



# Workshop on Numerical Simulation for Ocean Dynamics

Bandung, 16-20 January 2012

Lectures by : Prof. Guus Stelling

Prof. Guus Stelling is one of the creator of the public domain software **SWASH** (an acronym of Simulating Waves till Shore). It is a general-purpose numerical tool for simulating non-hydrostatic, free-surface, rotational flows and provides a general basis for describing complex changes to rapidly varied flows and wave transformations in coastal waters. For more information about SWASH, see <http://swash.sourceforge.net>. Since 2002 Prof. Stelling is the head of the section Environmental Fluid Mechanics in Civil Engineering and Geosciences faculty of the Delft University of Technology, the Netherlands. Prof. Stelling is also Visiting Professor at Department of Civil Engineering, National University of Singapore.

## Contents of the course:

1. Setting up Box models including numerical integration in time.
2. Numerical modeling of advective transport
3. Modeling shallow water flow in 1 dimension including rapidly varying flows, flooding and drying.
4. Shallow water flow in 2 dimensions, efficient flooding, flooding based on sub-grid methods.
5. Computation of vertical structure and non-hydrostatic effects.

The course will pay much attention to hands on programming of the methods that are treated. All participants are suggested to bring their own laptop.

Venue: Mathematics Study Program, Labtek III Building, Jl Ganesha 10 Bandung

Registration fee: Rp 500.000,00

Rp 250.000,00 (student by showing ID card)

The registration fee covers tea/coffee/lunch, support materials and certificate of attendance.

Please register by sending an email containing information about your name, email address, institution, curriculum vitae, motivation letter, and telephone number to : Dr. Sri Redjeki Pudjaprasetya

([sr\\_pudjap@math.itb.ac.id](mailto:sr_pudjap@math.itb.ac.id)).

Enrolment deadline : 5 January 2012

Seats are LIMITED.

## Contact Person :

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