

WAVE MODELLING WITH MIKE 3 WAVE FM

Take your wave modelling a giant step further - and make it better and smarter!

The aim of this instructor-facilitated, online course is to provide advanced users and professionals involved in wave modelling with the skills to benefit from MIKE 3 Wave FM - a new wave modelling application that outperforms other existing deterministic wave models in the market.

In contrast to webinar and e-learning methodology, this course is taught online and live by a trainer who actively facilitates dialogue and discussion amongst the participants throughout the training sessions.

MIKE 3 Wave FM is a new wave module, an advanced 3D phase-resolving wave model that can be applied to ports & terminals, coastal areas as well as the offshore and maritime industry. It is the state-of-the-art flexible mesh based tool for simulating fully non-linear and fully dispersive 3D waves with no depth restrictions in the model domain. Featuring excellent flood & dry capabilities, the tool handles wave breaking, run-up and overtopping related to coastal flooding. The module has been tested and validated extensively.

"DHI's new powerful MIKE 3 Wave FM model has been an extremely valuable tool for assessment of the coastal flooding due to wave overtopping in our Capbreton-Soorts Hossegor coastal area, southern part of France. In addition, the 3D visualisation of the results has been a game changer for illustrating the risk prone areas to the many stakeholders".
Regional Coastal Authorities, Landes, France

COURSE SESSIONS AND TOPICS

- **Session 1 - My first 3D wave model (14 March)**
Topics: Meshing, resolution & wave propagation, model standard outputs
- **Session 2 - Wave generation and damping zones (21 March)**
Topics: Wave generation theory, relaxation zones, irregular sea states, sponge zones, positioning of zones, statistical model outputs
- **Session 3 - Reflection and porosity (28 March)**
Topics: Porous flow, porosity zones, identifying wave reflections, reflection analysis, analysis tools
- **Session 4 - Wave breaking and overtopping (04 April)**
Topics: Wave breaking representation, resolution, requirements, wave induced currents, flood'n'dry, run-up, green water overtopping

TARGET GROUP AND PREREQUISITES

Professionals and researchers in the fields of port, coastal and marine engineering. Participants must have a basic knowledge of wave hydrodynamics and experience using wave modelling software, eg. MIKE 21 SW or MIKE 21 BW or similar.

DATE AND TIME

This online course is divided up into 4 consecutive sessions each of 120 minutes/ 2.0 hours including a break. **The training takes place on Thursdays from 16.00-18.00 (UTC) for 4 consecutive weeks.** The course starts on 14 March, and continues on 21 March, 28 March, and 04 April 2019.

Calculate your local time in UTC Time Zone Converter [here](#).

TRAINING METHODOLOGY

The course combines theory and practice, including hands-on exercises, lectures, break-out sessions, videos, quizzes and home assignments. Throughout the course you will have ample time to discuss tips & tricks, 'Best Practices' and examples.

FEE

Standard price: € 750 (excl VAT)

Book-An-Expert (Optional & additional):

You may wish to book your own personal expert to discuss your own project and data. This option is not included in the standard course fee. Please contact course coordinator for conditions for booking your own expert.

THIS IS INCLUDED

- Training Certificate
- 30 days' Internet evaluation license for all MIKE 3 modules
- 10% discount on perpetual license or annual subscription packages including MIKE 3 Wave FM by 1 July 2019

IT REQUIREMENTS

- Installation of Zoom desktop client (to be provided by course coordinator prior to the course). You can read more about Zoom [here](#)
- Installation of MIKE 3 Wave FM (to be provided by course coordinator prior to the course)
- A quality webcam and headset with microphone

LANGUAGE

Lectures and training material are in English.

REGISTRATION

Deadline for registration is **Thursday 7 March 2019**.
Your registration takes place [here](#)

The number of participants is limited to 12 in order to ensure highest degree of quality learning and skills development for each trainee. The registration takes place according to the principle of "first come, first served".

DHI reserves the right to reschedule the course up to 1 week prior to the commencement of the course.



Examples of application areas of MIKE 3 Wave FM

USEFUL LINKS AND INFORMATION

- Highlights of MIKE 3 Wave FM [here](#)
- Course catalogue "Coast & Marine Standard Courses - Effective Solutions for Complex Environments" [here](#)

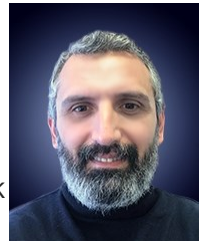
CONTACT

Natalia Luchko, THE ACADEMY, Course Coordinator
nalu@dhigroup.com/+420 703 891 993

TEAM OF TRAINERS

CHRISTOS MITSIS (LEAD TRAINER)

Christos is a senior consultant ocean engineer at DHI. He has been with DHI since 2016 and is specialised in adaptation of emerging technologies in real-world applications. Christos works with advanced numerical modelling and analytics related to waves and hydrodynamics in offshore, ports and coastal environments. Previously, he was a modelling engineer at National Oceanography Center, UK and a scientific consultant in a marine engineering firm.



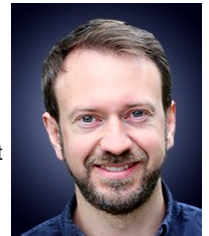
Christos is passionate about advanced wave modelling, data science and machine learning.

PhD, Physical Oceanography, Uni. of East Anglia & British Antarctic Survey, UK, 2012

MSc, Environmental Oceanography, Uni. of Patras, Greece

JESPER S. MARIEGAARD

Jesper is a senior researcher at DHI. He has been with DHI since 2009 and is specialised in emerging technologies, development and research projects. Jesper works with waves, numerical models, data assimilation, data science, machine learning, software development and operational forecast systems.



Jesper has been heading the development team of MIKE 3 Wave FM.

PhD, Applied Mathematics, Technical University of Denmark, 2009
MSc, Civil Engineering, Technical University of Denmark, 2005

PETER SLOTH

Peter is a senior project manager and specialist consultant at DHI. Peter has extensive experience in numerical and physical modelling of waves and coastal processes, especially wave disturbance in ports and harbours. Peter has a huge experience from a wide spectrum of projects through his more than 30 years of experience.



MSc in Civil Engineering. Majors in Hydraulic Engineering, University of Aalborg, Denmark

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.

Learn more about THE ACADEMY on www.theacademybydhi.com

DHI A/S

Agern Allé 5
DK-2970 Hørsholm
Denmark

+45 4516 9200 Telephone
+45 4516 9292 Telefax

dhi@dhigroup.com
www.dhigroup.com