

The Association of Consulting Engineers of Hong Kong
香港顧問工程師協會

ACEHK ANNUAL SEMINAR 2024

AI APPLICATION IN ENGINEERING

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40th ANNIVERSARY
Inheriting HKIS Values 傳承·發展·創領

ice
Hong Kong

香港大學
THE UNIVERSITY OF HONG KONG

Event Details

Date: 20 September 2024 Time: 9:00am - 5:00pm

Venue: Multi-Purpose Hall,
CIC-Zero Carbon Park, Kowloon Bay

Format: Hybrid Event (Physical & Zoom)



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ABOUT ACEHK



The Association of Consulting Engineers of Hong Kong
香港顧問工程師協會

The Association of Consulting Engineers of Hong Kong (ACEHK) is a non-profit making association representing the consulting engineering profession in Hong Kong. As an industry group, the Association seeks to set and maintain standards of professional conduct and ethics of consulting engineers, promote the advancement of the profession of consulting engineering and uphold the professional interests, rights, powers and privileges of consulting engineers.

ACEHK places high importance on the business interests of its members and assist authorities, developers, bankers, funding agencies and others requiring engineering services to select consulting engineers. The Association is a member association of the International Federation of Consulting Engineers (FIDIC).

ACEHK represents the industry on various external committees, principally the Government Works Bureaux and Works Departments, such as, Development Bureau, Housing Authority, Architectural Services Department, Buildings Department, Civil Engineering and Development Department, Electrical and Mechanical Services Department and Highways Department.

ABOUT THE SEMINAR



This seminar is focused on exploring and showcasing the latest advancements in the integration of artificial intelligence (AI) technologies within various engineering disciplines. The seminar brings together government officials, industry professionals, and scholars to discuss how AI is transforming and enhancing engineering practices and capabilities.

Our discussions will cover a wide range of topics, showcasing how AI enhances operational efficiency, improves safety standards, and promotes sustainability in engineering practices. Participants can look forward to in-depth presentations on subjects such as smart railway systems, structural health monitoring, and the integration of AI with Building Information Modeling (BIM) and digital twins. We will also explore the role of generative AI in redefining engineering processes and the exciting possibilities of 3D metal printing in large-scale projects.

Through a mix of keynote presentations, speakers' presentations & discussions, and networking opportunities, the "AI Application in Engineering" seminar provides a platform for the exchange of ideas, case studies, and best practices to further the integration of AI in the engineering domain.

KEYNOTE SPEAKER

Ir Ricky LAU Chun-kit, JP

Permanent Secretary for Development (Works)

Development Bureau

The Government of the HKSAR



PROGRAMME



OPENING

08:30 Registration

09:05 Welcome Speech **Ir Stephen LAI**, Chairman, ACEHK

09:10 Opening Address **Ir Ricky LAU Chun-kit, JP**,
Permanent Secretary for Development (Works), Development Bureau

09:20 Certificates Presentation & Group Photo

AM SESSION

09:30 Session 1 **AI and Data Intelligence in Smart Railway**
Ir H.W. CHAN, Deputy General Manager - Operations Innovation Hub,
MTR Corporation Limited

Mr Andy PANG, Chief Operations Data Studio Manager,
MTR Corporation Limited

09:55 Session 2 **AI with BIM / Digital Twin for a Greener and Safer Built Environment**
Prof Jack CHENG Chin-pang, Professor and Associate Head,
Department of Civil and Environmental Engineering,
The Hong Kong University of Science and Technology

10:20 Networking Break

10:50 Session 3 **Generative AI for a New Chapter in Engineering**
Mr Wisdom CHAN, Founder, 01River Ltd

11:15 Session 4 **Engineering Powered by AI**
Ir Dr Julian KWAN Shun-hang, Assistant Director (Technical),
Civil Engineering and Development Department

PROGRAMME



11:40 Panel Discussion (1)

Moderator:

Ir Dickson LAW, Council Member, ACEHK

Panelists:

Ir H.W. CHAN, Deputy General Manager - Operations Innovation Hub,
MTR Corporation Limited

Mr Andy PANG, Chief Operations Data Studio Manager,
MTR Corporation Limited

Prof Jack CHENG Chin-pang, Professor and Associate Head,
Department of Civil and Environmental Engineering,
The Hong Kong University of Science and Technology

Mr Wisdom CHAN, Founder, 01River Ltd

Ir Dr Julian KWAN Shun-hang, Assistant Director (Technical),
Civil Engineering and Development Department

12:00 Certificates Presentation & Group Photo

12:15 Networking Lunch

PM SESSION

14:05 Session 5

AI Aided Structure Health Monitoring of Bridges and Structures
Prof DUAN Yuan-feng, Head of Civil Engineering Department,
Zhejiang University

PROGRAMME



14:30 Session 6

Weaving Love: Pioneering 3D Metal Printing for Large-Scale Pavilions in Hong Kong

Ms Christina POON, Senior Architect/Building Information Modelling, Architectural Services Department

Mr Tony SIU Sai-kwan, Assistant Manager (R&D), Vibro (H.K.) Limited

14:55 Networking Break

15:25 Session 7

Machine Learning-Based Photogrammetry Applications for Civil Structures

Dr WANG Xu-guang, Assistant Professor (Infrastructure Project Management), The University of Hong Kong

15:50 Session 8

AI – a Perspective from the Construction Industry

Ir Dr George WONG, Senior Manager – Industry Development, Construction Industry Council

16:15 Panel Discussion (2)

Moderator:

Ir Chris LEE, Honorary Treasurer, ACEHK

Panelists:

Prof DUAN Yuan-feng, Head of Civil Engineering Department, Zhejiang University

Mr Derek SO Kwok-leung, Managing Director, Vibro (H.K.) Limited

Dr WANG Xu-guang, Assistant Professor (Infrastructure Project Management), The University of Hong Kong

Ir Dr George WONG, Senior Manager – Industry Development, Construction Industry Council

16:35 Certificates Presentation & Group Photo

16:50 Closing Remarks

Ir Francis YAU, Vice Chairman, ACEHK