CIHT Hong Kong

40th 香港 ANNIVERSARY CIHT HONG KONG

The Hong Kong Polytechnic University
香港理工大學
FACULTY OF CONSTRUCTION AND ENVIRONMENT
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
建設及環境學院
土木及環境工程學系

CIHT HONG KONG
40TH ANNIVERSARY ANNUAL CONFERENCE

CELEBRATING 40 YEARS OF EXCELLENCE: SUSTAINABLE INFRASTRUCTURE AND MOBILITY FOR FUTURE GENERATIONS

Saturday 10 May 2025

Venue: Lecture Theatre V322, 3/F Jockey Club Innovation Tower (Core V), The Hong Kong Polytechnic University

Supporting Organisations

chartered ices

ice Hong Kong

FUTURE CITY VISION 未來都會願景

The Chartered Institute of Logistics and Transport

Department of Architecture and Civil Engineering
香港城市大學
City University of Hong Kong

HKIE THE HONG KONG INSTITUTION OF ENGINEERS 香港工程師學會
Logistics & Transportation Division 物流及運輸分部

HKIE THE HONG KONG INSTITUTION OF ENGINEERS 香港工程師學會
Civil Division 土木分部

香港都會大學 科技學院
Hong Kong Metropolitan University School of Science and Technology

Table of Contents

Conference Programme

08:30 - 9:00	Registration
09:00 - 09:15	Welcome Speech Presented by: Mr Raymond PAU
09:15 - 09:30	Keynote Speech Presented by: Ir LEUNG Sai-ho Assistant Commissioner for Strategic Studies, Transport Department
09:30 - 09:35	Photography Session
09:35 - 10:00	*Theme 1* Environment, Social and Governance (ESG) Pillars on Transport Infrastructure and Railway Presented by: Mr Tim WONG
10:00 - 10:25	*Theme 2* Railway Network Expansion in Urban Environment - **Construction Challenges and Lessons** Presented by: Mr Neil NG Head of Construction Management, MTR Corporation Limited
10:25 - 10:35	Q&A (*Theme 1* and *Theme 2*)
10:35 - 11:00	Coffee Break with Refreshment
11:00 - 11:25	*Theme 3* **A Smart MiC Porous Road System for Flood Mitigation and Noise Reduction** Presented by: Dr Yuhong WANG Professor, Civil and Environmental Engineering Department, Hong Kong Polytechnic University
11:25 - 11:50	*Theme 4* **The Future of Smart Mobility: Embracing Artificial Intelligence** Presented by: Mr Dongzhe SU Director of Smart Mobility and Chief Engineer of V2X System, Hong Kong Applied Science and Technology Research Institute
11:50 - 12:15	*Theme 5* **Whole Life Carbon Reduction for Infrastructure Project Under PAS 2080** Presented by: Mr Ronald CHAN Associate Director, WSP Asia Limited
12:15 - 12:30	Q&A (*Theme 3*, *Theme 4*, and *Theme 5*)
12:30 - 12:35	Closing Remarks Presented by: Mr Alan YAN

Foreword

The Chartered Institution of Highways and Transportation (CIHT) is a distinguished learned society based in the United Kingdom, dedicated to the planning, design, construction, maintenance, and operation of land-based transport systems and infrastructure. With members worldwide, CIHT serves as a vital forum for exchanging technical information and perspectives on highways and transport policies, offering specialised advice to government bodies and other stakeholders, enhancing road safety, and promoting training and professional development to meet contemporary needs.

CIHT Hong Kong, established in 1985, has been a pivotal platform for engineers, planners, professionals, industry operators, and government officials to collaborate and contribute to a better environment in Hong Kong. As we mark our 40th anniversary in 2025, we reflect on four decades of fostering innovation, knowledge-sharing, and professional excellence in the highways and transportation sector. Throughout this year, we have organised a series of events to celebrate this milestone, including a delegation visit to the United Arab Emirates from 11 to 16 December 2024, where our delegates engaged in professional exchanges and cultural experiences in Dubai and Abu Dhabi. Additionally, on 17 January 2025, we held a 40th Anniversary Cocktail Reception at Conrad Hong Kong, attended by 138 members and professionals, featuring welcome addresses, keynote speeches, and the presentation of the 40th Anniversary Prestigious Infrastructure Project Awards to five outstanding projects. These events, along with others, have been attended by over 600 participants in Session 2024/2025, underscoring the vibrancy and commitment of our community.

