

Following the success of the “First CoastLab Teaching School” held in November 2007 at the Faculty of Engineering of the University of Porto (FEUP) - Portugal, the CoastLab Network - the network for small and medium coastal engineering laboratories has organized the “Second CoastLab Teaching School” again with the support of ENCORA Young Professional Exchange Program (YPEP) and the IAHR-Maritime Section.

Once more the Faculty of Engineering of the University of Porto (FEUP) hosted the 3-day school. An international group of 29 young professionals with a background in coastal sciences was welcomed with participants from Brazil, Turkey, Tunisia and 6 different EU countries.

The aim of this series of teaching schools is to provide a hands-on application-oriented training on coastal physical modelling related issues. In the first CLab course more general topics were addressed (e.g. wave generation, measuring techniques, and wave-structure interactions), on the contrary the second was entirely dedicated to issues related to sediment transport models within a total of 15-hours.

On the first day, after a brief presentation of CoastLab network by its co-ordinator Professor Francisco Taveira Pinto, Professor Leo van Rijn, presently of Deltares and the University of Utrecht, gave two lectures on cross-shore and long-shore sediment transport, presenting very relevant insights on the topics that can be transferred into practical recommendations when developing a movable bed model. In the afternoon, Professor António Trigo Teixeira, presently of *Instituto Superior Técnico* of Lisbon, introduced the problems addressed, the limitations and the different types of movable bed models followed by a fascinating video on the physical modelling experiment of the Lobito sandspit evolution from the sixties, performed in the National Laboratory of Civil Engineering - Lisbon.



Figure 1. Left) Professor Leo van Rijn. Right) Professor António Trigo Teixeira.

On the following day, students had the chance to visit the Hydraulics Laboratory of FEUP where they got the chance to see some of the ongoing experiments. Afterwards Professor Fernando Veloso Gomes led a field excursion to the Portuguese northwest coast. A number of field stops to some key hotspots illustrating different examples of coastline change to sediment transport disruption were made.

In the morning of the last day, Professor Mutlu Sumer, presently of the Technical University of Denmark, gave two lectures one on the modelling of scour around marine structures and the other one on the effect of turbulence on bedload sediment transport; both presentations were supported by interesting experiments. Unfortunately, due to medical constraints, Professor Agustín Sánchez-Arcilla, presently of the

Technical University of Catalonia, could not give its presentations which were replaced by two presentations: "Improving operational conditions at Leixões oil terminal - Portugal"; and "Simulation of medium term coastal evolution of the Portuguese northwest coast", given by two PhD Researchers of FEUP, Paulo Rosa Santos and Raquel Silva, respectively.



Figure 2. Left) Professor Fernando Veloso Gomes showing information. Right) Participants enjoying the view and struggling with the wind.

In the last day evening students enjoyed traditional flavours of Porto with "*Francesinha*".

The feedback received was very positive despite the change in programme. Suggestions to be included in forthcoming concern the extension of the school duration to make possible a period of actual work in the laboratory.

PoCoast - the National Network of ENCORA in Portugal was pleased to assist in the success of this event.

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Second CoastLab Course



Faculty of Engineering of the University of Porto
Porto, Portugal | April 9-11, 2008

PROGRAMME

APRIL 9 | TOPIC: SEDIMENT TRANSPORT AND MOVABLE BED MODELS

[09:00-10:30] Cross Shore Sediment Transport

Prof. Dr. Leo van Rijn (Delft Hydraulics | University of Utrecht, The Netherlands)

[11:00-12:30] Long Shore Sediment Transport

Prof. Dr. Leo van Rijn (Delft Hydraulics | University of Utrecht, The Netherlands)

[14:30-16:00] Movable Bed Models

Prof. Dr. António Trigo Teixeira (Instituto Superior Técnico, Portugal)

APRIL 10 | TECHNICAL VISIT

Laboratory of Hydraulics of FEUP and Northwestern Coast of Portugal

APRIL 11 | TOPIC: SCOUR, TURBULENCE AND SEDIMENT TRANSPORT

[09:00-10:30] Modelling of Scour around Marine Structures

Prof. Dr. B. Mutlu Sumer (Technical University of Denmark, Denmark)

[11:00-12:30] Effect of Turbulence on Bedload Sediment Transport

Prof. Dr. B. Mutlu Sumer (Technical University of Denmark, Denmark)

[14:30-16:00] Sediment Transport along the Spanish Coast: Models and Concepts I

Prof. Dr. Agustín Sánchez-Arcilla (Technical University of Catalonia, Spain)

[16:30-18:00] Sediment Transport along the Spanish Coast: Models and Concepts II

Prof. Dr. Agustín Sánchez-Arcilla (Technical University of Catalonia, Spain)

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