

**CONSIGLIO NAZIONALE DELLE RICERCHE  
ISTITUTO DI SCIENZE MARINE**



## **CICLO DI SEMINARI**

Lunedì 22 Luglio 2024 - Ore 14,30

[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_OTdhNjI3ZWUtNTQ0ZC00MGNkLTgzZjYtMmQwOGE4NGEzZjc2%40thread.v2/0?context=%7b%22Tid%22%3a%2234c64e9f-d27f-4edd-a1f0-1397f0c84f94%22%2c%22Oid%22%3a%22ba5501d5-7f46-4ff3-820e-1bd86cf6bd3f%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_OTdhNjI3ZWUtNTQ0ZC00MGNkLTgzZjYtMmQwOGE4NGEzZjc2%40thread.v2/0?context=%7b%22Tid%22%3a%2234c64e9f-d27f-4edd-a1f0-1397f0c84f94%22%2c%22Oid%22%3a%22ba5501d5-7f46-4ff3-820e-1bd86cf6bd3f%22%7d)

### **Coastal submesoscale circulation and technical data analysis using high-frequency radar-derived surface currents**

**Sung Yong Kim**

Korea Advanced Institute of Science and Technology



This talk will present various coastal submesoscale circulation studies using high-frequency radar(HFR)-derived surface currents, focusing on technical data analysis and oceanographic coastal dynamics: uncertainty estimates of radial velocities, optimal interpolation to directly combine radial velocity maps to a vector current map as well as kinematic and dynamic quantities (divergence, vorticity, stream function, and velocity potential), variance distribution of HFR-derived surface currents in the along-shore and cross-shore directions from a large array of US West Coast HFR network, and a statistical relationship between wind and surface currents, energy spectra and energy cascade at submesoscale, and implementation of random walk based on Lagrangian surface drifter observations.