisms of classifying spaces 10
Shotaro Kudo (Fukuoka Univ.)
Tomohiro Nakano (Wajiro Junior High School)
- 11 Tomohisa Inoue (Shinshu Univ.)[#] The 31-stem homotopy groups of 9 and 10-dimensional spheres 10
Juno Mukai (Matsumoto Univ.)
- 12 Ipei Ichigi (Kochi Nat. Coll. of Tech.) The homotopy groups of a type two spectrum grading over the Picard
Katsumi Shimomura (Kochi Univ.) group of \mathcal{L}_2 15
Yutaro Terahara (Kochi Univ.)
- 13 Takahito Naito (Shinshu Univ.)[#] String topology on rational Gorenstein spaces 15
- 14 Ryo Kato (Nagoya Univ.)[#] On the generalized retract conjecture 10
Katsumi Shimomura (Kochi Univ.)
Yutaro Tatehara (Kochi Univ.)
- 15 Tadayuki Haraguchi (Okayama Univ.)^{*} Model structure of numerically generated spaces 15

16:20–17:20 Invited Talk by Research Section

- Toshio Sumi (Kyushu Univ.)^{*} The Smith equivalence problem and Smith sets of Oliver groups

September 19th (Wed) Session Room VIII and IX

10:30–10:45 Presentation Ceremony for 2012 Geometry Prize**10:50–11:50 Award Lecture for 2012 Geometry Prize**Ken'ichi Ohshika (Osaka Univ.)[#] Topological structure of deformation spaces of Kleinian groups**13:15–14:15 Award Lecture for 2012 Geometry Prize**Yukinobu Toda (Univ. of Tokyo)[#] Stability conditions and Donaldson–Thomas type invariants on Calabi–Yau 3-folds

September 20th (Thu) Session Room IX

9:30–11:45

- 16 Takuji Nakamura (Osaka Electro-Comm. Univ.)^{*} The state numbers of plane curves and knots 10
 Yasutaka Nakanishi (Kobe Univ.)
 Shin Satoh (Kobe Univ.)
 Yumi Toyama (Kobe Univ.)
- 17 Reiko Shinjo (Waseda Univ.)[#] On the inclusive relation of three properties of knot diagrams 10
 Kokoro Tanaka (Tokyo Gakugei Univ.)
- 18 Kokoro Tanaka (Tokyo Gakugei Univ.)[#] Interpretation of rack coloring knot invariants in terms of quandles ... 15
 Yuma Taniguchi (Tokyo Gakugei Univ.)
- 19 Masao Hara (Tokai Univ.)[#] On Jones polynomials of alternating pretzel knots 10
 Makoto Yamamoto (Chuo Univ.)
- 20 Atsuhiko Mizusawa (Waseda Univ.)[#] Yokota type invariants for oriented spatial graphs derived from Costantino–Murakami's invariants 15
- 21 Kenta Okazaki (Kyoto Univ.)[#] On the Turaev–Viro–Ocneanu invariants of 3-manifolds associated with the E_6 and E_8 subfactor planar algebras 10
- 22 Inasa Nakamura (Gakushuin Univ.)[#] Unknotting numbers and triple point cancelling numbers of torus-covering knots 10
- 23 Yeonhee Jang (Nara Women's Univ.)[#] Distance of bridge presentations of links and essential surfaces in the link exteriors 15

14:15–15:40

- 24 Kengo Kishimoto (Osaka Inst. of Tech.)[#] Simple ribbon fusions for links II 10
 Tetsuo Shibuya (Osaka Inst. of Tech.)
 Tatsuya Tsukamoto (Osaka Inst. of Tech.)
- 25 Tetsuya Abe (Kyoto Univ.)[#] Annulus twists and diffeomorphic 4-manifolds 15
 In Dae Jong (Osaka Pref. Univ.)
- 26 Tetsuya Abe (Kyoto Univ.)[#] Omae's knot and $12_{a,990}$ are ribbon 15
 Motoo Tange (Univ. of Tsukuba)
- 27 Yuichi Yamada (Univ. of Electro-Comm.)[#] Divide knot presentations of sporadic knots of Berge's lens space surgery 10
- 28 Motoo Tange (Univ. of Tsukuba)[#] Primitive/Seifert knots in the Poincaré homology sphere 15

16:00–17:00 Invited Talk by Research SectionKoya Shimokawa (Saitama Univ.)[#] Tangle analysis of site-specific recombinations

