

# Workshop on qualitative and numerical aspects of water waves and other interface problems

May 17 - 19, 2011

organized by A. Constantin, J. Escher, D. Lannes, W. Strauss

- **Tuesday, May 17**

**09:00 – 10:00:** J.-C. Saut (Paris Orsay)

*Remarks on the Cauchy problem for Boussinesq systems*

**10:00 – 10:30:** Coffee

**10:30 – 11:30:** E. Wahlén (Lund)

*Existence and stability of solitary water waves with weak surface tension*

**11:30 – 12:30:** V. Hur (U. of Illinois)

*Regularity vs. Blowup for surface water waves*

**12:30 – 14:00:** Lunch Break

**14:00 – 15:00:** C. Sulem (Toronto)

*Water waves over a rough bottom in the shallow water regime*

**15:00 – 16:00:** V. Duchêne (ENS Paris)

*A nonlinear approach to the dead-water phenomenon*

**16:00 – 16:30:** Coffee

**16:30 – 17:30:** N. Totz (Ann Arbor)

*A Rigorous Justification of the Modulation Approximation to the 2D Full Water Wave Problem*

- **Wednesday, May 18**

**09:00 – 10:00:** M. Groves (Saarbrücken)

*Existence and stability of fully localised three-dimensional gravity-capillary solitary water waves*

**10:00 – 10:30:** Coffee

**10:30 – 11:30:** A. Mاتیoc (Hannover)

*On stratified steady periodic water waves with linear density distribution and stagnation points*

**11:30 – 12:30:** B. Mاتیoc (Hannover)

*Existence and regularity results for stratified water waves*

**12:30 – 14:00:** Lunch Break

**14:00 – 15:00:** P. Germain (Courant Institute)

*Global existence for water waves*

**15:00 – 16:00:** D. Lannes (ENS Paris)

*A stability criterion for two-fluid interfaces*

**16:00 – 16:30:** Coffee

- **Thursday, May 19**

**09:00 – 10:00:** T. Kano (Kyoto)

*Water waves KdV hierarchy III*

**10:00 – 10:30:** Coffee

**10:30 – 11:30:** T. Iguchi (Keio)

*A mathematical analysis of tsunami generation in shallow water due to seabed deformation*

**11:30 – 12:30:** S. Gavriluk (Marseille)

*Model of shear shallow water flows*

**12:30 – 14:00:** Lunch Break

**14:00 – 15:00:** P. Guyenne (Delaware)

*A Hamiltonian approach to nonlinear modulation of water waves*

**15:00 – 16:00** A. Nachbin (IMPA)

*Reduced water wave models with highly variable topography*

**16:00 – 16:30:** Coffee

**16:30 – 17:30:** J. Escher (Hannover)

*Regularity of rotational waves*

**All lectures take place in the ESI Boltzmann Lecture Hall**