



## DEPARTMENT OF CIVIL ENGINEERING

## SEMINAR

**The Path to Reshaping Human-Machine Collaboration in Building Sector**

Prof. Chao MAO  
Chongqing University

Date: January 8, 2025 (Wednesday)  
Time: 4:00 p.m. to 5:00 p.m.  
Venue: Room 616, 6/F, Haking Wong Building, The University of Hong Kong  
(Entrance at the Lobby on 6/F of Haking Wong Building)

**Abstract**

The construction robot, as an important tool in intelligent construction, has demonstrated its potential to become a new form of the labor force and holds critical significance for restructuring the workforce and driving deep changes in the industry. This seminar will share the development logic of “machine substitution” in the construction industry, analyzing the external driving forces of construction robot development from dimensions such as construction labor and skill structure. It will focus on the adaptation between construction robots and construction tasks, as well as construction workers, exploring the development potential of construction robots from aspects such as task substitution potential, technological maturity, and market maturity. This seminar will propose rational reflections and key points on “machine substitution” in the construction industry.

**About the Speaker**

Prof. Mao Chao is the Secretary of the Party Committee, Professor, and Doctoral Supervisor at the School of Management Science and Real Estate, Chongqing University. She has been recognized with titles such as “Young Top Notch Talent in the Chongqing Talent Program”, “Bayu Young Scholar of Chongqing”, “Baogang Education Award”, “Chongqing Women’s Exemplary Role Model” and “Female Researcher in the Western (Chongqing) Science City”. She serves as a member of the Chongqing Municipal Committee on Teaching Informatization and Teaching Method Innovation, a board member of the Engineering Management Research Subcommittee of the Architectural Society of China, a board member of the Special Committee for Internet and BIM Construction of China Society for Urban Science, and a director of the Chinese Research Institution of Construction Management. She holds professional qualifications from The Chartered Institute of Building (MCIOB). Her research mainly focuses on smart construction and Building industrialization, smart city governance, carbon emissions in construction, building information technology, etc. She undertook the several research fundings, such as National Social Science Fund of China (2 items), National Natural Science Foundation of China (1), subproject of National Key Research and Development Program from the Ministry of Science and Technology of China (1), Ministry of Education Foundation for Humanities and Social Sciences (1), Municipal-level Social Science Fund and Natural Science Fund (4 items), Provincial and University’s Education Reform Projects (over 20 items). She has published over 100 papers, authored three monographs, translated three books, and produced two textbooks. Additionally, she holds five patents and four software copyrights. She has won the second prizes in the National Teaching Achievement Awards 3 times, The special and the first prizes in Chongqing’s Teaching Achievement Awards, the third prize in the National University Teaching Innovation Competition, the first prize in Chongqing’s Teaching Innovation Competition, and the second prize in the Ministry of Housing and Urban-Rural Development’s Huaxia Science and Technology Award.

- ALL ARE WELCOME -