THE UNIVERSITY OF HONG KONG

DEPARTMENT OF CIVIL ENGINEERING

SEMINAR

Risk Management of Clustered Rainfall-Induced Landslides in Southeast Coastal China

Professor Yu HUANG
Tongji University

Date: Aug 13, 2025 (Wednesday)
Time: 10:30 a.m. -11:30 a.m.
Venue: Room 612B, 6/F Haking Wong Building, The University of Hong Kong

Abstract
Global warming is intensifying geohazard risks by altering climatic and hydrological processes, thereby increasing the frequency, abruptness, and compound nature of disaster events. Under climate change, rainfall-induced landslides in China's southeast coastal region have become increasingly prevalent and destructive, exhibiting clustered occurrences, strong spatial interdependence, and complex cascading effects. To address the escalating risks of such landslides, an integrated approach combining mechanistic understanding and risk-informed disaster management is essential. Recent studies have elucidated how geological, hydro-meteorological, and anthropogenic factors interact to drive rainfall-induced landslides. A dynamic model has been developed to simulate the full evolution of rainfall-induced landslides, from initial triggering to post-failure behavior. Meanwhile, early warning and prevention strategies have evolved—moving beyond historical data dependence and local reinforcement toward climate-informed forecasting, resilience-based regulation, and system-level regional optimization. Moving forward, effective disaster risk reduction hinges on the integration of technological innovation and institutional coordination. A comprehensive system should be developed to enable accurate hazard identification, precise early warning, refined risk assessment, and resilience-based mitigation strategies. Moreover, strengthening the theoretical foundation for rainfall-induced landslide management through interdisciplinary collaboration is essential for advancing climate-adaptive disaster risk governance.

About the Speaker
Yu Huang is a distinguished professor and leader of the College of Civil Engineering, Tongji University, specializing in engineering geology and geohazard mitigation. He has led several major national research projects, including the National Key Research and Development Program, the Distinguished Young Scholars Program of the NSFC, and the Key International (Regional) Joint Research Program of the NSFC. He has published over 200 SCI-indexed papers and holds more than 20 granted national invention patents. He is the author of five academic monographs and three textbooks. Professor Huang has been recognized as a Changjiang Distinguished Professor by the Ministry of Education and has received the State Council's Special Government Allowance. Among his accolades are the Huang Jiqing Young Geological Science and Technology Award from the Geological Society of China, the Baosteel Excellent Teacher Award, and the Science Achievement Award from the International Consortium on Geo-disaster Reduction (ICGdR). As the principal awardee, he has received the First Prize of the Shanghai Natural Science Award and the First Prize of the Ministry of Education's Science and Technology Progress Award.

- ALL ARE WELCOME -

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