



CORE Annual Research Symposium 2022

Date & Time: January 13, 2022 (Thu) 2:30pm-6:15pm &
January 14, 2022 (Fri) 9:00am-12:45pm

Link:

Zoom Details: <https://hkust.zoom.us/j/98122257737?pwd=dmdRT3dRaGNoVmMk1N0pvRVlFNmZlQT09>

Meeting ID: 981 2225 7737

Passcode: CORE2022

Program Rundown:

13 Jan 2022 (Thu)

Time	Program	Speaker
2:15	Zoom ready for joining	
2:30-3:15pm	<u>Introduction & Retrospection</u> (Chair: Prof. Jianping Gan)	
2:30 - 2:45 (15mins)	Welcoming Remarks	Prof. Lixin Wu (Director of QNLM)
2:45 – 3:00 (15mins)	Welcoming Remarks	Prof. Shyy Wei (President of HKUST)
3:00 – 3:15 (15mins)	CORE Overview	Prof. Jianping Gan (Director of CORE)
3:15– 4:30pm	<u>Scientific Presentations (Part 1)</u> (Chair: Dr. Qixing Ji) *Presentation time including 2-3mins Q&A session	
3:15 – 3:30 (15mins)	High-order compact scheme for shallow water equations	Prof. Kun Xu (HKUST)
3:30 - 3:45 (15mins)	Offshore groundwater in the Pearl River Estuary and the adjacent continental shelf and its implications on water resource and environment	Prof. Jimmy Jiao (HKU)
3:45 – 4:00 (15mins)	Some physics-constrained data-driven applications in physical oceanography	Dr. Julian Mak (HKUST)
4:00 - 4:15 (15mins)	Prospects on quantifying air-sea fluxes at the ocean submesoscale	Prof. Yan Wang (HKUST)
4:15 - 4:30 (15mins)	Marine Underwater Survey Technology	Dr. Lai Leo Chan (CityU)

13 Jan 2022 (Thu)

4:30– 6:15pm **Scientific Presentations (Part 2) (Chair: Prof. Jinshu Chi)**

*Presentation time including 2-3mins Q&A session

Time	Program	Speaker
4:30 - 4:45 (15mins)	Quantifying Organic and Inorganic Nitrogen in Atmospheric Aerosol: Methods and Applications	Prof. Jianzhen Yu (HKUST)
4:45 – 5:00 (15mins)	Sediment contributions to coastal marine biogeochemical cycles	Prof. Jiying Li (HKUST)
5:00 – 5:15 (15mins)	Exploring land-atmosphere exchanges and interactions using the eddy covariance technique	Prof. Jinshu Chi (HKUST-GZ)
5:15 – 5:30 (15mins)	IOD, ENSO and summer rainfall over China	Prof. Wen Zhou (CityU)
5:30 – 5:45 (15mins)	On the eddy structures of wall-bounded turbulence in ocean engineering	Prof. Lin Fu (HKUST)
5:45 – 6:00 (15mins)	Flood Coping Capabilities under Storms in Metropolitan Area	Dr. Liang Gao (UM)
6:00 – 6:15 (15mins)	Near-Surface Ocean Processes and the Short-Term Prediction of Extreme Precipitation	Prof. Xiaoming Shi (HKUST)

14 Jan 2022 (Fri)

8:45am Zoom ready for joining

9:00 – 11:00am **Scientific Presentations (Part 3) (Chair: Dr. Qing Li)**

*Presentation time including 2-3mins Q&A session

Time	Program	Speaker
9:00 - 9:15 (15mins)	Coastal macro-vortices dynamics in the Pearl River Estuary and the Hong Kong waters	Dr. Alessandro Stocchino (PolyU)
9:15 - 9:30 (15mins)	Multiphase modelling of air-sea interaction: application to surface tracer dispersion	Dr. Keith Ngan (CityU)
9:30 - 9:45 (15mins)	Modeling the turbulent mixing in coastal oceans	Dr. Qing Li (HKUST)
9:45 - 10:00 (15mins)	Risk assessment of artificial island flooding under extreme weather conditions	Prof. Wanhuan Zhou (UM)
10:00 - 10:15 (15mins)	Interactions between aquacultured bivalves and planktonic ecosystem dynamics: insights from a hybrid Eulerian/Individual-Based modelling framework	Prof. Liuqian Yu (HKUST-GZ)
10:15 - 10:30 (15mins)	Numerical studies of coastal hazards: storm surge and submarine landslides	Prof. Huabin Shi (UM)
10:30 - 10:45 (15mins)	The water exchange and connectivity in the pearl river estuary	Prof. Zhongya Cai (UM)
10:45 - 11:00 (15mins)	Break	

14 Jan 2022 (Fri)

11:00 – 11:45am **Scientific Presentations (Part 4) (Chair: Prof. Liuqian Yu)**
*Presentation time including 2-3mins Q&A session

Time	Program	Speaker
11:00 - 11:15 (15mins)	Aquatic N ₂ O emission dynamics: insights from the Pearl River Estuary	Dr. Qixing Ji (HKUST-GZ)
11:15 - 11:30 (15mins)	Dynamics of nutrients and plankton production in dipole eddies in oligotrophic oceans	Dr. Jie Xu (UM)
11:30 - 11:45 (15mins)	Statistical and computational methods to leverage big data for real applications	Prof. Can Yang (HKUST)

11:45am -12:45pm **Prospects and Insights in future research projects in CORE**

Time	Program	Speaker
11:45- 12:15 (30mins)	CORE Research Outline and Strategy 2022	Prof. Gan Jianping (Director of CORE)
12:15 – 12:45 (30mins)	Discussion	Prof. Gan Jianping (Director of CORE)