THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

COLLEGE OF PROFESSIONAL AND CONTINUING EDUCATION 專業及持續教育學院

School of Professional Education and Executive Development 專業進修學院

SPEED

RCGETB Research Centre for Green Energy, Transport and Building 綠色能源、交通運輸及建築科研中心

Research Centre for Green Energy, Transport and Building (RCGETB)

Research Seminar on Green Buildings and Smart City

DATE: 23 May 2022 (Monday)

TIME: 2:30 p.m. - 4:30 p.m.

VENUE: Online - MS Teams

Speaker: Dr LIANG, Shanjun Junot

Lecturer, Division of Science, Engineering and Health Studies, CPCE

Topic: A Review of Reconfigurable Acoustic Metamaterials

Biography

Dr Junot LIANG obtained his BEng degree and MPhil degree in Mechanical Engineering at Harbin Engineering University in 2014 and 2016, respectively. From 2016 to 2020, he studied in the field of Acoustic Metamaterials at The Hong Kong Polytechnic University for his PhD degree. In 2019, Dr LIANG was in North Carolina State University as a visiting scholar for three months. In recent years, he has been developing new strategies and devices to control acoustic wave propagation in broad bandwidth. These sound devices present huge potential in acoustic material science with its space-saving and flexible characteristics. The related research work was published in journals of physics or acoustics, such as *Physical Review Letters, Journal of Applied Physics, Journal of Sound and Vibration.*

Abstract

Metamaterials are artificially structured materials whose characteristics mainly rely on the geometries and arrangement of their unit cells. The local resonant mode makes it exhibit unconventional properties beyond the natural materials. The geometry-based structures make metamaterial more reconfigurable. By introducing mechanical, piezoelectric, magnetic/electric, or thermal designs to unit cell configuration, the working frequency, phase shift and amplitude control vary along with the tuning variables such as voltage, displacement, or temperature. The reconfigurable metamaterials remain huge potential in practical utilization scenarios for its tunable properties.

Speaker: Dr WANG, Xueying Daisy

Lecturer, Division of Science, Engineering and Health Studies, CPCE

Topic: MiC Challenges & BIM-based Solutions in Hong Kong

Biography

Dr Daisy WANG obtained her BEng (Hons) and PhD in Civil Engineering from the Department of Civil and Environmental Engineering of The Hong Kong University of Science and Technology. Her major research interests include concrete mechanics and constitutive modelling, shear performance and hysteretic performance of RC elements. Her teaching areas includes structure, construction materials, transportation, geotechnical engineering and BIM technologies.

Abstract

The construction industry is a vital sector in the economy of Hong Kong, contributing not only to the GDP but also to the long-term development of Hong Kong. However, in recent years, traditional construction in Hong Kong had been facing some severe challenges due to the shortage of labour, increased cost and high requirement for sustainability. To address the current issues, Modular integrated construction (MiC) becomes a game-changing innovative construction method that transforms the fragmented on-site construction into a value-driven production and assembly of prefabricated modules. In this seminar, challenges arising from the implementation of MiC in Hong Kong and the effectiveness of Building Information Modelling (BIM) technologies in MiC will be discussed.

Speaker: Dr LAU, Yui-yip Joseph

Lecturer, Division of Business and Hospitality Management, CPCE

Topic: Developing Research Skills for Future: An Interdisciplinary Perspective

Biography

Dr Joseph LAU has published 272 research papers in international journals and professional magazines, contributed 10 book chapters, 2 books, and presented numerous papers at international conferences. He has collaborated with scholars from more than 20 countries and regions spreading over five continents on research projects. He has also secured over HK$ 10 million in research grants. Recently, he has been awarded a Certificate of Appreciation by the Institute of Seatransport in recognition of his outstanding performance in research and the Best Paper Award in international leading conferences. His research interests are cruise, ferry, maritime transport, air transport, impacts of climate change, maritime education and training, transport history, sustainability issues, supply chain management, health logistics, and regional development.

Abstract

Even though being "fashionable" in academic life today as professions arise and new needs, carrying out interdisciplinary research is a "risky" choice, encountered the difficulty in working and coordinating with researchers from various disciplines with vary mindsets, securing external competitive research grants, and publishing research findings in top-tier journals. Specifically, it needs a thoroughly various set of competent research skills in carrying out interdisciplinary research effectively. On the basis of his past research experience, the speaker shares his viewpoint on interdisciplinary research, the updated research agenda, and how to build up the required skills and methods in carrying out interdisciplinary research effectively. As expected, this would encourage colleagues and researchers to establish interdisciplinary collaborations and exchange new ideas that can bring a valuable insight on communities, industries, and academic world.

All are welcome!

Register Now!

Kindly make the reservation at https://forms.office.com/r/DjYrxH7rZg

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