



Joint Seminar of HKIHT and The Highways Department

Innovative Technologies in Ultra-High-Performance Concrete and Semi-Flexible Pavement Applications

Highlights

Ultra-High-Performance Concrete (UHPC) offers exceptional strength, toughness, and durability, enabling lighter, taller, and longer-span engineering structures. However, challenges like unclear mechanical design methods, low construction efficiency, and cracking risks hinder large-scale applications. This presentation highlights breakthroughs in UHPC preparation, focusing on mechanical performance, shrinkage reduction, and toughness enhancement, along with practical engineering outcomes.

China's electronically guided rubber-tired system, a flexible and cost-effective urban transit mode, faces challenges such as pavement rutting caused by ultra-high tire pressure. This presentation explores semi-flexible pavement technology as a solution, emphasizing material development, structural design, and construction optimization to enhance performance and durability.

Details

Date:	12 Decmeber 2025 (Friday)
Time:	5:30pm - 6:30pm
Venue:	Room Z211, Block Z, The Hong Kong Polytechnic University
Capacity:	100 Max.
Language:	Mandarin
CPD Hours:	1 Hour of CPD Certificate will be distributed after the Event
Fee:	Free

Speakers



Minghui Gong, Ph.D.

Director of the Subote Transportation Materials Research Institute; off-campus graduate advisor at Southeast University, Changsha University of Science & Technology, and Hunan University. Dr. Gong has been recognized in Jiangsu Province's "333 High-Level Talent Training Program," the High-Level Innovation and Entrepreneurship Talent Introduction Plan, and as an Outstanding Young Engineer by the Jiangsu Society of Engineers.

He has led 4 national and provincial research projects, co-authored 9 industry and local standards, published 92 papers and holds 28 authorized patents. Dr. Gong has received 6 scientific and technological awards, including the First Prize of the China Highway & Transportation Society Science and Technology Award.



Fangyu Han

Senior Engineer, Chief Engineer of the UHPC Division at Jiangsu Sobute New Materials Co., Ltd., and Director of the National Key Laboratory for Major Infrastructure Engineering Materials. Mr. Han is part of Jiangsu Province's High-Level Talent Training Program ("333 Project").

Specializing in fundamental research and key technology development of Ultra-High-Performance Concrete, he has led or participated in over 20 research projects, including the National Key R&D Program and the National Natural Science Foundation. He has resolved technical challenges in major national projects such as the Nanjing Fifth Yangtze River Bridge. He has published over 60 SCI papers, holds more than 20 authorized invention patents, and has received 8 provincial and ministerial first-class awards.

Registration

For registration, please complete the [online registration](#) form in the email.

It will be on a first-come first-served basis with priorities given to members of the Institutions. Successful applicants will be notified on or before 10 December 2025.

Looking Ahead: ICRR 2027

International Conference on Roads and Railways (ICRR) is gearing up to capture global attention once again. Building on the momentum established in June, ICRR 2027 will elevate cross-sector intelligence, catalyze breakthrough collaboration, and reinforce Hong Kong's role as a strategic bridge for innovation and industry convergence.

Stay tuned at: icrr.hk

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