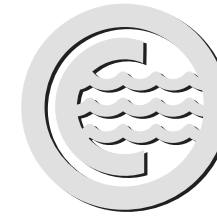


Registration at opencoasts.lnec.pt/index_en.php



OPENCoastS e-Tutorial: from processes knowledge to on-demand circulation forecasts

13 of December 2018

Provided by



LABORATÓRIO NACIONAL
DE ENGENHARIA CIVIL



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EOSC-hub
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opencoasts.ncg.ingrid.pt

Goal:

- Introduce OPENCoastS, an innovative and free platform to generate on-demand forecasts
- Empower potential users by providing an introduction to the relevant physical processes, the numerical model SCHISM and unstructured grid generation
- Minimize the learning effort by a step-by-step tutorial on the use of OPENCoastS

Course platforms

- Colibri platform
 - Registration compulsory, limited number of participants
 - Link provided on registration confirmation
- On-site participants
 - Registration compulsory, limited number of participants:

Sites:

- LNEC, conference room 2
- University of Cantabria (UC), Civil Engineering School, classroom 25
- CNRS/University of La Rochelle (UR)
- Web streaming
Link provided at opencoasts.lnec.pt

Program (all hours are CET):

Morning: 10:00-13:15

Welcome and quick explanation on the course (LNEC)

T1 - Coastal processes (UC)

10 min break

T2 - Understanding and using Model SCHISM (CNRS/UR)

T3 - Generation of triangular finite element grids for coastal models (LNEC)

Lunch break

Afternoon: 15:00-17:25

T4 - Forecast systems: an overview (LNEC)

T5 - The OPENCoastS service (LNEC)

10 min break

T6 - E-infrastructures and how can we use them (LIP)

Final round of questions

Online quiz: T3-T6, Evaluation request and closure (LNEC)

For more information contact:

Anabela Oliveira
aoliveira@lnec.pt

The OPENCoastS service assembles on-demand circulation forecast systems for selected coastal areas and keeps them running operationally for a period defined by the user. This service generates daily forecasts of water levels and vertically averaged velocities over the region of interest for 48 hours, based on numerical simulations of the relevant physical processes.

OPENCoastS
Coastal circulation on-demand forecast

Forecast systems are fundamental assets for emergency response and everyday management of coastal regions. The OPENCoastS service assembles on-demand circulation forecast systems for selected coastal areas and keeps them running operationally for a period defined by the user. This service generates daily forecasts of water levels, vertically averaged velocities and wave parameters over the region of interest for 48 or 72 hours, based on numerical simulations of all relevant physical processes. Presently, all forecasts are made with the SCHISM model. Forecasts are provided by NOAA / CFS, PRISM2017 and FES2014. Tide gauge data are provided by EMODnet Physics. You can find a sample grid file to test the service here. The coordinate reference system of this grid is EPSG: 4326 | WGS84 | World Geodetic System 1984, and the vertical displacement relative to mean sea level is 0. You can access the user manual here.

Target Audience

- Partners**: Provide tools for emergency agents and civil protection agents anticipating natural disasters such as flooding, storms, algae blooms, assessing the impacts of anthropogenic accidents on the coast and helping in search and rescue operations.
- Companies**: Provide all coastal managers the predictions on water conditions, tides and accuracy, supporting multiple uses such as navigation aid, water monitoring, tourism activities, dredging works and building works on the coast.
- Scientific Community**: Forecast systems are also useful for the scientific community, supporting, for instance, field work and helping in understanding the physical, geomorphological and ecosystemic dynamics in the estuaries and coastal areas.

Features

Configuration Assistant

Configuration Assistant

Step 1: Model
Step 2: Boundaries
Step 3: Stations
Step 4: Parameters
Step 5: Additional Data
Step 6: Submission

Define Boundary Conditions

Select one or more boundaries and define their type and forcing condition

Select a forcing source to apply to all ocean boundaries:

Select an atmospheric forcing:

Forecast Systems

ID	Name	Status	Date
SCHISM-d-4.0 (48h)	gudiana hergh	Created	06/11/2018 @ 22:4 p.m.
SCHISM-d-4.0 (48h)	gudiana prap-mestehance	Created	06/11/2018 @ 22:4 p.m.
SCHISM-d-4.0 (48h)	Top + ARIEZE	Created	21/10/2018 @ 21:4 p.m.
SCHISM-d-4.0 (48h)	Ria Formosa	Created	21/10/2018 @ 22:2 p.m.
SCHISM-d-4.0 (48h)	gudiana com FES	Created	28/10/2018 @ 08:0 p.m.
SCHISM-d-4.0 (48h)	gudiana com FES	Created	28/10/2018 @ 08:0 p.m.
SCHISM-d-4.0 (48h)	AUSO-PES	Created	28/10/2018 @ 8:57 p.m.
SCHISM-d-4.0 (48h)	top near gual	Created	28/10/2018 @ 20:0 p.m.

Forecast Systems

Charts

01
02
03
04

0109: gubiana-forgh
0108: gubiana-prap-mestehance
0107: Top + ARIEZE
0106: Ria Formosa
0104: gubiana com FES
0102: AUSO-PES
0100: top near gual
0108: albufeira com gubiana