

数理解析研究所講究録 1588

非線形発展方程式と現象の数理

京都大学数理解析研究所

2008年4月

*RIMS Kôkyûroku 1588*

*Nonlinear Evolution Equations  
and Mathematical Modeling*

*April, 2008*

*Research Institute for Mathematical Sciences*

*Kyoto University, Kyoto, Japan*

This is a report of research done at Research Institute for Mathematical Sciences, Kyoto University. The papers contained herein are in final form and will not be submitted for publication elsewhere.

**Symposium on**  
**Nonlinear Evolution Equations and**  
**Mathematical Modeling**

Organized by Yoshio Yamada  
(Waseda University)

Date & Time: October 22, 2007 (Monday) 13:30~  
October 24, 2007 (Wednesday) 11:50

Place: Research Institute for Mathematical Sciences,  
Kyoto University

**Program**

**October 22 (Monday)**

- 13:30~14:20 Akio Ito (Kinki Univ.)  
Mathematical treatment of tumor invasion phenomena
- 14:30~15:20 Tetsuya Ishiwata (Gifu Univ.) and Shigetoshi Yazaki (Miyazaki Univ.)  
Interface motion of a negative crystal
- 15:30~16:20 Katsuya Inui (Keio Univ.), Atsushi Tani (Keio Univ.) and  
Shin'ya Matsui (Hokkaido Information Univ.)  
On time local solvability for the motion of an unbounded volume  
of viscous incompressible fluid
- 16:30~17:20 Vladimir Fedorov (Chelyabinsk State Univ.)  
Research of a class of nonlinear Sobolev type equations and its  
applications for mathematical physics

**October 23 (Tuesday)**

- 10:00~10:50 Junichi Harada (Waseda Univ.)  
Regularity of solutions for some elliptic equations with nonlinear boundary conditions
- 11:00~11:50 Yoshitsugu Kabeya (Osaka Prefecture Univ.)  
Imperfect bifurcations arising in a nonlinear elliptic equation on a spherical cap
- 11:50~13:30 — Lunch —
- 13:30~14:20 Kazuhiro Oeda (Waseda Univ.)  
Stationary patterns for a cooperative model with nonlinear diffusion
- 14:30~15:20 Masaki Hoshino (Tohoku Univ.)  
Sharp estimates of the convergence rate for a semilinear parabolic equation with supercritical nonlinearity
- 15:30~16:20 Atsushi Yagi (Osaka Univ.) and Gianluca Mola (Milano Polytechnics)  
Dynamical system for forest model with memory
- 16:30~17:20 Tohru Tsujikawa (Miyazaki Univ.)  
Interactive dynamics of two interfaces in a reaction diffusion system
- Banquet —

**October 24 (Wednesday)**

- 10:00~10:50 Shota Sato (Tohoku Univ.)  
Existence of solutions with moving singularities for a semilinear parabolic equation
- 11:00~11:50 Noriaki Umeda (Tokyo Univ.)  
On blow-up at space infinity for nonlinear heat equations

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Nonlinear Evolution Equations and Mathematical Modeling  
RIMS 研究集会報告集

2007年10月22日～10月24日  
研究代表者 山田 義雄 (Yoshio Yamada)

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