

# Functional Equations

March 15th (Sat) Conference Room V

## 9:00–12:00

- 05-01-0036  
1 Koh Katagata (Ichinoseki Nat. Coll. of Tech.) # Configurations of equilibrium points in complex differential equations and the Euler–Jacobi formula . . . . . 10
- 05-01-0047  
2 Hideaki Izumi (千葉工大情報) # Analytic solutions of functional equations associated to translative means . . . . . 10  
Janusz Matkowski (Univ. of Zielona Góra)
- 05-01-0066  
3 Kanae Akaiwa (Kyoto Univ.) # On the asymptotic behavior in the recurrence relation of the quotient-difference method . . . . . 12  
Masashi Iwasaki (Kyoto Pref. Univ.)  
Koichi Kondo (Doshisha Univ.)
- 05-01-0058  
4 Toshinori Takahashi (Kinki Univ.) # On the WKB theoretic structure of a Schrödinger operator with a Stokes curve of loop type . . . . . 12
- 05-01-0062  
5 Mika Tanda (Kinki Univ.) # Alien derivatives for the Gauss hypergeometric differential equation . . 12
- 05-01-0046  
6 Yoshiaki Goto (Hokkaido Univ.) # Monodromy representation of Lauricella’s hypergeometric function  $F_C$  . . . . . 12
- 05-01-0029  
7 Seiji Saito (Doshisha Univ.) # On uniformly asymptotic boundedness of periodic difference equations . . . . . 12
- 05-01-0061  
8 Yoichi Enatsu (Univ. of Tokyo) # Asymptotic stability of equilibria of compartmental epidemic models with delays . . . . . 12
- 05-01-0023  
9 Jitsuro Sugie (Shimane Univ.) # Discrete condition for uniform asymptotic stability of damped linear oscillators . . . . . 12  
Masakazu Onitsuka (Okayama Univ. of Sci.)
- 05-01-0001  
10 Tetsutaro Shibata (Hiroshima Univ.) # S-shaped bifurcation curve for semilinear two-parameter problems . . . . 12
- 05-01-0024  
11 Ryuji Kajikiya (Saga Univ.) # Existence of three positive solutions for the generalized Hénon equation . . . . . 12
- 05-99-0001  
12 Katsuyuki Nishimoto (Descartes Press Co.) \* The solutions to the homogeneous Bessel equations by means of the N-fractional calculus (The calculus in the 21 th century) (Again) . . . . . 6
- 05-99-0002  
13 Katsuyuki Nishimoto (Descartes Press Co.) \* The solutions to the nonhomogeneous Bessel equations by means of the N-fractional calculus operator . . . . . 6

## 14:15–16:30

- 05-01-0002  
14 Wataru Ichinose (Shinshu Univ.) # The continuity and the differentiability of solutions on parameters to the Schrödinger equations and the Dirac equations . . . . . 12
- 05-01-0003  
15 Wataru Ichinose (Shinshu Univ.) # On the construction of the Feynman path integral for the Dirac equation . . . . . 12
- 05-01-0020  
16 Kiyoshi Mochizuki (首都大\*/Chuo Univ.) # Uniform resolvent estimates for magnetic Schrödinger operators in 2D exterior domain . . . . . 12  
Hideo Nakazawa (日本医大)
- 05-01-0068  
17 Fumihiko Hirose (Yamaguchi Univ.) # On second order weakly hyperbolic equations and the ultradifferentiable classes . . . . . 12  
Haruhisa Ishida (Univ. of Electro-Comm.)

- 05-01-0013  
18 Megumi Sano (Osaka City Univ.)# A mean value property for polycaloric functions . . . . . 12
- 05-01-0054  
19 Shigehiro Sakata (Tokyo Metro. Univ.)# Maximizers of the solution of Poisson's equation and the heart of a body  
. . . . . 12
- 05-01-0011  
20 Mamoru Okamoto (Kyoto Univ.)# Well-posedness for the one dimensional Chern–Simons–Dirac system in  
Shuji Machihara (Saitama Univ.) critical and supercritical regularity spaces . . . . . 12
- 05-01-0017  
21 Hiroyuki Hirayama (Nagoya Univ.)# Well-posedness for a system of quadratic derivative nonlinear Schrödinger  
equations on torus at the scaling critical regularity . . . . . 10
- 05-01-0067  
22 Isao Kato (Nagoya Univ.)# Global well-posedness of Zakharov system at the critical space in four  
Kotaro Tsugawa (Nagoya Univ.) and more spatial dimensions . . . . . 10
- 05-01-0056  
23 Sungyong Park (Tohoku Univ.)\* Local well-posedness and blow-up result for weakly dissipative Camassa–  
Takayoshi Ogawa (Tohoku Univ.) Holm equation . . . . . 12

