RIMS Joint Research

Microlocal analysis and asymptotic analysis

Organizer: Yasunori Okada (Chiba Univ.)
Coorganizers: Naofumi Honda (Hokkaido Univ.), Susumu Yamazaki (Nihon Univ.)

October 16(Mon) $\sim$ 20(Fri), 2017
Room No. 111, RIMS, Kyoto University

Program

October 16, Monday

10:00 - 10:50 Toshinori Takahashi (Kindai University)
The confluent hypergeometric function and WKB solutions

11:10 - 12:00 Shofu Uchida (Kindai University)
Linear continuous operators acting on the space of entire functions of a given order

13:40 - 14:30 Kunio Ichinobe (Aichi University of Education)
Experimental observation on k-summability of divergent solutions of the heat equation with $k > 1$
(a joint work with M. Miyake)

14:50 - 15:40 Yumiko Takei (Kobe University)
On expressions of Voros coefficients for hypergeometric differential equations in terms of the topological recursion

16:00 - 16:50 Takashi Aoki (Kindai University)
Exact WKB analysis of the Gauss hypergeometric function

October 17, Tuesday

10:00 - 10:50 Yasunori Okada (Chiba University)
On the solvability of a coupling equation for PDEs of Briot-Bouquet type

11:10 - 12:00 Susumu Yamazaki (Nihon University)
Nearby and Vanishing Cycles of Fuchsian D-Modules

13:40 - 14:30 Keisuke Uchikoshi (National Defense Academy)
Singularities of gravity water waves

14:50 - 15:40 Kiyoomi Kataoka (the University of Tokyo)
Some remarks on Hayato Chiba's theory about Kuramoto conjecture

16:00 - 16:50 Tatsuo Suwa (Hokkaido University)
Relative Dolbeault cohomology and Sato hyperfunctions

October 18, Wednesday

10:00 - 10:50 Kohei Umeta (Nihon University)
Laplace hyperfunctions from the viewpoint of Čech-Dolbeault cohomology
(a joint work with N. Honda)

11:10 - 12:00 Naofumi Honda (Hokkaido University)
Application of the theory of Čech-Dolbeault cohomology to operations on hyper-functions
(a joint work with T. Izawa and T. Suwa)

13:40 - 14:30 Joe Kamimoto (Kyushu University)
Failure of meromorphy for local zeta functions

14:50 - 15:40 Sampei Hirose (Shibaura Institute of Technology), Takahiro Kawai (RIMS)
and Yoshitsugu Takei (Doshisha University)
On virtual turning points originating from a non-hereditary turning point

16:00 - 16:50 Yoshitsugu Takei (Doshisha University)
Some recent topics in the exact WKB analysis related to the exact steepest descent method

October 19, Thursday

10:00 - 10:50 Jun Yamamoto (Shibaura Institute of Technology) and Hiroshi Yamazawa (Shibaura Institute of Technology)
q-analogue of a system of equation from geometry

11:10 - 12:00 Hidetoshi Tahara (Sophia University)
Some examples of the Borel summability of formal solutions of linear partial differential equations

13:40 - 14:30 Masafumi Yoshino (Hiroshima University)
Movable Singularity of Hamiltonian System and Blowup of Semi linear Wave Equation

14:50 - 15:40 Saiei-Jaeyeong Matsubara-Heo (the University of Tokyo)
On Laplace and Euler integral representations of GKZ hypergeometric functions

16:00 - 16:50 Toshio Oshima (Josai University)
Transformation of KZ type equations

October 20, Friday

10:00 - 10:50 Naoto Kumano-go (Kogakuin University)
Phase space Feynman path integrals of parabolic type with functional derivatives

11:10 - 12:00 Takeshi Morita (Osaka University)
On some divergent bilateral basic hypergeometric series and connection formulae

13:40 - 14:30 Toshinori Oaku (Tokyo Woman's Christian University)
An attempt to compute holonomic systems for Feynman integrals in two-dimensional space-time

14:50 - 15:40 Shinichi Tajima (University of Tsukuba)
A method for computing generic Lê numbers associated with hypersurface non-isolated singularities