



**11:30 – 12:00 Dr. Jin-Soo KIM**

*School of Energy and Environment, City University of Hong Kong*

**A Better Future for the Next Generation: Carbon-Climate Feedback Research Based on Earth System Modelling**

Earth system modellings (ESM) are useful tools for quantitatively projecting future climate states to produce more accurate scientific facts regarding climate change to prepare carbon-neutral strategies. However, it is found that land processes are the leading uncertainty factor in future climate projections. To reduce the uncertainty of future climate projections, comparisons between observational and modelled. Interannual climate variability and relevant terrestrial responses can be good metrics for evaluating emergent model fidelity to the global carbon cycle and carbon-climate feedback. Large-scale climate variabilities such as El Niño–Southern Oscillation (ENSO), Arctic warming-induced cold waves and Arctic Oscillation, and impacts on vegetation activity and agricultural productivity will be delivered in this seminar.



**12:00 – 12:30 Dr. Jung-Eun CHU**

*School of Energy and Environment, City University of Hong Kong*

**The Role of Climate Change on Tropical Cyclones Represented by High-Resolution Earth System Model Simulations**

Tropical cyclones (TCs), the generic name for typhoons, are among the most destructive natural hazards on earth. TCs existed on Earth in the past and will exist in the future as well. However, their characteristics such as geographic location, intensity, air-sea interaction, and hazards during the landfall can be changed in response to climate change. This talk will cover the limitation of simulating TCs, and changes in TC characteristics under different background conditions represented by the high-resolution Earth System Model. Changes in TC frequency and increased intensity in the present-day and future climate as well as physical mechanisms controlling their change will be discussed.



**13 January 2023**

Enquires: 3943 5494 [eesc@cuhk.edu.hk](mailto:eesc@cuhk.edu.hk)



**11:30 a.m.**

**Zoom Link (Mixed-mode)**



**Conference Room, 3/F,  
Mong Man Wai Building**

**ID: 992 4969 9833 Passcode: 983837**

