



## MIKE 21 SW AND BW

### Spectral wave and Boussinesq wave modelling

This two-day, hands-on course teaches you the fundamentals of wave modelling and gives you an introduction on how to set up both spectral wave models using MIKE 21 SW and wave agitation models using the MIKE 21 Boussinesq Wave (BW) in 2D, for various applications. The course also helps you predict and analyse wave conditions in ports where accurate assessment of wave impact is of utmost importance.

The knowledge of the wave conditions is needed for the design of offshore, coastal and port structures where accurate assessment of wave loads is of utmost importance to the safe and economic design of these structures.

MIKE 21 SW is used for the assessment of wave climates in offshore and coastal areas. MIKE 21 SW is particularly applicable for simultaneous wave prediction and analysis on regional scale and local scale.

MIKE 21 BW module is the state-of-the-art tool for studies and analysis of short and long period wave disturbance in ports and harbours and coastal areas.

#### COURSE TOPICS

- Introduction to wave modelling
- Theoretical background and application areas of MIKE 21 BW and MIKE 21 SW
- MIKE 21 BW and MIKE 21 SW setup planner
- Decision of spectral formula
- Bathymetry/mesh generator
- Wave generation
- Data organisation, importing, editing and quality control
- Wave absorption using sponge layer maps
- Calibration techniques and model validation
- Using the utility software of MIKE 21/3 Flow Models
- Analysis and presentation of results, including video animation
- Introduction to advanced applications (e.g. wave breaking)
- Coupling MIKE 21 SW with other MIKE Powered by DHI engines
- Overview of MIKE 21 Mooring Analysis (MIKE 21 MA)

#### TARGET GROUP AND PREREQUISITES

Professionals in offshore and port engineering. It is recommended that the participants have a basic knowledge of wave hydrodynamics either through experience or through following the course 'MIKE 21/3 Flow Model HD FM - Introduction to hydrodynamic modelling using flexible mesh' prior to the course.

#### THE ACADEMY BY DHI

THE ACADEMY offers a palette of courses and capacity building packages designed to fit your needs and challenges. We offer standard and/or tailored training - face-2-face as well as online.

**MIKE Powered by DHI** courses focus on practical skills, hands-on exercises and teaching you how to get the most out of your software. These courses also enable you to understand the power of the MIKE tools for building decision support systems.

**Thematic courses** allow you to apply concepts, applications and decision support principles to the entire business process within current areas: aquaculture and agriculture, energy, climate change, flooding, coast and marine, surface and groundwater, urban water, industry, environment and ecosystems, product safety and environmental risk, etc.

**Our trainers** are experienced professionals, many of whom are recognised international experts in their fields. The use of highly skilled trainers guarantees the quality of THE ACADEMY courses.

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