

BRONZE

City University of Hong Kong (Department of Architecture and Civil Engineering)



INTRODUCTION OF THE ORGANISATION

The Department is unique in Hong Kong and perhaps world-wide for its multidisciplinary faculty that includes specialists in civil and structural engineering, architecture, surveying, building services engineering, construction engineering and management, urban design and regional planning all within one academic unit.

Our academic offerings are professional-discipline specific through the Discovery-enriched Curriculum, our programmes aim to enhance innovation and exploration of new ideas. Our graduates are well equipped with necessary skills and knowledge to contribute towards a better development of the built environment. Building on these, we offer taught postgraduate master programmes in Civil and Architectural Engineering, Construction Management and Urban Design and Regional Planning. Our graduate research degree programmes include more than 100 MPhil and PhD students.

THREE WINNING FACTS

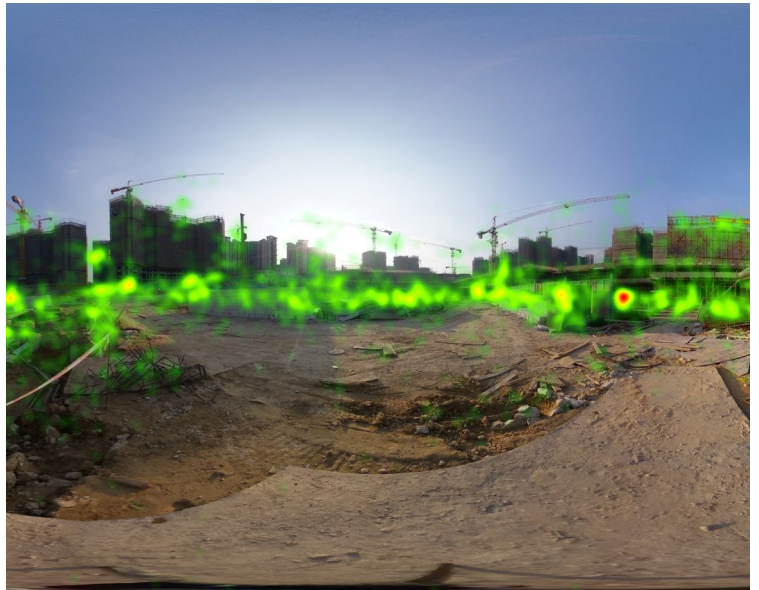
Extensive fundamental and applied research in construction digitalisation. The department has been conducting research and consultancy projects in the field of digital transformation of architecture, engineering, and construction. Example research includes digital twin for buildings and infrastructures; city information modelling; BIM for asset maintenance planning and management; smart construction job site monitoring using internet of things and computer vision; construction robotics; human-robot collaboration; automation of planning and design tasks; virtual and augmented reality for project information presentation and simulation; community resilience assessment; 3D printing. The department has secured findings from different funding agencies, including the National Science Foundation of China, Research Grant Council, Innovation and Technology Commission, Ping An Insurance (Group) Company of China.

Systematic curriculum in construction digitalisation, training future workforce and leader for construction 4.0. In our curriculum, BIM, GIS, AR&VR, computer programming, data analytics, construction robotics, Modular Integrated Construction (MiC) has been integrated into the existing courses and newly developed courses. A unique course offered by our department is Integrated Building Project Development (IBPD). The IBPD is a mandatory course for final year students of all bachelor degree programs currently run by the department, covering the studies of architecture, civil and structural engineering, building service engineering, construction management and surveying. In a semester of 13 weeks duration, students of different disciplines join hands to develop a building project from initial design to construction planning and costing. Only the client's requirements, site conditions, and other constraints are provided to the students. BIM is required to be adopted for all the disciplines in the project development process of this course. A collaborative BIM platform is developed and deployed by the department to allow the students to work together. Work performance (e.g., productivity) data could be automatically tracked in the system. A Common Data Environment (CDE) is used throughout the entire project.

The department is unique in Hong Kong and perhaps worldwide for its multidisciplinary faculty that includes specialists in civil and structural engineering, architecture, surveying, building services engineering, construction engineering and management, urban design, and regional planning, all within one academic unit. The department has over 35 full-time academic staff from civil engineering, building service engineering, architecture, construction management, and surveying. Those academic staff have extensive knowledge, research, and industrial experience related to digitalisation in their own fields. In addition, the department owns cutting-edge research and training facilities, including the newly established Built Informatics and Smart Cities Cluster.



Students Presenting their project using Virtual Reality in the Integrated Building Project Development Exhibition and Competition



Investigating workers' physiological behaviors in the digital transformation using multiple wearable sensor



Students learn and use BIM in the Built Informatics and Smart Cities Cluster (BISCC)