Computational Science Seminar Series

Trust in Transition: How Digital Technologies Reshape Stakeholder Relationships in the Greater Bay Area

Abstract

To address pressing domestic challenges—including exorbitant construction costs, an aging workforce, and severe labor shortages—the Hong Kong Government is actively promoting cross-border Modular Integrated Construction (MiC). This strategy leverages the industrial capacity of Mainland China by outsourcing the manufacturing of volumetric modules to enhance efficiency and cost-effectiveness. However, as this model is deployed across a growing portfolio of public and private projects, the physical separation of manufacturing, logistics, and installation creates a critical "black-box" effect. This fragmentation erodes direct oversight, making it profoundly difficult for stakeholders to verify quality, track progress, and ensure precise assembly in real time, thereby undermining trust. This talk addresses this central challenge by investigating how integrated digital technologies can bridge the confidence gap across the entire project lifecycle. We propose a framework that transforms opaque processes into a transparent, digital thread, ultimately enabling successful collaboration and the reliable delivery of quality-assured projects in Hong Kong.