

3D Concrete Printing Towards Digital Construction

Dr. Weng Yiwei

Department of Building and Real Estate, The Hong Kong Polytechnic University

Seminar

Time: 10-11 am

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Contact: Du Hongjian



Abstract

Conventional construction faces various challenges, such as safety and productivity. To solve current issues, innovative fabrication technologies have become crucially important. Digital construction, especially 3D concrete printing (3DCP), has attracted great attention from academia and engineering in recent years with its attractive potential benefits. The talk will cover several topics, including developing printable material, printing system design to address the interface issue, and integrating Building Information Modelling with 3DCP for automatic printing path generation. Finally, future research needs and innovation opportunities of 3DCP will be proposed and discussed.

Biography of Speaker

Dr. WENG Yiwei is the Assistant Professor in the Department of Building and Real Estate, The Hong Kong Polytechnic University. Dr. Weng earned his Ph.D. in Civil and Environmental Engineering from Nanyang Technological University in 2020 with the research area of developing printable cementitious materials for large-scale 3D concrete printing applications. He is an Editorial Board Member of the Journal of Materials Science in Additive Manufacturing and a member of the American Society of Civil Engineers. His research works have been transferred to construction practice in Singapore and highlighted in many news outlets, such as Chanel NewsAsia, The Straits Times, IEEE Spectrum, The Business Times, etc.