

# CLIVAR– FIO Summer School on Ocean Macroturbulence and Its Role in Earth's Climate

19-25 June 2022  
Qingdao, China

The summer school is intended for early career scientists with research interests in ocean and climate. It will focus on the interactions of ocean meso- and sub-mesoscale motions with Earth's climate system, including the following topics:

- **Observations:** How are remote and in situ observations made on these scales, what new technologies (e.g. autonomous vehicles) are becoming available, and what are the challenges in analyzing and interpreting these data?
- **Dynamics:** What are the dynamical mechanisms that produce meso- and sub-mesoscale motions? How do they interact with larger-scale circulations?
- **Modeling:** How are meso- and submeso-scale motions represented in numerical models? What are the computational challenges to simulating these scales?
- **Role in climate:** How do meso- and submeso-scale motions influence air-sea interactions and fluxes of energy and nutrients between the near-surface and deeper ocean? How do they shape marine ecosystems? What is the importance of ocean macroturbulence for simulating and projecting climate change?

## Director:

W. Robinson, N. Carolina State Univ., US

## Lecturers:

E. Chassignet, Florida State Univ., US  
A. Dellapenna, Univ. of Washington, US  
G. Ewans, NOC, UK  
X. Ma, Ocean Univ. of China  
F. Qiao, FIO-MNR, China  
W. Robinson, N. Carolina State Univ., US  
S. Speich, IPSL, France

.....

## Local Organisers

J. Santos, ICPO, [icpo@clivar.org](mailto:icpo@clivar.org)  
J. Li, ICPO, [jing.li@clivar.org](mailto:jing.li@clivar.org)

Further information: <http://www.clivar.org/events/clivar-fio-summer-school-ocean-macroturbulence-and-its-role-earth%E2%80%99s-climate>



中华人民共和国自然资源部  
Ministry of Natural Resources of the People's Republic of China