

# 26th Matsuyama Camp: Recent Development on Partial Differential Equations

Dedicated to the 60th Birthday of Professor Yoshinori MORIMOTO

6/1/2011 to 9/1/2011

TOMOIKISO (Ryukoku University)

tel: 075-366-5303

<http://www.ryukoku.ac.jp/tomoikiso/> (in Japanese)

〒 602-8019 38 Konoe-chou, Shimochoja-machi Sagaru, Muromachi-dori,  
Kamigyoku-ku, Kyoto

## January 6, 2011

11:00 – 11:50

### **Boltzmann equation and the existence of solutions**

Seiji UKAI (Professor Emeritus Tokyo Institute of Technology)

13:30 – 14:20

### **Lower and upper estimates for the non-cutoff collisional operator**

Radjesvarane ALEXANDRE

(Shanghai Jiao Tong University / French Naval Academy)

14:40 – 15:30

### **Optimal hypoelliptic estimates for a class of kinetic equations**

Karel PRAVDA-STAROV

(Chaire CNRS de Physique-Mathématique Université de Cergy-Pontoise)

16:10 – 17:00

### **Stark effect on $H_2^+$ -like molecules**

Vania SORDONI (University of Bologna)

17:20 – 18:10

### **Life-time for the molecular predissociation** (joint work with A. Grigis)

Andre MARTINEZ (University of Bologna)

**January 7, 2011**

10:00 – 10:50

**Regularities of solutions for a class of degenerate partial differential equations**

Hua CHEN (Wuhan University)

11:10 – 12:00

**Regularity of solutions for the non-cutoff Boltzmann equation**

Chao-Jiang, XU (Wuhan University/Université de Rouen)

13:30 – 14:20

**Hypocoercivity in kinetic theory and the convergence to the equilibrium**

Tong YANG (City University of Hong-Kong)

14:40 – 15:30

**Uniqueness of solutions for non-cutoff Boltzmann equation and singular change of variables in pre-post collisional velocities**

Yoshinori MORIMOTO (Kyoto University)

16:10 – 17:00

**On fundamental solutions related to non-local Dirichlet forms with BMO convections**

Yasunori MAEKAWA (Kobe University)

17:20 – 18:10

**On the Cauchy problem for the water wave system**

Claude ZUILLY (Professor Emeritus Université de Paris XI )

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**19:00 BANQUET: Kyoto Garden Palace**

tel: 075-411-0111 <http://www.hotelgp-kyoto.com/>

〒602-0912 605 Tatsumae-chou, Shimochoja-machi Agararu, Karasumadori, Kamigyoku-ku, Kyoto

## January 8, 2011

10:00 – 10:50

**The construction of a class of solutions to hyperbolic equations and applications to inverse problems**

Hideki TAKUWA (Doshisha University)

11:10 – 12:00

**Nonlinear eigenvalue problem and related topics**

Toshihiko HOSHIRO (University of Hyogo)

13:30 – 14:20

**Singularities of solutions to the Cauchy problem for second-order hyperbolic operators with the coefficients of their principal parts depending only on the time variable**

Seiichiro WAKABAYASHI (University of Tsukuba)

14:40 – 15:30

**The Lyapunov exponents for nonhomogeneous linear differential systems**

Haruhisa ISHIDA (University of Electro-Communications)

16:10 – 17:00

**Note on lower bounds of energy growth for solutions to wave equation**

Tatsuo NISHITANI (Osaka University)

17:20 – 18:10

**On the energy estimates for second order homogeneous hyperbolic equations with Levi-type conditions**

Fumihiko HIROSAWA (Yamaguchi University)

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## January 9, 2011

10:00 – 10:50

**Semiclassical resonance width for homoclinic trajectories (joint work with J.-F.Bony, T.Ramond, M.Zerzeri)**

Setsuro FUJIE (Ritsumeikan University)

11:10 – 12:00

**Construction of the fundamental solutions and spectral functions of nilmanifolds**

Chisato IWASAKI (University of Hyogo)

13:30 – 14:20

**Blow up Phenomena on the curvature of closed plane elastic curves**

Toshiyuki MIYOSHI (Ryukoku University, Master Course)

14:40 – 15:30

**Blow up Phenomena on the curvature of closed plane elastic curves  
with the winding number  $\omega \geq 1$**

Minoru MURAI (Ryukoku University, Post-Doctral)

**Organising Comitee**

Toshihiko HOSHIRO (University of Hyogo)

Waichiro MATSUMOTO (Ryukoku University)

Humihiko HIROSAWA (Yamaguchi Universitu)

**Contact with**

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Challenging Exploratory Research (No. 22654019)

**Hypoellipticity and Schroedinger operators with magnetic fields**

Principal Investigator: Toshihiko HOSHIRO

Scientific Research (C) (No. 19540202)

**Study on systems of partial differential equations aided by the abstrat  
algebra**

Principal Investigator: Waichiro MATSUMOTO

Scientific Research (C) (No. 22540187)

**Boltzmann equation and nonlinear microlocal analysis**

Principal Investigator: Yoshinori MORIMOTO

Scientific Research (C) (No. 22540197)

**On the analysis of evolution equations with smooth coefficients**

Principal Investigator: Fumihiko HIROSAWA