



THEMATIC PROGRAM ON MATHEMATICS OF OCEANS

APRIL 29 – JUNE 28, 2013

The dynamics of oceans influence our weather, climate, economic activities, and coastal communities. Mathematics is essential to understanding the ocean: nonlinear surface water waves, tsunamis, global circulation and currents, and air-sea interactions. This Program will focus on the following topics:

1. Nonlinear ocean wave dynamics, including extreme waves, rogue waves, and tsunamis
2. Wave interactions, including statistical ocean wave spectra and turbulence
3. Ocean-atmosphere interaction, including global oceanic circulation.

The purpose of this Program is to bring together mathematical analysts, applied mathematicians, and practicing ocean scientists to focus on these problems.



The Program involves cooperation with AARMS, the Bedford Institute of Oceanography (Dartmouth, NS) and the Institute of Ocean Sciences (Sydney, BC).

ORGANIZERS

W. Craig (McMaster University)
D. Dutykh (University College-Dublin, and CNRS)
D. Henderson (Pennsylvania State University)
K. Lamb (University of Waterloo)
M. Onorato (Università di Torino)
E. Pelinovsky (Russian Academy of Sciences)
C. Sulem (University of Toronto)

SHORT COURSES

Hamiltonian PDEs and Water Waves
Walter Craig (McMaster), Catherine Sulem (Toronto)

Stochastic Fluid Dynamics
Sergei Kuksin (Paris 7), Armen Shirikyan (Cergy Pontoise)

Modeling of Nonlinear Ocean Waves

COXETER LECTURE SERIES

May 7, 9, 10, 2013
Vladimir Zakharov
(University of Arizona and Lebedev Institute, Moscow)

WORKSHOPS

May 6 – 11, 2013
Ocean Wave Dynamics

- Thursday, May 9 – Special Session on Air-Ocean Interactions

May 21 – 25, 2013
Wave Interactions and Turbulence

June 11 – 14, 2013
Sub-mesoscale Ocean Processes

For more information and to register, please visit:
www.fields.utoronto.ca/programs/scientific/12-13/mathoceans

