RIMS Symposium on

New development of microlocal analysis and singular perturbation theory

Organizer Naofumi Honda (Hokkaido University)
Coorganizer Yasunori Okada (Chiba University)

October 3 (Mon.) ~ 7 (Fri.), 2016
Room No. 111 of RIMS, Kyoto University

Program

October 3, Monday

10:00 - 10:50 Joe Kamimoto (Kyushu University)
On analytic continuation of local zeta functions

11:10 - 12:00 Saiei-Jaeyeong Matsubara-Heo (University of Tokyo)
On the rapid decay homology of F.Pham

13:30 - 14:20 Yasunori Okada (Chiba University)
A continuation method for coupling transforms (joint work with R. Schäfke and H. Tahara)

14:35 - 15:10 Daichi Komori (Hokkaido University)
Intuitive representation of a local cohomology group

15:20 - 15:55 Kohei Umeta (Hokkaido University)
A vanishing theorem of global cohomology groups with values in the sheaf of Whitney jets
with Gevrey conditions (joint work with N. Honda and T. Simoyama)

16:10 - 17:00 Kiyoomi Kataoka (University of Tokyo)
Sobolev forms for microfunctions with real analytic parameters and the microlocal energy method

October 4, Tuesday

10:00 - 10:50 Hideshi Yamane (Kwansei Gakuin University)
Asymptotics for the focusing integrable discrete nonlinear Schrödinger equation

11:10 - 12:00 Naoto Kumano-go (Kogakuin University)
Phase space path integral of higher order parabolic type with general functional as integrand

13:40 - 14:30 Toshinori Oaku (Tokyo Woman’s Christian University)
An algorithmic study on the integration of holonomic distributions

14:50 - 15:40 Yutaka Matsui (Kindai University)
Topological Radon transforms and their applications

16:00 - 16:50 Shinichi Tajima (University of Tsukuba)
Local cohomology solutions of holonomic D-modules associated with non-isolated hypersurface singularities
October 5, Wednesday

10:00 - 10:50  Katsuyoshi Ohara (Kanazawa University)
    Comprehensive Groebner systems in Poincare-Birkhoff-Witt algebra and Bernstein-Sato ideals (joint work with K. Nabeshima and S. Tajima)
11:10 - 12:00  Hiroshi Yamazawa (Shibaura Institute of Technology)
    Singular solutions of the Briot-Bouquet type equations
    —partial differential equation and q-difference-differential equation—
13:40 - 14:30  Masafumi Yoshino (Hiroshima University)
    Moving singularity and monodromy of Hamiltonian system containing generalized Emden-Fowler equation
14:50 - 15:40  Yoko Umeta (Yamaguchi University)
    Stokes geometry for a unified family of some Painlevé hierarchies
16:00 - 16:50  Hidetoshi Tahara (Sophia University)
    On the summability of formal solutions of some linear q-difference partial differential equations

October 6, Thursday

10:00 - 10:35  Toshinori Takahashi (Kindai University)
    Exact WKB analysis and Jacobi polynomials with varying nonstandard parameters (joint work with T. Aoki and M. Tanda)
11:00 - 11:50  Takashi Aoki (Kindai University)
    The hypergeometric function, confluent hypergeometric functions and WKB solutions (joint work with T. Takahashi and M. Tanda)
13:40 - 14:30  Naofumi Honda (Hokkaido University) and Takahiro Kawai (RIMS)
    A unified treatment of pinch points and cusps in Landau-Nakanishi surfaces with microlocal analysis
14:50 - 15:40  Sampei Hirose (Shibaura Institute of Technology)
    On non-hereditary turning points; particular turning points which appear in the deformation theory of ordinary differential equations
16:00 - 16:50  Sampei Hirose, Takahiro Kawai (RIMS) and Yoshitsugu Takei (RIMS)
    On some recent results in the theory of virtual turning points

October 7, Friday

10:30 - 11:05  Takahiro Shigaki (Kobe University)
    Nonlinear eigenvalue problems and exact WKB analysis
11:25 - 12:00  Kenji Kurogi (Hiroshima University)
    Counterexample to the summability of the formal solution of some PDE
13:40 - 14:30  Yasuyuki Hatsuda (University of Geneva)
    Quantization Conditions in Difference Equations
14:50 - 15:40  Kohei Iwaki (Nagoya University)
    Exact WKB analysis vs spectral networks
16:00 - 16:50  Eric Delabaere (Université d’Angers)
    Several topics about resurgence theory