September 21st (Fri) Session Room IX

9:15–12:00

- 29 Yusuke Mizota (Kyushu Univ.)[#] Explicit construction of generators for the module of liftable vector fields
..... 15
- 30 Masaru Kada (Osaka Pref. Univ.)[#] Galois–Tukey connection involving order structures of metrics 20
Yasuo Yoshinobu (Nagoya Univ.)
- 31 Hanbiao Yang (Univ. of Tsukuba)* Metrization of function spaces with the Fell topology 10
- 32 Katsuhisa Koshino (Univ. of Tsukuba)* Characterizing infinite-dimensional manifolds and its applications 15
- 33 Jun Yagi (Kochi Univ.)[#] The topology of a model for ringed hydrocarbon molecules 15
Satoru Goto (Tokyo Univ. of Sci.)
Yutaka Hemmi (Kochi Univ.)
Kazushi Komatsu (Kochi Univ.)
- 34 Akihiro Higashitani (Osaka Univ.)[#] Lattice multi-polygons 15
Mikiya Masuda (Osaka City Univ.)
- 35 Takami Sato (Hokkaido Univ.)[#] Curves on a spacelike surface in three dimensional Lorentz–Minkowski
space 10
- 36 Shin Kiriki (Kyoto Univ. of Edu.)[#] Existence of generic cubic homoclinic tangencies for Hénon maps 15
Teruhiko Soma (Tokyo Metro. Univ.)
- 37 Toshikazu Ito (Ryukoku Univ.)* Degeneracy locus of critical points of the distance function on a holo-
Bruno Scárdua morphic foliation 10
(Univ. Fed. Rio de Janeiro)
Yoshikazu Yamagishi (Ryukoku Univ.)

Infinite Analysis

September 18th (Tue) Session Room VII

9:30–11:45

- 1 Kazuo Kaneko (Yokkaichi Univ.)* Special solutions to the four dimensional Painlevé type equations 21,21,111,111
and 31,22,22,1111 15
- 2 Seiji Nishioka (Yamagata Univ.)[#] Approximation of Poincaré’s new functions by rational functions 15
- 3 Yoshikatsu Sasaki (Hiroshima Univ.)[#] Third-degree superintegrable system solved by the sixth Painlevé tran-
scendents 15
- 4 Hajime Nagoya (Kobe Univ.)[#] Realizations of affine Weyl group symmetries on the quantum Painlevé
equations by fractional calculus 15

- 5 Hajime Nagoya (Kobe Univ.)[#] Symmetries of quantum Lax equations for the Painlevé equations ···· 15
 Yasuhiko Yamada (Kobe Univ.)
- 6 Koji Hasegawa (Tohoku Univ.)[#] Lax form for quantum discrete Painlevé VI equation ······ 20
- 7 Gen Kuroki (Tohoku Univ.)[#] Sato–Wilson formalisms for quantum birational Weyl group actions of
 type A ······ 30

14:15–14:45

- 8 Edwin Langmann[#] Source identity and kernel functions for Inozemtsev-type systems ···· 15
 (Roy. Inst. of Tech. Sweden)
 Kouichi Takemura (Chuo Univ.)
- 9 Masatoshi Noumi (Kobe Univ.) Bispectral problem for the Ruijsenaars–Macdonald q -difference opera-
 Jun'ichi Shiraishi (Univ. of Tokyo) tors ······ 15

15:00–16:00 Invited Talk by Special Session

- Junichi Shiraishi (Univ. of Tokyo)[#] Vertex operators, Nekrasov partition functions and Macdonald polyno-
 mials

September 19th (Wed) Session Room VII

10:30–11:50

- 10 Taichiro Takagi[#] Commuting time evolutions in the tropical periodic Toda lattice ···· 15
 (Nat. Defense Acad. of Japan)
- 11 Atsuo Kuniba (Univ. of Tokyo)[#] Tetrahedron equation and quantum R matrices for spin representations
 Sergey Sergeev (Univ. of Canberra) ······ 10
- 12 Ryosuke Kodera (Kyoto Univ.)^{*} Self-extensions and prime factorizations for simple $U_q(L\mathfrak{sl}_2)$ -modules · 15
- 13 Jun Murakami (Waseda Univ.)[#] Quantum $6j$ -symbols for non-integral highest weight representations of
 $\mathcal{U}_q(\mathfrak{sl}_2)$ at root of unity ······ 15
- 14 Motohiro Ishii (Univ. of Tsukuba)[#] Path model for representations of generalized Kac–Moody algebras ··· 15

13:30–14:30 Invited Talk by Special Session

- Yoshiyuki Kimura (Osaka City Univ.)[#] Quiver varieties and quantum cluster algebras
-