

RIMS Symposium on

Recent development of microlocal analysis and asymptotic analysis

Organizers: Yasunori Okada, Naofumi Honda, and Susumu Yamazaki

October 23(Tue.) ~ 26(Fri.), 2012
Room No. 111 of RIMS, Kyoto University

Program

October 23, Tuesday

- 10:00 - 10:50 Yasunori Okada (Chiba Univ.)
Boundary value representations for bounded hyperfunctions and some variants
- 11:10 - 12:00 Hideshi Yamane (Kwansei Gakuin Univ.)
Long-time asymptotics for the defocusing integrable discrete nonlinear Schrödinger equation
- 13:30 - 14:20 Takashi Aoki (Kinki Univ.) and Mika Tanda (Kinki Univ.)
Parametric Stokes phenomena for hypergeometric differential equations
- 14:40 - 15:30 Masafumi Yoshino (Hiroshima Univ.)
Connection problem for first integrals of nonintegrable Hamiltonian
- 15:50 - 16:40 Otto Liess (Univ. Bologna)
On the boundary values of continuous functions, respectively hyperfunctions: various settings and some relations between them

October 24, Wednesday

- 10:00 - 10:50 Kunio Yoshino (Tokyo City Univ.)
Analytic continuation of eigenvalues of Daubechies operator and Fourier ultrahyperfunctions
- 11:10 - 12:00 Yasuyuki Oka (Shibaura Institute of Technology) and Kunio Yoshino (Tokyo City Univ.)
Solvability of Lewy equation in the space of the tempered ultrahyperfunctions via Fourier transform
- 13:30 - 14:20 Takashi Takiguchi (National Defense Academy of Japan)
On the structure of hyperfunctions and ultradistributions
- 14:40 - 15:30 Naoto Kumano-go (Kogakuin Univ.)
Phase space path integral as analysis on path space

15:50 - 16:40 Naofumi Honda (Hokkaido Univ.) and Takahiro Kawai (RIMS, Kyoto Univ.)
Micro-analytic S-matrix theory revisited — Can a computer afford us a better understanding of the Landau-Nakanishi geometry?

October 25, Thursday

- 9:40 - 10:30 Kana Ando (Chiba Univ.)
Multi-point connection problem
- 10:40 - 11:30 Shingo Kamimoto (RIMS, Kyoto Univ.)
On the decomposition of WKB solutions to monomially summable series
- 11:40 - 12:30 Ruriko Ohashi (Tokyo Metropolitan Univ.) and Akira Shudo (Tokyo Metropolitan Univ.)
Numerical verification of the exact WKB analysis for multilevel nonadiabatic transition problems
- 14:00 - 14:50 Youko Umeta (Hokkaido Univ.)
Instanton-type formal solutions of $(P_{34})_m$ and $(P_{IV})_m$ with a large parameter
- 15:00 - 15:50 Shinji Sasaki (RIMS, Kyoto Univ.)
Borel summability of transformations series concerning fixed singularities of WKB solutions
- 16:00 - 16:50 Yoshitsugu Takei (RIMS, Kyoto Univ.)
Exact WKB analysis and multi-summability — A case study

October 26, Friday

- 10:00 - 10:50 Takashi Aoki (Kinki Univ.), Naofumi Honda (Hokkaido Univ.) and Susumu Yamazaki (Nihon Univ.)
Kernel functions and symbols of pseudodifferential operators of infinite order with an apparent parameter
- 11:10 - 12:00 Motoo Uchida (Osaka Univ.)
Algebraic analysis of boundary value problems for sheaves and D-modules
- 13:30 - 14:20 Hidetoshi Tahara (Sophia Univ.) and Hiroshi Yamazawa (Shibaura Institute of Technology)
Maillet type theorem, convolution equations and multisummability of formal solutions
- 14:40 - 15:30 Shinichi Tajima (Tsukuba Univ.)
Algebraic local cohomology classes and Kouchnirenko's formula
- 15:50 - 16:40 Kiyoomi Kataoka (Univ. Tokyo) and Nobuko Takeuchi (Tokyo Gakugei Univ.)
A system of fifth-order PDE's describing surfaces containing 2 families of circular arcs and the reduction to a system of fifth-order ODE's