



Workshop on Nonlinear Water Waves
In honor of Professor Mitsuhiro Tanaka
on the occasion of his retirement

Date : May 23 (Wed) & 25 (Fri), 2018
Place : Research Institute for Mathematical Sciences, Kyoto University
Room 111 of RIMS in North Campus
URL : http://murasige.sci.ibaraki.ac.jp/WS_Nonlinear_Water_Waves_RIMS_2018.html
Organizers : Takanori Hino (Yokohama National Univ.), Tatsuo Iguchi (Keio Univ.),
Taro Kakinuma (Kagoshima Univ.), Takeshi Kataoka (Kobe Univ.),
Ken-ichi Maruno (Waseda Univ.), Tetsu Mizumachi (Hiroshima Univ.),
Sunao Murashige (Ibaraki Univ.), Yasuhiro Ohta (Kobe Univ.)

Program

May 23 (Wed)

- 13:00-13:10 Opening
- 13:10-13:40 Sunao Murashige (Ibaraki University)
Large-amplitude solitary waves on a linear shear current
- 13:40-14:10 Yoshihiro Niwa (University of Tokyo)
Estimation of baroclinic tide energy available for deep ocean mixing based on three-dimensional global numerical simulations
- Coffee break*
- 14:30-15:20 Nail Akhmediev (Australian National University)
Classifying the rogue wave solutions of the nonlinear Schrödinger equation
- Coffee break*
- 15:30-16:20 Wooyoung Choi (New Jersey Institute of Technology)
On spectral formulation for nonlinear water waves and their applications

May 24 (Thu)

9:20-9:50 Taro Kakinuma (Kagoshima University)
A numerical calculation for internal waves over a slope or a mound

9:50-10:20 Takeshi Kataoka (Kobe University)
Transverse instability of surface solitary waves and breaking

Coffee break

10:30-11:20 Triantaphyllos Akylas (Massachusetts Institute of Technology)
Parametric subharmonic instability of internal waves: locally confined beams versus monochromatic wavetrains

Coffee break

11:30-12:20 Roberto Camassa (University of North Carolina)
Hydrodynamic models and boundary confinement effects

Lunch

14:00-14:30 Takuji Waseda, Wataru Fujimoto and Yuki Kita (University of Tokyo)
Modulational instability in realistic directional seas

14:30-15:00 Naoto Yokoyama (Doshisha University / Kansai University) and Masanori Takaoka (Doshisha University)
Energy budget in stratified turbulence

Coffee break

15:10-16:00 Victor Shrira (Keele University)
Evolution of wind wave angular spectra: kinetic equations vs direct numerical simulations and observations

Coffee break

16:10-17:00 Mitsuhiro Tanaka (Gifu University)
Wave turbulence in a two-layer fluid system

Banquet (invitation only)

May 25 (Fri)

9:20-9:50 Ken-ichi Maruno (Waseda University)
The interactions of dark line solitons in the Davey-Stewartson II system

9:50-10:20 Yasuhiro Ohta (Kobe University)
Time-localized solutions for some soliton equations

Coffee break

10:30-11:20 Yuji Kodama (Ohio State University)
**Mach Reflection of a Solitary Wave: Revisited
Part I: Theory**

Coffee break

11:30-12:20 Harry Yeh (Oregon State University)
**Mach Reflection of a Solitary Wave: Revisited
Part II: Experiments**

Group Photo

Lunch

14:30-15:20 David Lannes (The Université de Bordeaux)
The Boussinesq equations with a floating obstacle

Coffee break

15:30-16:00 Yoshimasa Matsuno (Yamaguchi University)
The N -soliton formulas for a multi-component modified nonlinear Schrödinger system with nonzero boundary conditions

16:00-16:30 Tetsu Mizumachi (Hiroshima University)
On the phase shift of line solitary waves for the KP-II equation

16:30-17:00 Tatsuo Iguchi (Keio University)
Kakinuma model for internal gravity waves in the rigid-lid case

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