



Kobe Workshop on Nonlinear Water Waves

<https://murasige.sci.ibaraki.ac.jp/WS.Nonlinear.Water.Waves.Kobe.2025.html>

Date : July 7 (Mon) – 10 (Thu), 2025

Place : Hotel Kitano Plaza Rokko-so (Kobe, Japan)

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Program with title only

July 7 (Mon)

10:30-10:40 *Opening*

10:40-11:20 Takeshi Kataoka (Kobe University)
Surface waves due to subcritical flow past topography: an exponential-asymptotics solution

11:20-12:00 Amin Chabchoub (Okinawa Institute of Science and Technology)
Hydrodynamic Manakov solitons and breathers

Lunch

14:00-14:40 Ken-ichi Maruno (Waseda University)
An integrable semi-discretization of the 2-component Hunter-Saxton equation

14:40-15:20 Justin Cole (University of Colorado, Colorado Springs)
Dispersive Spiral Waves

Coffee break

- 15:40-16:20 Dag Nilsson (Mid Sweden University)
Axisymmetric capillary solitary waves with vorticity and swirl
- 16:20-17:00 Samuel Walsh (University of Missouri)
Extreme internal waves
- 17:00-17:40 Mark Groves (Universität des Saarlandes)
Solitary wave solutions to the full dispersion Kadomtsev-Petviashvili equation

July 8 (Tue)

9:00-9:40 Sunao Murashige (Ibaraki University)
Gravity currents and steep internal fronts

9:40-10:20 Mark Blyth (University of East Anglia)
Stability of waves on fluid of infinite depth with constant vorticity

Coffee break

10:40-11:20 Mitsuhiro Tanaka (Gifu University)
Numerical study on the fast spectral evolution in a simplified two-layer fluid system

11:20-12:00 André Nachbin (Worcester Polytechnic Institute)
Water-wave propagation on graphs

Lunch

14:00-14:40 Magda Carr (Newcastle University)
Experimental & numerical modelling of internal solitary waves

14:40-15:20 Martin Erinin (University of Michigan)
The effect of surfactants on plunging breakers: surface profile evolution and droplet generation

Coffee break

15:40-16:20 Yohei Onuki (Kyushu University)
Breaking of internal waves simulated in a distorted domain model

16:20-17:00 Hidetaka Houtani (University of Tokyo)
Experiment on nonlinear design irregular waves for predicting extreme values of ship response in waves

18:30–20:30 *Banquet* at “Sakabayashi”

July 9 (Wed)

10:00-10:40 Taro Kakinuma (Kagoshima University)
Tsunami-height reduction using a very large floating structure

10:40-11:20 Zhan Wang (Chinese Academy of Sciences)
Dynamics of ferrofluid jets: the Hamiltonian framework

11:20-12:00 Roberto Camassa (University of North Carolina)
Hydrodynamic models and boundary confinement effects

Group photo & Lunch

14:00-14:40 Yeunwoo Cho
(Korea Advanced Institute of Science and Technology (KAIST))
Breather solutions of a quadratic nonlinear beam equation

14:40-15:20 Paul Milewski (The Pennsylvania State University)
Embedded Solitary Waves in the Euler equations: three-layer stratified flows

Coffee break

15:40-16:20 Philippe Guyenne (University of Delaware)
Modeling and simulation of wave propagation and attenuation in sea ice

16:20-17:00 Wooyoung Choi (New Jersey Institute of Technology)
High-order strongly nonlinear long wave approximation

July 10 (Thu)

9:00-12:00 *Free discussion*

Lunch

14:00-19:00 *Free discussion & Closing*