

Functional Equations

September 18th (Tue) Session Room III

9:00–12:00

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| 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.)[#] Asymptotic behavior of solutions of linear differential systems 10
Yorimasa Oshime (Doshisha Univ.)
- 16 Hideaki Matsunaga (Osaka Pref. Univ.)[#] Formal adjoint operators and asymptotic formula for solutions of inte-
Satoru Murakami gral equations 10
(Okayama Univ. of Sci.)
Yutaka Nagabuchi
(Okayama Univ. of Sci.)
- 17 Jitsuro Sugie (Shimane Univ.)[#] Criteria for global asymptotic stability of damped superlinear oscillators
Tsunehiko Shimadu (Shimane Univ.) 10
Takashi Yamasaki (Shimane Univ.)
- 18 Kunihiko Taniguchi * Extinction in a two-species nonautonomous Lotka–Volterra competition
(Mojigakuen Senior High School) system 10
Hiroyuki Usami (Gifu Univ.)
- 19 Shinji Adachi (Shizuoka Univ.) * Uniqueness and non-degeneracy of positive solutions for a class of quasi-
Masataka Shibata (Tokyo Tech) linear elliptic equations with general nonlinearities 10
Tatsuya Watanabe
(Kyoto Sangyo Univ.)
- 20 Naoki Sioji (Yokohama Nat. Univ.) * Radial symmetry of n -mode positive solutions for semilinear elliptic
Kohtaro Watanabe equations in a disc and its applications to the Hénon equation 10
(Nat. Defense Acad. of Japan)
- 21 Ryuji Kajikiya (Saga Univ.) * Multiple bifurcations of solutions for one-dimensional p -Laplace equa-
tion 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 gen-
eralized p -Laplace equations with indefinite weight 10
- 26 Mieko Tanaka (Tokyo Univ. of Sci.) * Multiple existence results of solutions for quasilinear elliptic equations
Dumitru Motreanu with a nonlinearity depending on a parameter 10
(Univ. de Perpignan)
- 27 Tetsutaro Shibata (Hiroshima Univ.) * Critical exponents of the asymptotic formulas for two-parameter varia-
tional 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
Ryuji Kajikiya (Saga Univ.) 10
- 33 Goro Akagi (Kobe Univ.)[#] Symmetry breaking of least energy solutions of Emden–Fowler equations
Ryuji Kajikiya (Saga Univ.) 10
- 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
Jong-Shenq Guo (Tamkang Univ.) interaction model 10
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
Takeyuki Nagasawa (Saitama Univ.) of variational formulae for Möbius energy 10
- 41 Sachiko Ishida (Tokyo Univ. of Sci.)[#] Possibility of the blow-up in quasilinear degenerate Keller–Segel systems
Takashi Ono 10
(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	Hiro Yoshi Mitake (Fukuoka Univ.) * Hitoshi Ishii (Waseda Univ.) Guy Barles (Univ. de Tours)	On the large time behavior of solutions of Hamilton–Jacobi equations associated with nonlinear boundary conditions	10
46	Hiro Yoshi Mitake (Fukuoka Univ.) * Hung Vinh Tran (UC, Berkeley)	Remarks on the large time behavior of viscosity solutions of quasi-monotone weakly coupled systems of Hamilton–Jacobi equations	10
47	Atsushi Nakayasu (Univ. of Tokyo) * Yoshikazu Giga (Univ. of Tokyo) Nao Hamamuki (Univ. of Tokyo)	Eikonal equations in metric spaces	10
48	Gen Nakamura (Hokkaido Univ.) # Haibing Wang (Hokkaido Univ.)	Linear sampling method for identifying cavities in a heat conductor . . .	10
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 (Hiroasaki 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

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
- 65 Tsukasa Iwabuchi (Chuo Univ.) * Ill-posedness for the nonlinear Schrödinger equations in one and two space dimensions 10
Takayoshi Ogawa (Tohoku Univ.)
- 66 Mamoru Okamoto (Kyoto Univ.) # Well-posedness of the Cauchy problem for the Chern–Simons–Dirac system 10
- 67 Shuji Machihara (Saitama Univ.) # Time global solutions in L^p for Chern–Simons–Dirac equation in $1 + 1$ dimension 10
Takayoshi Ogawa (Tohoku Univ.)
- 68 Takamori Kato (Kyoto Univ.) # Unconditional well-posedness of the fifth order modified KdV equation with periodic boundary condition 10
Kotaro Tsugawa (Nagoya Univ.)
- 69 Eiji Onodera (Kochi Univ.) * A fourth-order dispersive flow into Kähler manifolds 10
Hiroyuki Chihara (Kagoshima Univ.)
- 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.) # Existence and blow-up of solutions to nonlinear wave equations in one space dimension 10
Ayako Osaka (Tohoku Univ.)
Muhammet Yazici (Tohoku Univ.)
- 74 Hiroyuki Takamura * The lifespan of solutions of a nonlinear wave equations with a quadratic term of non-single and indefinite sign in four space dimensions 10
(Future Univ.-Hakodate)
Kyouhei Wakasa
(Future Univ.-Hakodate)
- 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) * The L^∞ -Stokes semigroup in exterior domains 10
Yoshikazu Giga (Univ. of Tokyo)
- 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.) # On the sectorial \mathcal{R} -boundedness of the Stokes operator for the compressible viscous fluid flow 10
Yoshihiro Shibata (Waseda Univ.)

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.) * Time periodic solutions to the Navier–Stokes equations in the rotational
Ryo Takada (Kyoto Univ.) framework 10
- 82 Tsukasa Iwabuchi (Chuo Univ.) * Global solutions for the Navier–Stokes equations in the rotational frame-
Ryo Takada (Kyoto Univ.) work 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.) * Initial-boundary value problem for micropolar fluid equations with spin-
Mitsuharu Ôtani (Waseda Univ.) 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.) # Asymptotic behavior of solutions to the compressible Navier–Stokes
Yoshiyuki Kagei (Kyushu Univ.) equation around a time-periodic parallel flow 10
- 87 Masashi Ohnawa * On the convergence rates towards traveling waves for a model system
(Waseda Univ./Tokyo Tech) of radiating gas 10
Shinya Nishibata (Tokyo Tech)
- 88 Masashi Ohnawa * Asymptotic stability of a stationary solution to the Euler–Poisson equa-
(Waseda Univ./Tokyo Tech) tions including fluid-boundary interaction 10
Shinya Nishibata (Tokyo Tech)
- 89 Masahiro Suzuki (Tokyo Tech) * Asymptotic behavior of solutions to a shallow water equation 10
Masahiro Takayama (Keio Univ.)
Bongsuk Kwon
(Ulsan Nat. Inst. of Sci. and Tech.)
- 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
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