

## Department of Civil Engineering eNews (March 2024)

### Staff Award

#### Clarivate Highly Cited Researchers 2023

Prof. Chuyang Y. Tang and Prof. Tong Zhang, listed in alphabetical order, were two of the University's fifty-one scholars recognized in Clarivate's list of Highly Cited Researchers for 2023.

On March 14, 2024, an award ceremony took place in Loke Yew Hall to celebrate their remarkable research achievements. Both professors have consistently produced multiple Highly Cited Papers™, which rank in the top 1% by citations within their field and publication year in the Web of Science™ over the past decade. Their work has garnered significant attention from international peers, showcasing their ground breaking research and their considerable academic influence.

HKU acknowledges the significance of this achievement, as it boasts the highest number of HKU scholars, 51 in total, to be featured on the list. Furthermore, HKU's notable improvement in rankings has also contributed to Hong Kong's inclusion among the top 10 regions and nations for 2023, according to Clarivate Analytics.



Figure 1. Group photo taken in the Awards Ceremony.

**For full story, please access newspaper articles by clicking here:**

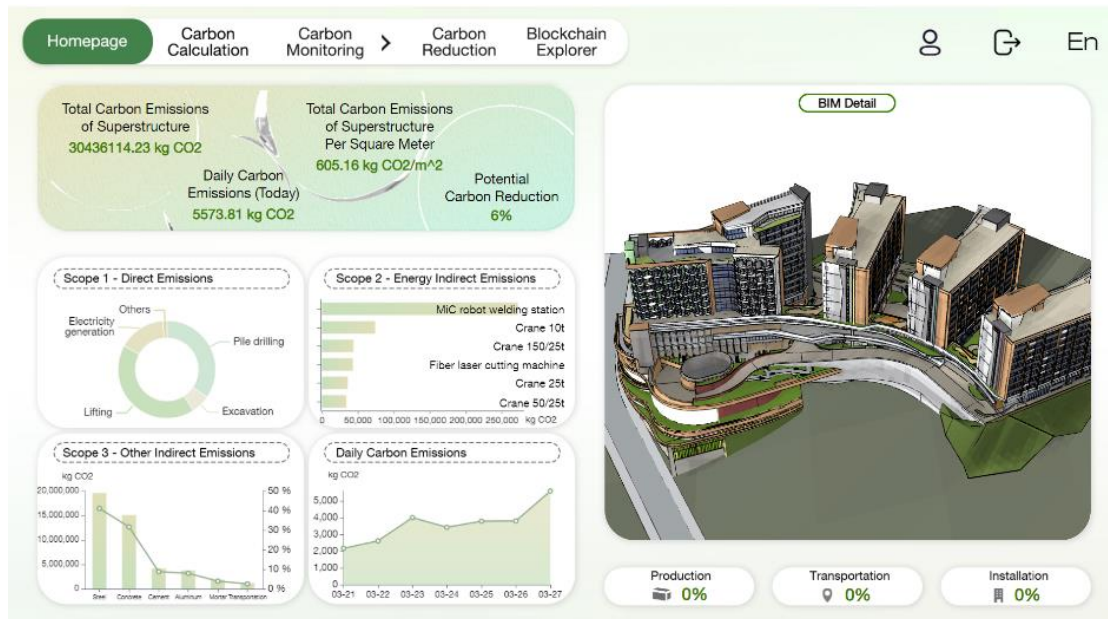
[HKU Media 1](#); [HKU Media 2](#) and [HKU Media 3](#)

**[Dr. Xiao LI awarded Environment and Conservation Fund as PI with the title of “CarbonGuard: A Blockchain-enabled IoT-BIM Platform for Automated Estimation, Reliable Monitoring, and Proactive Reduction of Carbon Emissions in Modular Integrated Construction \(MiC\)”](#)**

Buildings account for 90% of electricity consumption and over 60% of the city's carbon emissions in Hong Kong. Beyond building operation, the construction stage releases significant carbon emissions in a short period. Modular integrated construction (MiC) has

been extensively promoted as an innovative construction approach and is expected to be used to deliver massive public housing in the next decade. However, monitoring MiC's carbon emissions has been a labor-intensive, unreliable, and passive process, typically conducted after construction activities have concluded. Such a post-estimation approach is impractical as it comes too late to act and only provides retrospective data for future projects.

This project aims to develop a blockchain-enabled IoT-BIM (BIBP) platform designed for estimating, monitoring, and reducing carbon emissions in MiC.



**Figure 1.** Blockchain-enabled IoT-BIM (BIBP) platform for carbon.

**For full story, please access newspaper articles by clicking here:** [ECF GovHK](#)

**[Dr. Xiao LI awarded NSFC/RGC CRS as Co-PI \(1 million HKD\) with the title of “The mechanism and policy optimization of multi-stakeholder cross-regional collaboration in the construction industry of the GBA”](#)**

In this project, HKU collaborates with Tsinghua University, HKPolyU, Central University of Finance and Economics, and Xiamen University. Our HKU team takes the role of establishing an intelligent platform for simulating stakeholders' interactions, collaboration behaviour, and collaboration performance that underpins collaboration policies.



Figure 1. Policy simulation platform for construction industry collaboration.

For full story, please access newspaper articles by clicking here: [HKU Scholars Hub](#)

## Project Mingde

### The Shaking Table Competition 2024

The Shaking Table Competition 2024, organized by our Department and Project Mingde Student Association (PMSA), was held on March 7, 2024. This exciting competition served both educational and entertainment purposes, aimed at encouraging students to apply their engineering knowledge and creativity to design and construct a small-scale physical model. The models were tested under an earthquake load applied through the shaking table. Each team was given limited materials, mainly balsa wooden sticks and super glue, and a fixed amount of time to construct a model according to the pre-announced specifications. They were also required to present their engineering justifications to the esteemed judge, Prof. Francis Au, the former Head of Department.

This year's competition was attended by five teams, and we are pleased to announce the winning was team A, comprised of Lau Tak San, Wong Pak Hei, Hung Chi Yung, and Chan Long Ching, who are all fourth-year civil engineering students. The team received a cash prize of HK\$1000 and a Certificate of Champion. We extend our congratulations to the winners on their impressive victory, and we commend all participants for their hard work and dedication to the competition.



**Figure 1.** Group photo of the winning team with the judge.



**Figure 2.** Models built by Team A to E (from left to right).