香港科技大學
THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

土木及環境工程學系
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

SEMINAR

FUTURE-PROOFING THE RESILIENCE OF FLOOD DEFENCES

Speaker

Prof. Lidija Zdravkovic

Computational Geomechanics, Imperial College London

Abstract

Effects of climate change are abundantly evident in today's society. More frequent and intensive periods of rainfall and drought increasingly compromise the stability and serviceability of infrastructure, causing the loss of service, economic impact and often loss of life. Coastal and river estuary habitats are similarly threatened by more frequent flooding due to the rise in sea levels. This seminar examines the possibilities for climate adaptation of existing earth embankments and levees currently serving as flood protection infrastructure. Using computational analysis and case studies in the UK's Thames Estuary, temporal evolutions of the behavioural mechanisms in the foundation soil underneath existing defences are examined, highlighting opportunities for sustainable life extension of existing flood defences.

Biography

Lidija Zdravkovic is Professor of Computational Geomechanics at Imperial College London, where she has been an academic staff member since 1996, becoming full professor in 2013. She was Head of the Geotechnics division in the Civil and Environmental Engineering Department from 2014 to 2024. Her research integrates soil characterisation and numerical modelling to assess geotechnical infrastructure, climate change impact, offshore foundations, energy geostructures and nuclear waste disposal, recently expanding her interests to data science and machine learning. She has consulted on several major infrastructure projects and is a Fellow of the Institution of Civil Engineers. She has published over 250 technical papers and has been awarded prizes from the British Geotechnical Association (BGA) and the Institution of Civil Engineers, UK, and the 2019 Imperial College President's Medal for Excellence in Education. She delivered the prestigious Rankine Lecture in 2024 and has been the Géotechnique Editor-in-Chief since 2024.

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Room 3574 (Lift 27/28)
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