



## **CICLO DI SEMINARI**

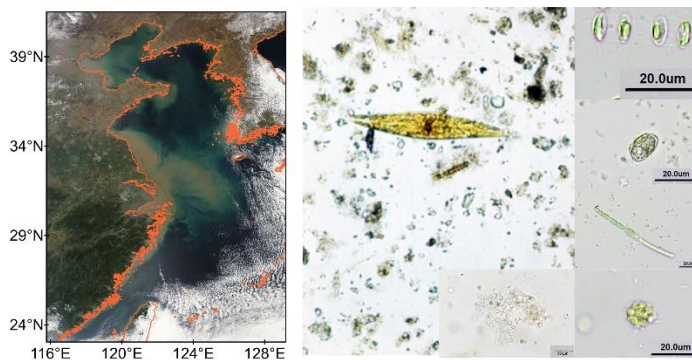
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### **Optical identification of complex marine particle types for biogeochemical observation from estuarine and coastal waters to the open ocean**

Mengyu Li

State Key Laboratory of Estuarine and Coastal Research  
(East China Normal University)



Particles in the marine environment not only affect the marine optical properties, but also play a key role in the biogeochemical cycles. However, the different particle types and their optical properties are both complex but also poorly observed, from the open ocean to turbid estuarine and coastal waters. I will mainly focus on the material and structural properties of marine particles from estuarine and coastal waters, on their inherent optical properties and how these observations help improving our understanding of biological carbon pump. Two case studies will be presented: (i) the multi-platform detection of atmospheric particle deposition and marine biological responses in an extreme event, and (ii) particulate organic carbon estimation based on optical identification of particle types in turbid estuarine and coastal areas.

During my year at ISMAR as visiting PhD student, my plans are (i) to investigate more on the optical properties of phytoplankton and organic detritus using complex optical models for marine particles, and (ii) develop a multi-platform approach based on satellite and autonomous in situ BGC-Argo observations to monitor the response of marine ecosystems to extreme events such as Marine Heat Waves.