

# Remote Sensing of Land Deformation and Early Warning of Geo-hazards for Sustainable Development



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**11:30 a.m.**



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



**[Zoom Link \(Mixed-mode\)](#)**

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Global urbanization has created a huge demand for civil infrastructures, such as buildings, subways, bridges, dams, highways, airports, and railroads. Unfortunately, land subsidence and structural deformations under the combined effects of natural and anthropogenic activities are threatening infrastructural health and public safety. Like human's health conditions, infrastructural health should also be monitored regularly to build a safe and resilient city. In this seminar, I will discuss my work on the development and application of innovative radar remote sensing methods with deep learning analytics for monitoring large-scale land deformations and studying their interactions with environmental factors. Two important scientific issues will be specifically addressed. For one thing, I will discuss how to accurately monitor land deformations and intelligently mine their spatiotemporal patterns in various geological, hydrological, and built environments through multi-source big data analytics. For another, I will focus on exploring the interactions between land deformations and environmental factors and identifying risk indicators for early warning. I will highlight how my research advances fundamental scientific knowledge of large-scale infrastructural dynamics and their relationship with specific environmental factors and how it strongly supports the United Nations Sustainable Development Goals and CUHK's Strategic Plan 2021–2025.



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