This year's Annual Conference, co-organised with the Department of Civil and Environmental Engineering at the Hong Kong Polytechnic University, continues our tradition of facilitating the exchange of views on selected technical topics among academics, professionals, and other interested parties. We are delighted to welcome highway and transportation professionals, students from universities, consultancy firms, contracting companies, and all those involved in the transport and highway industries.

On this special occasion, we celebrate not only our past achievements but also look forward to future challenges and opportunities in creating sustainable infrastructure and mobility solutions for Hong Kong. We extend our heartfelt thanks to all participants, speakers, sponsors, and organisers who have made this conference possible.

CIHT Hong Kong 40th Anniversary Annual Conference Organising Committee

Welcome Message

Mr Raymond PAU

Chair, CIHT Hong Kong

It is my great pleasure to welcome you all to the CIHT Hong Kong Annual Conference. This year holds special significance as we celebrate the 40th anniversary of CIHT Hong Kong, established in 1985. For four decades, we have been promoting excellence in transportation and infrastructure. Today, we come together not only to honour our remarkable journey but also to set our sights on the opportunities that lie ahead.

Our theme this year, "Celebrating 40 Years of Excellence: Sustainable Infrastructure and Mobility for Future Generations," captures our dual focuses on sustainable infrastructure and sustainable mobility. It reflects our pride in past achievements while underscoring our responsibility to address the challenges of tomorrow. Sustainability is no longer just an aspiration — it is an imperative. As we move forward, we are committed to ensuring that our infrastructure and mobility solutions are environmentally responsible, economically sound, and socially inclusive. This conference is a testament to our vision and dedication to shaping a future that benefits generations to come.

We are truly honoured to have Mr. LEUNG Sai Ho, Assistant Commissioner / Strategic Studies of the Transport Department, as our keynote speaker to address the Conference. With his extensive experience in strategic transportation planning, he brings a wealth of insights that are particularly relevant to the evolving transport landscape in Hong Kong. His address will undoubtedly inspire us to think boldly about the importance of sustainability in transport system.

In addition to our keynote speaker, we are privileged to welcome five distinguished speakers from AECOM Asia Co. Ltd., WSP Asia Limited, MTR Co. Ltd., ASTRI and the Hong Kong Polytechnic University. Their presentations will span a broad spectrum of topics. I look forward to the fresh ideas and fireside discussions on advancing sustainability in transport system of Hong Kong.

At its core, CIHT Hong Kong is a learning society, membership body and charity with several UK and International regional offices representing members in the highways and transportation sector. For 40 years, we have maintained a strong belief in the power of knowledge sharing and collaboration. Looking forward, by fostering dialogue and facilitating the exchange of ideas, we play a key role in shaping policies and practices that benefit our entire community.

Welcome Message (continued)

Our commitment to professional development is unwavering. Through programs, seminars, and publications, we provide a platform for professionals to hone their skills, stay informed about the latest advancements, and contribute to the field. This dedication to lifelong learning has been a cornerstone of our success and will continue to guide us as we navigate the future.

As we mark this 40th anniversary milestone, I want to take a moment to express my heartfelt gratitude to all our members, past and present, who have fuelled the growth and success of CIHT Hong Kong. Your passion, expertise, and unwavering dedication have been the driving force behind our achievements. This celebration belongs to each and every one of you.

