

微分方程式の指数解析とその周辺

研 究 集 会

京都大学数理解析研究所の共同研究事業の一つとして、下記のように研究集会を催しますので、ご案内申し上げます。

研究代表者 竹 井 義 次
(京大・数理研)

記

日 時 : 2013年10月15日(火) 10:00 ~
 10月18日(金) 17:30

場 所 : 京都大学数理解析研究所4階420号室
 市バス 京大農学部前 または 北白川 下車

プログラム

10月15日(火)

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|---------------|---|
| 10:00 ~ 11:00 | Daniele C. Struppa (Chapman Univ., USA)
Propagation of superoscillations as solutions to the Cauchy problem for generalized Schrödinger equations |
| 11:15 ~ 12:15 | Naofumi Honda (Hokkaido Univ.) and Takahiro Kawai (RIMS, Kyoto Univ.)
Sato's postulates on the S -matrix revisited through the Borel resummation of the perturbation series (a joint work with Henry P. Stapp) |
| 14:00 ~ 15:00 | Reinhard Schäfke (Strasbourg, France)
Loray's reduction of a vector field with nilpotent linear part and polynomial asymptotics |
| 15:15 ~ 16:15 | Tatsuya Koike (Kobe Univ.)
On the computation of Voros coefficients via middle convolutions (joint work with K. Iwaki) |
| 16:30 ~ 17:10 | Mika Tanda (Kinki Univ.)
Parametric Stokes phenomena of the Gauss hypergeometric differential equation with a large parameter (joint work with T. Aoki) |
| 17:20 ~ 18:00 | Toshinori Takahashi (Kinki Univ.)
On the WKB theoretic structure of a Schrödinger operator with a Stokes curve of loop type |

10月16日(水)

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|---------------|--|
| 10:00 ~ 11:00 | Yutaka Matsui (Kinki Univ.)
Topological Radon transforms and their applications |
| 11:15 ~ 12:15 | Ahmed Sebbar (Bordeaux, France)
Folding paper, theta function and eta function |

- 14:00 ~ 15:00 Shingo Kamimoto (RIMS, Kyoto Univ.),
Takahiro Kawai (RIMS, Kyoto Univ.) and Tatsuya Koike (Kobe Univ.)
A happy marriage of resurgent functions and linear differential operators
of infinite order in exact WKB analysis
- 15:15 ~ 16:15 André Voros (Saclay, France)
Zeta functions over zeros of zeta functions, and an exponential-asymptotic
view of the Riemann Hypothesis
- 16:30 ~ 17:30 Takashi Aoki (Kinki Univ.)
Exact WKB analysis of confluent hypergeometric equations (joint work
with T. Takahashi and M. Tanda)
- 19:00 ~ < Party >

10月17日 (木)

- 10:00 ~ 11:00 Yousuke Ohyama (Osaka Univ.)
The q -Painlevé equations and Riemann-Hilbert-Birkhoff problem
- 11:15 ~ 12:15 Stephane Malek (Lille, France)
On Gevrey asymptotics for difference-differential nonlinear PDE
- 14:00 ~ 15:00 Shinichi Tajima (Univ. of Tsukuba)
 b -functions and algebraic local cohomology classes attached to Lê cycles
- 15:15 ~ 16:15 Susumu Yamazaki (Nihon Univ.)
Kernel functions and symbols of pseudodifferential operators of infinite
order with an apparent parameter (joint work with T. Aoki and N. Honda)
- 16:30 ~ 17:10 Kohei Umeta (Hokkaido Univ.)
On the sheaf of Laplace hyperfunctions in several variables (joint work
with Naofumi Honda)
- 17:20 ~ 18:00 Daisuke Tarama (Kyoto Univ.)
Analytic extension of Birkhoff normal forms for Hamiltonian systems of
one degree of freedom

10月18日 (金)

- 10:00 ~ 11:00 Grzegorz Lysik (Polish Academy of Sciences, Poland)
Summability of formal solutions to partial differential equations
- 11:15 ~ 12:15 Masafumi Yoshino (Hiroshima Univ.)
Connection problem for non integrable Hamiltonian system
- 14:00 ~ 15:00 Akira Shudo (Tokyo Metropolitan Univ.)
Toward pruning theory of the Stokes geometry for the quantum Henon map
- 15:15 ~ 16:15 Youko Umeta (Tokyo Univ. of Science)
Instanton-type solutions of Painlevé hierarchies $(P_J)_m$ ($J = \text{I, II, 34, IV}$)
- 16:30 ~ 17:30 Yoshitsugu Takei (RIMS, Kyoto Univ.)
The fourth-order PI equation and coalescing phenomena of nonlinear
turning points