# RIMS Workshop

## on

## Mathematical Analysis in Fluid and Gas Dynamics

Organizers   Tatsuo Iguchi
(Keio University)
Takayuki Kobayashi
(Osaka University)

Date : from July 2 to 4, 2014
Venue : RIMS, Kyoto University, Room No. 420

## Program

### Wednesday, July 2

14 : 00 ∼ 14 : 50      Kenji Nakanishi (Kyoto University)
Multi-frequency NLS limit for a model equation of gravity-capillary waves

15 : 00 ∼ 15 : 30      Yohei Yamazaki (Kyoto University)
Stability of line standing waves near the bifurcation point for a nonlinear Schrödinger equation

15 : 50 ∼ 16 : 40      Shih-Hsien Yu (National University of Singapore)
Duality in Boltzmann equation and its applications

### Thursday, July 3

10 : 00 ∼ 10 : 50      Takahiro Okabe (Hirosaki University)
Space-time asymptotics of the 2D Navier-Stokes flow in the whole plane

11 : 00 ∼ 11 : 50      Denys Dutykh (Université de Savoie)
Application of variational principles to water wave modelling

13 : 30 ∼ 14 : 00       Hiroki Ueno (Keio University)
On the thin film approximation for the flow of a viscous incompressible fluid down an inclined plane

14 : 10 ∼ 14 : 40       Masanari Hattori (Kyoto University)
Generalized slip-flow theory and its related Knudsen-layer analysis for a slightly rarefied gas I

15 : 00 ∼ 15 : 50       Satoshi Taguchi (The University of Electro-Communications)
Asymptotic theory of a rarefied gas flow past a sphere at low Mach numbers

16 : 00 ∼ 16 : 50       Hayato Nawa (Meiji University)
Toward a mathematical theory of turbulence

Friday, July 4

10 : 00 ∼ 10 : 50       Thomas Alazard (ENS Paris)
On the Cauchy problem for the gravity water-waves equations

11 : 00 ∼ 11 : 50       Tohru Nakamura (Kyushu University)
Stationary wave to system of viscous conservation laws in half line

13 : 30 ∼ 14 : 00       Masatoshi Okita (Kyushu University)
On decay estimate of strong solutions in critical spaces for the compressible Navier-Stokes equations

14 : 10 ∼ 14 : 40       Kazuyuki Tsuda (Kyushu University)
Time-periodic problem for the compressible Navier-Stokes equation on the whole space

15 : 00 ∼ 15 : 50       Natsumi Yoshida (Osaka City University)
Large time behavior of solutions toward a multiwave pattern for the Cauchy problem of the scalar conservation law with degenerate flux and viscosity