Looking to the future, CIHT Hong Kong remains steadfast in its mission to promote excellence in transportation and infrastructure. We will continue to champion sustainable practices, support professional growth, and strengthen collaboration among all stakeholders. The challenges ahead are complex with climate change, urbanization, and technological disruption by existing regulatory framework. However, I am confident that the collective expertise from our engineers is capable of embracing these challenges and having concerted effort to build a more sustainable and resilient environment for our future generations.

Keynote Speaker

Ir LEUNG Sai-ho

Assistant Commissioner for Strategic Studies,
Transport Department

Ir. LEUNG Sai-ho is the Assistant Commissioner for Strategic Studies in the Transport Department of the HKSARG. He has over 20 years of working experience in traffic engineering and participating in various large-scale infrastructure projects. In recent years, he is responsible for overseeing the territory-wide "Traffic and Transport Strategy Study" and the planning of major roads and various transport policies. Before joining the Transport Department, he also worked in Drainage Services Department, Highways Department, and Transport and Housing Bureau, and was involved in the planning and implementation of a number of road and railway projects, including the construction of the 17 km long railway backbone of Shatin to Central Link, and the planning of Route 11 and associated roads which form the strategic route connecting the Northwest New Territories and the urban area.

Distinguished Speakers

Mr Tim WONG

ESG & Sustainability Hub Lead,
AECOM Asia Company Limited

Biography

Tim Wong is the AECOM Asia's ESG & Sustainability Hub Lead, who is driving innovation in sustainable built environments and carbon management. With over 16 years of experience and a commitment to merging ESG principles with digital innovation, Tim reflects on his journey from civil engineer to a sustainability thought leader.

Environment, Social and Governance (ESG) Pillars on Transport Infrastructure and Railway

ESG integration ensures that infrastructure projects are sustainable, reducing environmental impacts and enhancing community support, which leads to long-term benefits such as project longevity and resilience.

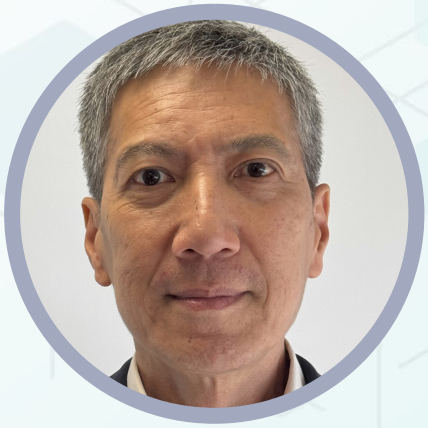
Tim has been in the built environment industry for many years delivering green transportation in Greater Bay Area from his earlier career and now specializing his advisory services on ESG and Sustainability. He will showcase the best practice to integrate six major ESG pillars in the transportation infrastructure projects.

Firstly, the construction industry contributes significantly to global carbon emissions, accounting for around 38% of global CO_2 emissions. Decarbonisation is inevitable to significantly reduce greenhouse gas emissions through innovative technologies and practices.

Social Value highlights the importance of community engagement and equitable access to transportation and also Low-altitude economy. Circular economy promotes resource efficiency and waste minimization through sustainable design and operational practices. Climate Resilience and Adaptation, ensures the infrastructure is equipped to withstand the impacts of climate change. Energy Transition is a shift towards renewable energy sources to power transportation systems. Lastly, Biodiversity with Nature-based solutions emphasizing the protection of ecosystems and natural habitats during infrastructure development.

By effectively integrating these pillars, transportation infrastructure can evolve into a more resilient, inclusive, and sustainable system that not only meets current demands but also safeguards the environment and enhances the quality of life for all stakeholders. This holistic approach is essential for creating a sustainable future that prioritizes ecological integrity and social equity.

Distinguished Speakers



Mr Neil NG

Head of Construction Management,
MTR Corporation Limited

Biography

Neil has almost 40 years of experience in delivering major infrastructure projects. He is currently the Head of Construction Management with the MTR Corporation Limited. After obtaining his Bachelor Degree in Geotechnical Engineering from University of Toronto, he began his career in Canada for a few years before relocating back to Hong Kong. His earlier project experience includes construction of the Chek Lap Kok Airport, West Rail, Kowloon Southern Link and High Speed Rail (formerly Express Rail Link) and more recently the Shatin to Central Link. His initial practice is in heavy civil and geotechnical engineering including railways and underground structures, particularizing in tunnelling works, and has diversified into project management.

