# Summer School CROCO « initiation » 10-14 of october 2022 Barcelonette, France

## **Context and Participants**

This CROCO training took place in France, in the Séolane accommodations in Barcelonette, Alpes and lasted 5 days from Monday 10 October to Friday 14 October 2022 (4 days and a half). Participants were provided with accommodation and food on site. Rooms were preferably double, but on request, participants could have single rooms.

It gathered 18 participants (9 women, 9 men) from different countries:

- 9 participants from the South coming from Chile, Colombia, Vietnam, Tunisia(2), Senegal(2), Martinique
- 9 participants from the North coming from France(7), Grèce, Spain These participants were doctoral students, post-doctoral fellows and engineers, notably from an engineering office.

The lectures were given by Cyprien Sow, and Camille Mazoyer (MIO, IRD, France), Rachid Benshila (LEGOS, CNRS, France), Guillaume Morvan (LEGOS, IRD, France), Solène Legac (Ifremer, France), Gildas Cambon (LOPS, IRD, France) and Nicolas Ducousso (Shom, France), Christophe Yohia and Julien Lecubin (Osu Pytheas, CNRS, France).

Camille Mazoyer and Cristèle Chevalier (MIO, IRD, France), Jihene Abdennadher (IPEIT, Tunisia), and Bamol Ali Sow (UASZ, Senegal) were responsible for the training.

Christophe Yohia and Julien Lecubin (Osu Pytheas, CNRS, France), two IT engineers from OSU Pytheas, set up the local network and took care of the participants' IT problems.

This school was co-financed by the GDR, the GDRI and the PSF Croco-FoSud

### **Fundings**

The GDRI Croco financed the travel of 6 people (3 Tunisians, 2 Senegalese and 1 Vietnamese). The travel of the trainers and the accommodations for everybody (all participants and trainers) were funded by the GDR Croco and the PSF CROCO FOSUD of the IRD.

Participants from France paid a 300 euro participation fee.

#### Content

For 5 days, the Croco developers teached the participants to the CROCO ocean code.

The training took place in the form of courses and practical work.

All files from the school are available at:

https://data-croco.ifremer.fr/DOC/PRES\_TRAINING\_CROCO\_2022\_1/

The participants learned the basics through:

- courses: croco theory, advection-diffusion, physical parameterizations, time stepping, parallelization, ...
- As well as practical work: compiling, launching test cases, setting up a realistic configuration, ocean-atmosphere coupling, adding sedimentary modules, ...

The level of the participants was very heterogeneous: some had very little experience and had used ocean codes as a user, while others had already used codes such as ROMS, TELEMAC, ... Some were already using CROCO and wanted to improve their model (addition of ocean-atmosphere coupling, agrif nested models). Several participants were interested in modelling river mouths near the coast.

#### **Outcomes**

The participants invested a lot in the training and worked hard. The satisfaction questionnaires show that the participants really appreciated the training and the venue. They found the training dense and interesting. In particular, the sediment module was much appreciated by the participants.



Figure 1: Participants and Croco team



Figure 2: Opening speech of the Croco training by Bamol Ali Sow (UASZ, Senegal), Jihene Abdennadher (IPEIT, Tunisia) et Cristèle Chevalier (MIO, IRD, France).

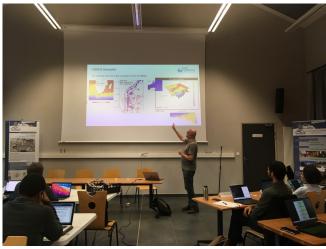


Figure 3: Overview of Croco by Rachid Benshila (Legos, CNRS, France)



Figure 4: Sediment module presented by Solène Legac (DYNECO, IFREMER, France).

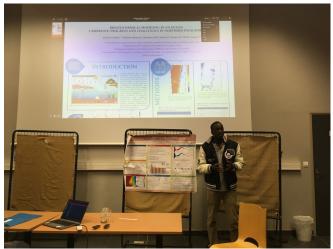


Figure 5: Presentation of participants' posters. Here, Biram Ndom (UASZ, Senegal) presents his work.



Figure 6: View from Seolane, Barcelonette









