

Workshop on
“Nonlinear Water Waves - an Interdisciplinary Interface”

November 27 – December 7, 2017

organized by

David Henry (U College Cork), Konstantinos Kalimeris (RICAM, Linz), Emilian Părau (U of East Anglia), Jean-Marc Vanden-Broeck (U College London), Erik Wahlén (Lund U)

Week 2

December 4 – December 7, 2017

• Monday, December 4, 2017

09:00 – 09:30 **Registration**

09:30 – 10:30 **Boris Buffoni**

Steady three-dimensional rotational flows: variational structure and Nash-Moser iteration

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Mark Groves**

Fully localised solitary gravity-capillary water waves

12:00 – 14:00 *Lunch Break*

14:00 – 15:00 **Mariana Haragus**

Formation of Kerr optical frequency combs : a water waves bifurcation scenario

15:00 – 15:30 *Break*

15:30 – 16:30 **David Lannes**

Survey lecture: *The water waves equations and asymptotics*

• Tuesday, December 5, 2017

09:30 – 10:30 **Gareth Thomas**

Prediction of the free-surface elevation for rotational water waves using the recovery of pressure at the bed

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Ton van den Bremer**

Experimental validations of various aspects of the wave-induced mean flow for surface gravity wave groups

12:00 – 14:00 *Lunch Break*

14:00 – 15:00 **Raphael Stuhlmeier**

Evolution of statistically inhomogeneous degenerate water wave quartets

15:00 – 15:30 *Break*

15:30 – 16:30 **Vera Hur**

Stokes waves with constant vorticity: numerical computation

- **Wednesday, December 6, 2017**

09:30 – 10:30 **Guido Schneider**

The KdV and the NLS equation on periodic metric graphs and relations to the water wave problem

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Mats Ehrnström**

Enhanced existence time in fractional KdV equations

12:00 – 14:00 *Lunch Break*

14:00 – 15:00 **Konstantinos Kalimeris**

Non-local formulations for water waves

15:00 – 15:30 *Break*

15:30 – 16:30 **Ronald Quirchmayr**

Singular traveling waves of a highly nonlinear shallow water equation

- **Thursday, December 7, 2017**

09:30 – 10:30 **Eugen Varvaruca**

Large-amplitude steady water waves with constant vorticity

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Sam Walsh**

Existence, nonexistence, and asymptotics of deep water solitary waves with localized vorticity

12:00 – 14:00 *Lunch Break*

14:00 – 15:00 **Delia Ionescu-Kruse**

On the short-wavelength stabilities of some geophysical flows

15:00 – 15:30 *Break*

15:30 – 16:30 **Anna Geyer**

Spectral stability of periodic waves in the generalized reduced Ostrovsky equation

All talks take place at ESI, Boltzmann Lecture Hall!