Neil is now leading a multi-discipline team of professionals and administration personnel to design, construct and deliver world-class railway lines comprising of new stations, underground structures, E&M systems and railway systems. He is heavily involved in Government interface to establish a collaborative working culture and is an advocate of construction safety, quality, risk management and digitalisation culture in the construction industry.

Railway Network Expansion in Urban Environment - **Construction Challenges and Lessons**

The growing population of Hong Kong in the past decades and the demand for efficient public transportation were the two main factors that had prompted the Government to undertake studies and strategic expansion of the city's metro rail network. The construction of the railway extensions, especially those built in densely populated cities, involves meticulous planning process with high regards to construction risks and their potential impact to the community and the Mass Transit Railway (MTR) network in Hong Kong is no exception. Managing the construction risks, preparing for emergency response and handling of high consequence events are a prerequisite for successful project delivery.

The presentation will give a personal perspective on managing construction challenges and dealing with major incidents during construction of railway extension projects in the modern era.

Distinguished Speakers

Dr Yuhong WANG

Professor, Civil and Environmental Engineering Department,
Hong Kong Polytechnic University

Biography

Dr. Yuhong Wang is a professor in the Department of Civil and Environmental Engineering at the Hong Kong Polytechnic University (PolyU). He obtained his Ph.D. degree from the University of Kentucky in civil engineering. He successively worked at the Kentucky Transportation Research Center, Lawrence Tech. University, and East Carolina University. He started his employment at PolyU in 2010. He has led and participated in more than 100 scientific research projects in the United States, Mainland China, and Hong Kong. He is a fellow of the Hong Kong Institution of Engineers (HKIE) and a registered professional engineer in the United States.

A Smart MiC Porous Road System for Flood Mitigation and Noise Reduction

Urban highway systems face many challenges amid growing traffic demands, urban development, and climate change. In this multiple-year study, we developed a smart MiC porous road system. The porous road system includes 3D-printing based textures for optimized drainage, filters for pollutant removal, cavities for water storage, and optimized structure to support heavy traffic loads. The texture can also be optimized for noise mitigation. LED lighting provides warning messages to passengers and drivers to improve traffic safety and efficiency. Trials roads using the developed technology have been implemented in multiple locations.

Distinguished Speakers

Mr Dongzhe SU

Director of Smart Mobility and Chief Engineer of V2X System,
Hong Kong Applied Science and Technology Research Institute

Biography

SU DONGZHE, Director of Smart Mobility and Chief Engineer of V2X System at the Hong Kong Applied Science and Technology Research Institute. He has been leading the system architecture in research and development of vehicle-to-everything (V2X) communication and application systems and connected autonomous vehicles (CAV) systems. His role has been to define the technical scope and overall system design for ASTRI's V2X networking system. In 2021, ASTRI launched one of the world's largest C-V2X public road tests in Hong Kong, covering a 14 km route with various road environments of Hong Kong. Since 2023, ASTRI has launched CAV/C-V2X trails in different areas of Hong Kong.

The Future of Smart Mobility: Embracing Artificial Intelligence

The future of transportation is being transformed by smart mobility technologies, enabling smarter, safer, and more efficient transport solutions. In this speech, we will explore ASTRI's cutting-edge smart mobility initiatives, including Vehicle-to-Everything (V2X) communication, Connected Autonomous Vehicles (CAV), and Traffic Management Platforms (TMP). We will also discuss ASTRI's strategic roadmap for integrating AI into next-generation traffic systems. Through real-world case studies, we will demonstrate how these innovations reduce traffic congestion, optimize efficiency, and enhance road safety. Join us to discover how AI is reshaping urban mobility and what lies ahead in the journey toward intelligent transportation.

