

OBSERVING AND MODELLING OCEAN WAVES: MODEL WAVEWATCH III



The University of Brest, Ifremer & CNRS will be running a training course on ocean wave data and numerical wave modeling in Brest, France. If you want to learn how to use wave data from remote sensing, buoys or models or you want to run simulations of ocean waves at any scale from the globe to a local beach, then join us ! The two first days will be dedicated on visualization and interpretation of wave model results with insitu and remote sensing measurements.



AIMS AND SCOPE

This course builds on the capability of the Copernicus Marine Environment Monitoring Service (CMEMS) and other databases at LOPS and Ifremer. The objective of this course is to familiarize users (practitioners and scientists in all disciplines) with how ocean waves are represented in observations (buoys, satellite data from altimeters, SARs and CFOSAT...) and in numerical models. What is the accuracy, coverage of the different data sets? How can they be applied to coastal risks, seismology (via microseisms), or other topics. The course will be mostly based on hands-on work with data (visualization and analysis) and numerical model, including a beginner's course on setting up and running WAVEWATCH III@.

OBJECTIVE

- > Handling the wave prediction model WAVEWATCHIII@.
- > Comparing and interpreting numerical simulations with observations.

PREREQUISITES

Experience with LINUX/UNIX operating systems is preferred, as well as some practice of data analysis and processing. Before coming, it should be more comfortable for you to get some basic skills in LINUX computer sciences.

ACKNOWLEDGMENTS

This course is delivered in partnership with IFREMER, CNRS and LABEXMER. We gratefully acknowledge the contributions of H. Tolman, H. Alves to the tutorials and slides, as well as the feedback of many colleagues who helped us improve the teaching material.

TRAINERS

- > **Ardhuin, Fabrice** - Senior Research Scientist - LOPS¹ - CNRS
- > **Accensi, Mickael** - Computer sciences engineer - LOPS¹ - IFREMER
- > **Collard, Fabrice** - Senior Research Scientist - OceanDataLab, France
- > **Roland, Aron** - Senior Research Scientist - University of Darmstadt, Germany

¹LOPS : Laboratory of Ocean Physics & Satellite remote sensing

BIBLIOGRAPHY

- > You will find general scientific background on ocean waves in the books by L. Holthuijsen or I.R. Young, or this more up-to-date, but not yet finished book waves in geosciences.
- > <http://tinyurl.com/wavesbook>

LOCATION AND VENUE

IUEM
Institut Universitaire Européen de la Mer
Rue Dumont d'Urville
29280 Plouzané - France
Room B-014

DATE AND TIME

- 2 Possibilities
- > **Classic session** : 5 days :
from July 1 to July 5 (35 hours)
 - or
 - > **Extended session** : 7 days :
from June 27 to July 5 (49 hours)

Course starts at 09:00
and finishes at 17:30

REGISTRATION

- Please fill in the form online and choose your session
- > **Classic session** : 800€
(400€ discount for academic)
 - > **Extended session** : 1000€
(500€ discount for academic)

PROGRAM

E X T E N D E D S E S S I O N	CLASSIC SESSION	Thursday 27th June 2019 Waves properties and measurements
		Friday 28th June 2019 Sea states by remote sensing measurements
	CLASSIC SESSION	Monday 1st July 2019 WW3 parameterization
		Tuesday 2nd July 2019 WW3 implementation
		Wednesday 3rd July 2019 WW3 on unstructured mesh
		Thursday 4th July 2019 WW3 and numerical coupling
		Friday 5th July 2019 Personal project or real case modeling

CONTACT

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