**16:45–17:45 Talk invited by Functional Equations Section**

- 05-02-0004  
Hariya Mizutani (Gakushuin Univ.)# On Strichartz estimates for Schrödinger equations with variable coefficients

March 16th (Sun) Conference Room V

**9:00–12:00**

- 05-01-0026  
24 Kazumasa Fujiwara (Waseda Univ.)# Global well-posedness of the Cauchy problem for a semirelativistic  
Shuji Machihara (Saitama Univ.) system . . . . . 12  
Tohru Ozawa (Waseda Univ.)
- 05-01-0005  
25 Gaku Hoshino (Waseda Univ.)# Analytic solutions to nonlinear Schrödinger equation . . . . . 12  
Tohru Ozawa (Waseda Univ.)
- 05-01-0033  
26 Yohei Yamazaki (Kyoto Univ.)\* Transverse instability of a nonlinear Schrödinger equation and the stability  
of a bifurcation point . . . . . 10
- 05-01-0063  
27 Kota Uriya (Tohoku Univ.)\* Final state problem for a system of quadratic nonlinear Schrödinger  
Takayoshi Ogawa (Tohoku Univ.) equations . . . . . 10
- 05-01-0037  
28 Toshiyuki Suzuki (Tokyo Univ. of Sci.)# Blowup for Hartree type equations with inverse-square potentials . . . . . 12
- 05-01-0048  
29 Takahisa Inui (Kyoto Univ.)# Classification of complex valued solutions for the nonlinear Klein–  
Gordon equation . . . . . 10
- 05-01-0010  
30 Yuta Wakasugi (Osaka Univ.)\* On diffusion phenomena for the linear wave equation with space-  
dependent damping . . . . . 10
- 05-01-0012  
31 Kosuke Ono (Univ. of Tokushima)\* Global existence and decay estimates for mildly degenerate Kirchhoff  
type dissipative wave equations to the Cauchy problem . . . . . 12
- 05-01-0022  
32 Tomonari Watanabe (Hiroshima Univ.)\* Global existence and decay estimates for the nonlinear wave equations  
with space-time dependent dissipative term . . . . . 12
- 05-01-0040  
33 Kimitoshi Tsutaya\* On the asymptotic behavior of solutions of the wave equation of Hartree  
Paschalis Karageorgis (Trinity Coll.) type . . . . . 12
- 05-01-0069  
34 Fumihiko Hirose (Yamaguchi Univ.)# Some classes of non-analytic functions for the global solvability of  
Kirchhoff equation . . . . . 12
- 05-01-0031  
35 Nakao Hayashi (Osaka Univ.)\* Nonexistence of scattering states for the generalized Ostrovsky–Hunter  
equation . . . . . 10

**13:15–14:15 Award Lecture for 2013 Analysis Prize**

05-02-0001

Yoshihiro Tonegawa (Hokkaido Univ.)<sup>#</sup> On the regularity theory for mean curvature flow

March 17th (Mon) Conference Room V

**9:00–12:00**

05-01-0007

36 Noriaki Umeda (Meiji Univ.)<sup>#</sup> On vanishing at space infinity for semilinear heat equation with absorption ..... 12

05-01-0004

37 Toshihazu Kuniya (Univ. of Tokyo)<sup>#</sup> Invariance principle and Lyapunov functional for the asymptotic analysis of nonlinear partial differential equations with age variable ..... 12

05-01-0006

38 Tadashi Kawanago (Tokyo Tech)<sup>#</sup> The Hopf bifurcation theorem for semilinear equations ..... 12

05-01-0014

39 Sachiko Ishida (Tokyo Univ. of Sci.)<sup>#</sup> Boundedness of solutions to quasilinear degenerate Keller–Segel systems of parabolic-parabolic type on non-convex domains ..... 12  
Kiyotaka Seki (Tokyo Univ. of Sci.)  
Tomomi Yokota (Tokyo Univ. of Sci.)