Distinguished Speakers

Mr Ronald CHAN

Associate Director,
WSP Asia Limited

Biography

Ronald Chan is an Associate Director and a Chartered Environmentalist (CEnv) with over 17 years of experience in managing sustainability issues within the property, real estate, and aviation sectors. As the ESG, Ecology, EM&A, and Sustainability Group Leader for the WSP Hong Kong Environment Team, he guides real estate owners and investors in developing sustainability strategies that enhance value and mitigate future risks for their developments and asset portfolios. Before returning to Hong Kong, Ronald led the Sustainability Certification Team at WSP UK. He conducts Building Life Cycle Assessments and assists clients in decarbonizing their projects through Life Cycle Assessment studies and carbon calculations. Additionally, Ronald holds credentials as a LEED AP, WELL AP, BREEAM AP, and GRESB AP. He utilizes his expertise in these areas to support ESG reporting and solutions, share knowledge on EU and UK taxonomies, and align the BREEAM, LEED, and WELL schemes with the United Nations Sustainable Development Goals (SDGs).

Whole Life Carbon Reduction for Infrastructure Project Under PAS 2080

PAS 2080 is a globally applicable standard for carbon management in infrastructure and buildings, aiming to reduce emissions and costs through intelligent design, construction, and use. Developed by the British Standards Institution (BSI), it provides a holistic framework for whole-life carbon management, fostering collaboration and innovation across the value chain. Key principles include leadership on climate change , carbon measurement, reduction, collaboration, and continuous improvement. By adopting PAS 2080, organizations can promote consistency, efficiency, collaboration and innovation, and gain a competitive advantage in sustainable infrastructure development, contributing to a more environmentally responsible future. Its implementation has led to significant carbon reductions and cost savings. One Click LCA aids in achieving PAS 2080 compliance by providing tools for whole-life carbon management in infrastructure. It streamlines data input, supports material selection, and offers scenario analysis, ensuring alignment with PAS 2080 standards for low-carbon infrastructure projects.

Acknowledgements

Our deepest gratitude to the following honourable sponsors, your ongoing support and contribution play a vital role in making this annual conference a success.

Sponsors

AECOM

AAL 安達臣瀝青 ANDERSON ASPHALT

AR RENTALS

ARUP

asia infrastructure solutions
a GISI Consulting Group company

AtkinsRéalis

aurecon

Build King

Acknowledgements (continued)

Sponsors

中国地质工程集团有限公司
CHINA GEO-ENGINEERING CORPORATION

中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

中國建築工程(香港)有限公司
CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LIMITED

駿祺工程有限公司
CHUN KI ENGINEERING LIMITED

俊和
CHUN WO

Gammon

GME Group Holdings Limited
駿傑集團控股有限公司

Acknowledgements (continued)

Sponsors

Acknowledgements (continued)

Sponsors

陞暉工程有限公司
RICH CLOUD ENGINEERING LIMITED

顯豐工程有限公司
RICHWELL ENGINEERING LIMITED

SETWIN 實運

隧道股份

天和工程有限公司
Tin Wo Engineering Co., Ltd.

TUNG LEE
CIVIL ENGINEERING LIMITED

VTEC

偉金建築有限公司
Welcome Construction Co., Ltd.

偉栢建築有限公司
Well Park Construction Limited

榮興建築有限公司
Wing Hing Construction Co., Ltd

The Chartered Institute of Highways & Transportation Hong Kong
Suite 820, 8/F, Ocean Centre, Harbour City, 5 Canton Road
Tsim Sha Tsui,
Kowloon, Hong Kong

hongkong@ciht.org.uk
ciht.org.uk/about-us/international-groups/hong-kong/

The Hong Kong Polytechnic University
11 Yuk Choi Road,
Hung Hom,
Kowloon, Hong Kong

polyu.edu.hk

CIHT
Hong Kong

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學
FACULTY OF CONSTRUCTION AND ENVIRONMENT
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
建設及環境學院
土木及環境工程學系