

LSGI Research Seminar

Geodetic and Remote Sensing Observations of Thawing Permafrost

Date: 2 Sep 2022 (Fri)
Time: 10:30 - 11:30am
Venue: Z414, Block Z, PolyU
Language: English



Dr Lin LIU

Associate Professor

The Chinese University of Hong Kong (CUHK)

Bio:

Lin Liu is an Associate Professor of Earth System Science at the Chinese University of Hong Kong, where he also serves as the head of the Graduate Division of Earth and Atmospheric Sciences. He studied at Wuhan University for his bachelor degree and got his PhD in Geophysics from the University of Colorado at Boulder. Before joining CUHK in 2014, he was a George Thompson Postdoc Fellow at Stanford University. His research applies a wide range of geodetic, geophysical, remote sensing, and deep learning methods to the Earth's cryosphere systems including permafrost, glaciers, and ice sheets, aiming to quantify and understand their significant changes in a warming climate. He received the 2021 AGU John Wahr Early Career Award.

Abstract:

Accumulating observation evidence shows widespread thawing and degradation of permafrost, or ground remains frozen perennially, in cold regions. Thawing permafrost has profound effects on terrestrial ecosystems, on hydrologic and landscape processes, and on human infrastructure. A large amount of carbon currently frozen in permafrost may release into the atmosphere and further warm the global climate. However, it is challenging to study and monitor permafrost, which is purely defined by its subsurface thermal condition. In this talk, I will present the innovative use geodetic and remote sensing methods, including radar interferometry and GNSS Reflectometry, and deep learning, for mapping and quantifying permafrost degradation on the Qinghai-Tibetan Plateau and gain quantitative understandings on seasonal, decadal, gradual, as well as abrupt changes in ice-rich permafrost.

All are welcome. To register, please [click here](#) for the details.

For enquiries, please contact Ms Anna Choi at 3400 8158 or anna.choi@polyu.edu.hk