

# 超局所解析と特異摂動論

## 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。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：2015年10月5日(月) 13:00 ~ 10月9日(金) 17:00

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5日(月)

- 13:00 ~ 13:50 Pierre Schapira (Paris, France)  
Grothendieck topologies for analysis
- 14:00 ~ 14:50 Kiyoomi Kataoka (Univ. of Tokyo)  
The functor  $\beta_Y(\cdot)$  and mixed problems for  $\mathcal{D}_X$ -modules
- 15:10 ~ 16:00 Masafumi Yoshino (Hiroshima Univ.)  
Monodromy of some resonant Hamiltonian system
- 16:10 ~ 17:00 Shinji Sasaki (RIMS, Kyoto Univ.)  
Bifurcation phenomenon of Stokes curves around a double turning point and influence of virtual turning points upon nonadiabatic transition probabilities

#### 10月6日(火)

- 10:00 ~ 10:50 Setsuro Fujiie (Ritsumeikan Univ.)  
Resonances near an energy-level crossing
- 11:10 ~ 12:00 Johannes Sjöstrand (Dijon, France)  
Non-self-adjoint perturbations of completely integrable Hamiltonians in 2D — rational tori and spectral centipedes  
(joint work with Michael Hitrik)
- 14:00 ~ 14:50 Reinhard Schäfke (Strasbourg, France)  
Factorisation of fundamental WKB-solutions  
(joint work with Charlotte Hulek)
- 15:10 ~ 16:00 Keisuke Uchikoshi (National Defense Academy)  
(To be announced)
- 16:10 ~ 17:00 Takahiro Kawai (RIMS, Kyoto Univ.) and Naofumi Honda (Hokkaido Univ.)  
An invitation to Sato's postulates in micro-analytic  $S$ -matrix theory

### 10月7日(水)

- 10:00 ~ 10:50 Ovidiu Costin (Ohio State, USA)  
Exact WKB and resurgence
- 11:10 ~ 12:00 Masaki Kashiwara (RIMS, Kyoto Univ.)  
Riemann-Hilbert problem of irregular holonomic D-modules
- 18:30 ~ < Party >

### 10月8日(木)

- 10:00 ~ 10:50 Yuichi Ike (Univ. of Tokyo)  
Hyperbolic localization and Lefschetz fixed point formulas for higher-dimensional fixed point sets
- 11:10 ~ 12:00 Yves Laurent (Grenoble, France)  
 $b$ -functions and regular holonomic  $\mathcal{D}$ -modules
- 14:00 ~ 14:50 Toshio Oshima (Josai Univ.)  
Linear ordinary differential equations in the complex domain and hypergeometric systems
- 15:10 ~ 16:00 Toshinori Oaku (Tokyo Woman's Univ.)  
Some algorithmic problems for holonomic distributions
- 16:10 ~ 17:00 Hikosaburo Komatsu (Univ. of Tokyo)  
(To be confirmed)

### 10月9日(金)

- 10:00 ~ 10:50 Tatsuya Koike (Kobe Univ.)  
A remark on the growth order of Borel transform of WKB solutions of one-dimensional Schrödinger equations — Toward a proof of its multisummability
- 11:10 ~ 12:00 David Sauzin (Pisa, Italy & CNRS, France)  
Nonlinear analysis with endlessly continuable functions  
(joint work with Shingo Kamimoto)
- 14:00 ~ 14:50 Eric Delabaere (Angers, France)  
Some considerations on resurgence theory and applications
- 15:10 ~ 16:00 Takashi Aoki (Kinki Univ.)  
The hypergeometric function and WKB solutions
- 16:10 ~ 17:00 Yoshitsugu Takei (RIMS, Kyoto Univ.)  
On the exact WKB analysis of discrete Painlevé equations