

RIMS Workshop  
on  
Mathematical Analysis in Fluid and Gas Dynamics

Organizers Shinya Nishibata  
(Tokyo Institute of Technology)  
Yoshiyuki Kagei  
(Kyushu University)

Date : from July 11 to 13 2005  
Venue : RIMS, Kyoto University, Room No. 420

Program

Monday July 11

- |                   |   |
|-------------------|---|
| 10 : 00 ~ 10 : 45 | Takayuki Kobayashi (Saga Univ.)<br>Weak solutions to the Navier-Stokes-poisson equations  |
| 11 : 00 ~ 11 : 30 | Morimichi Umehara, Atusi Tani (Keio Univ.)<br>Global solutions to the one-dimensional equations for a self gravitating viscous radiative and reactive gas                 |
| 13 : 30 ~ 14 : 15 | Josef Malek (Charles Univ.)<br>A Lipschitz truncation of Sobolev functions and its application in analysis of steady flows of generalized power-law incompressible fluids |
| 14 : 30 ~ 15 : 00 | Hideyuki Miura (Tohoku Univ.)<br>Local theory in critical spaces for the dissipative quasi-geostrophic equation   |
| 15 : 15 ~ 15 : 45 | Homare Morioka, Atusi Tani (Keio Univ.)<br>Global solutions for the Zabolotskaya-Khokhlov equations   |
| 16 : 00 ~ 16 : 45 | Shinji Odanaka (Osaka Univ.)<br>A numerical scheme for quantum hydrodynamics in a semiconductor   |

Tuesday , July 12

- 10 : 00 ~ 10 : 45     Akitaka Matumura (Osaka Univ.)  
Asymptotic behavior of solutions for a fluid dynamical model of semiconductor equation
- 10 : 55 ~ 11 : 25     Masahiro Suzuki (Tokyo Inst. Tech.)  
A stationary solution for a fluid dynamical model of semiconductor
- 11 : 35 ~ 12 : 20     Fumioki Asakura (Osaka Electro-Communication Univ.)  
Wave-front tracking for the equations of non-isentropic gas dynamics
- 14 : 00 ~ 14 : 45     Kenji Nishihara (Waseda Univ.)  
Large-time behavior of solutions for the damped wave equation
- 14 : 55 ~ 15 : 40     Tetu Makino (Yamaguti Univ.)  
Remarks on quasilinear wave equations related to gas dynamics
- 16 : 00 ~ 16 : 45     Tai-Ping Liu (Stanford Univ.)  
Nonlinear waves for gas flows, a Kyoto subject

Wednesday , July 13

- 10 : 00 ~ 10 : 45     Kazuo Aoki (Kyoto Univ.)  
Cylindrical Couette flow of a vapor-gas mixture: A ghost effect in the fluid-dynamic limit
- 10 : 55 ~ 11 : 40     Yoshihiro Shibata (Waseda Univ.)  
 $L_p$  maximal regularity of Stokes equations with first order boundary condition
- 11 : 50 ~ 12 : 35     David Hoff (Indiana Univ.)  
Uniqueness of weak solutions of the Navier-Stokes equations of multidimensional compressible flow