



**DECIVIL**  
DEPARTAMENTO DE ENGENHARIA  
CIVIL, ARQUITETURA E GEORRECURSOS  
TÉCNICO LISBOA

## MESTRADO EM URBANISMO E ORDENAMENTO DO TERRITÓRIO ORDENAMENTO DA ORLA COSTEIRA



**Niels Hvam**

*Niels Hvam is a senior engineer at DHI.*

*He is specialized in coastal rivers, environmental hydraulics and coastal zone development projects. Niels has been in charge of a large number of modelling studies worldwide and has extensive training experience.*

*BSc in Physics, Technical University of Denmark.*

### "Coastline Evolution Modelling"

**IST – Thursday, 26 March 2015, 18:00h Room VA3**

Processes and factors are decisive when analyzing coastline evolution, so it's necessary to discuss which model to apply and in which dimension (2D/3D). Simulation is needed of the spreading and fate of dissolved or suspended substances under the influence of the fluid transport and associated dispersion processes, as the calculation of the erosion, transport, settling and deposition of cohesive sediment. It is also important to calculate the transport path and fate of the individual dissolved and suspended substances discharged or spilled in lakes, estuaries and coastal areas or at the open sea. We will discuss the fundamentals of fine sediment modelling and give you an introduction on how to set up a transport model using the MIKE 21 and MIKE 3 transport model (TR), the mud transport model (MT) and the particle tracking model (PT).