



# RESILIENT AND INTELLIGENT INFRASTRUCTURE SYSTEMS (RIIS) HUB ACTIVITIES AND IMPACT

Speaker

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## Abstract

The Resilient and Intelligent Infrastructure Systems (RIIS) Hub is an Australian Research Council Industry Transformation Hub established to address the critical challenges posed by aging infrastructure, climate variability, and rapid urban growth. Its overarching aim is to create innovative technologies and strategies that enable smarter, more sustainable, and resilient infrastructure systems for Australia's future. By integrating advanced sensing, artificial intelligence, and digital modelling, the Hub seeks to transform how infrastructure is monitored, managed, and maintained, ensuring safety, reliability, and cost-effectiveness throughout its life cycle.

This presentation will showcase a selection of projects undertaken within the Hub, demonstrating how cutting-edge research in sensing, robotics, machine learning, materials science, and digital modelling is being translated into practical solutions for industry and government partners. These examples will illustrate the Hub's role in shaping a new era of infrastructure resilience and sustainability, where technology and innovation work hand in hand to secure the future of Australia's critical assets.

## Biography

PSM Professor and Scientia Professor Khalili has about 30 years of experience in geotechnical engineering both as a consultant and as an academic/researcher. Prior to joining The University of New South Wales, he was responsible for managing the geotechnical group in the Chicago Office of the consulting firm Dames & Moore. He is currently the President of the Australian Association for Computational Mechanics (AACM), Fellow of Institution of Engineers Australia, Fellow of Australian Geomechanics Society, and Fellow of Academy of Technological Sciences and Engineering (ATSE). His research interests lie primarily in the areas of mechanics of unsaturated soils, soil plasticity, and mechanics of multi phase multi porous media. He is the recipient of many prestigious international awards including: Chandra Desai Medal from International Association for Computer Methods and Advances in Geomechanics (IACMAG) in 2014, and Valliappan Medal from International Association for Computational Mechanics (IACM) in 2016, and John Booker Medal in 2025.



**21 December 2025  
Sunday**



**10:00am – 11:00am**



**Room 3574 (Lift 27/28),  
Civil Engineering  
Conference Room,  
HKUST**

## Enquiry:

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