05-01-0018

40 Kentarou Fujie (Tokyo Univ. of Sci.)<sup>#</sup> Boundedness of solutions to parabolic-elliptic Keller–Segel systems with growth term and signal-dependent sensitivity function ..... 12  
Tomomi Yokota (Tokyo Univ. of Sci.)

05-01-0034

41 Yoshiyuki Kagei (Kyushu Univ.)<sup>#</sup> Uniqueness theorem on weak solutions to the Keller–Segel system of degenerate and singular types ..... 12  
Tatsuki Kawakami (Osaka Pref. Univ.)  
Yoshie Sugiyama (Kyushu Univ.)

05-01-0039

42 Yoshie Sugiyama (Kyushu Univ.)<sup>#</sup> Global solutions to a chemotaxis system with non-diffusive memory ..... 12  
Youhei Tsutsui  
(Waseda Univ./Osaka City Univ.)  
Juan J. L. Velázquez (Univ. Bonn)

05-01-0041

43 Yoshihisa Morita (Ryukoku Univ.)<sup>#</sup> A reaction-diffusion system with mass conservation ..... 10  
Takashi Suzuki (Osaka Univ.)

05-01-0060

44 Shigeru Sakaguchi (Tohoku Univ.)<sup>\*</sup> Fast diffusion and geometry of domain ..... 12

05-01-0015

45 Norihisa Ikoma (Tohoku Univ.)<sup>\*</sup> Singular perturbation problems for the Kirchhoff type equations with general nonlinearities ..... 12  
Giovany M. Figueiredo  
(Univ. Federal do Pará)  
João R. Santos Junior  
(Univ. Federal do Pará)

05-01-0016

46 Norihisa Ikoma (Tohoku Univ.)<sup>\*</sup> Eigenvalue problems for fully nonlinear second-order elliptic PDE on balls ..... 12  
Hitoshi Ishii (Waseda Univ.)

05-01-0032

47 Daisuke Naimen (Osaka City Univ.)<sup>#</sup> The critical problem of Kirchhoff type elliptic equations in dimension four ..... 12

05-01-0042

48 Takanobu Hara (Tokyo Metro. Univ.)<sup>#</sup> Regularity properties of weak solutions of second order elliptic equations with strongly singular drifts ..... 10**14:15–16:15**

05-01-0019

49 Kousuke Kuto (Univ. of Electro-Comm.)<sup>#</sup> Limiting structure of steady-states to the Lotka–Volterra competition model with large diffusion and advection ..... 12  
Tohru Tsujikawa (Univ. of Miyazaki)

05-01-0027

50 Kenichiro Umezu (Ibaraki Univ.)<sup>\*</sup> On *S*-shaped and *CS*-shaped bifurcation diagrams in population dynamics ..... 12  
Humberto Ramos Quoirin  
(Univ. de Santiago de Chile)

- 05-01-0008  
51 Yasuhito Miyamoto (Univ. of Tokyo) # Structure of the positive radial solutions for elliptic equations with exponential growth ..... 12
- 05-01-0009  
52 Shinji Adachi (Shizuoka Univ.) \* Uniqueness and non-degeneracy of positive radial solutions for quasilinear elliptic equations with exponential nonlinearity ..... 12  
Tatsuya Watanabe  
(Kyoto Sangyo Univ.)
- 05-01-0064  
53 Francesca Gladiali # On the number of peaks of the eigenfunctions of the linearized Gel'fand problem ..... 12  
(Univ. degli Studi di Sassari)  
Massimo Grossi  
(Univ. di Roma "La Sapienza")  
Hiroshi Ohtsuka (Kanazawa Univ.)
- 05-01-0065  
54 Naoki Sioji (Yokohama Nat. Univ.) # Uniqueness of positive radial solutions of  $\Delta u + \nabla \rho \nabla u / \rho - gu + hu^p = 0$  and its nondegeneracy ..... 12  
Kohtarō Watanabe (防衛大情報工)
- 05-01-0021  
55 Futoshi Takahashi (Osaka City Univ.) # Extremal solutions to Liouville–Gelfand type elliptic problems with nonlinear Neumann boundary conditions ..... 12
- 05-01-0028  
56 Futoshi Takahashi (Osaka City Univ.) # Continuum spectrum for the linearized extremal eigenvalue problem with boundary reactions ..... 12
- 16:30–17:30 Talk invited by Functional Equations Section**
- 05-02-0003  
Atsushi Tachikawa (Tokyo Univ. of Sci.) # On the regularity of  $p(x)$ -harmonic maps

