ESI **The Erwin Schrödinger International Institute for Mathematical Physics**

Boltzmanngasse 9/2
A-1090 Vienna, Austria

ZVR 298034776

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: M. Groves (Saarbrücken)
  Existence and stability of fully localised three-dimensional gravity-capillary solitary water waves

  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: E. Wahlén (Lund)
  Existence and stability of solitary water waves with weak surface tension

  10:00 – 10:30: Coffee

  10:30 – 11:30: A. Matioc (Hannover)
  On stratified steady periodic water waves with linear density distribution and stagnation points

  11:30 – 12:30: B. Matioc (Hannover)
  Existence and regularity results for stratifed 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: H. Segur (Colorado)
  Surface waves on deep water

  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