March 18th (Tue) Conference Room V

**9:00–12:00**

- 05-01-0051  
57 Tomoyuki Nakatsuka (Nagoya Univ.) \* On uniqueness of symmetric Navier–Stokes flows around a body in the plane ..... 12
- 05-01-0050  
58 Erika Ushikoshi (Tamagawa Univ.) \* New approach to the Hadamard variational formula for the Green function of the Stokes equations ..... 10
- 05-01-0025  
59 Hiroki Ueno (Keio Univ.) # On the thin film approximation for the flow of a viscous incompressible fluid down an inclined plane ..... 12  
Akinori Shiraishi  
Tatsuo Iguchi (Keio Univ.)
- 05-01-0057  
60 Shintaro Kondo (Meiji Univ.) # Almost-periodic solution of linearized Hasegawa–Wakatani equations with vanishing resistivity ..... 12
- 05-01-0059  
61 Masahiro Suzuki (Tokyo Tech) \* Stationary solutions to the equation for a multicomponent plasma ..... 12
- 05-01-0070  
62 Masashi Ohnawa (Waseda Univ.) # Asymptotic stability of strong traveling waves for a radiating gas model ..... 12
- 05-99-0003  
63 Natsumi Yoshida (Osaka Univ.) # Global asymptotic stability of a multiwave pattern for the scalar conservation law with degenerate flux and viscosity ..... 12
- 05-01-0052  
64 Masatoshi Okita (Kyushu Univ.) # Optimal decay rate for strong solutions in critical spaces to the compressible Navier–Stokes equations ..... 12
- 05-01-0053  
65 Hajime Koba (Waseda Univ.) \* On stability of Boussinesq type system ..... 12
- 05-01-0035  
66 Tsukasa Iwabuchi (Chuo Univ.) \* Global solutions for the Burgers equation in the Besov spaces and the large time behavior ..... 12
- 05-01-0049  
67 Takahiro Okabe (Hiroasaki Univ.) \* Space-time asymptotics of the two dimensional Navier–Stokes flow in the whole plane ..... 10

**14:15–15:15**

05-01-0038

- 68 Takayuki Kubo (Univ. of Tsukuba)<sup>#</sup> On the  $\mathcal{R}$ -boundedness of solution operators for the compressible-compressible two phase problem ..... 10  
 Yoshihiro Shibata (Waseda Univ.)  
 Kohei Soga (CNRS-ENS Lyon)

05-01-0043

- 69 Yoshihiro Shibata (Waseda Univ.)<sup>#</sup>  $\mathcal{R}$ -bounded solution operators for the Stokes equations with free boundary condition and its application, Incompressible case ..... 10

05-01-0045

- 70 Yoshihiro Shibata (Waseda Univ.)<sup>#</sup>  $\mathcal{R}$ -bounded solution operators for the Stokes equations with free boundary condition and its application, Compressible case ..... 10  
 Lorenz von Below (TU Darmstadt)  
 Yuko Enomoto (Shibaura Inst. of Tech.)

05-01-0044

- 71 Yoshihiro Shibata (Waseda Univ.)<sup>#</sup> On a global in time unique existence theorem for some free boundary problem of the Navier–Stokes equations without surface tension ..... 10

05-01-0055

- 72 Miho Murata (Waseda Univ.)<sup>#</sup> Local in time unique existence of solutions to compressible viscous fluid flow ..... 10  
 Yoshihiro Shibata (Waseda Univ.)

**15:30–16:30 Talk invited by Functional Equations Section**

05-02-0002

- Takeshi Wada (Kumamoto Univ.)<sup>#</sup> Smoothing effects and global well-posedness of Maxwell–Schrödinger equations