



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

45TH
ACEHK
ANNIVERSARY

SUPPORTING ORGANISATIONS



發展局
Development Bureau



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會



香港建造商會
HKCA



THE HONG KONG
INSTITUTION OF ENGINEERS
香港工程師學會



THE HONG KONG INSTITUTE OF
SURVEYORS
香港測量師學會



New Normal Embracing Engineering for Better Tomorrow

The Association of Consulting Engineers of Hong Kong
45th Anniversary Seminar

EVENT DETAILS

8 SEPTEMBER 2022; 9:00AM - 5:10PM

FORMAT: HYBRID

(ZERO CARBON PARK & ONLINE WEBINAR)

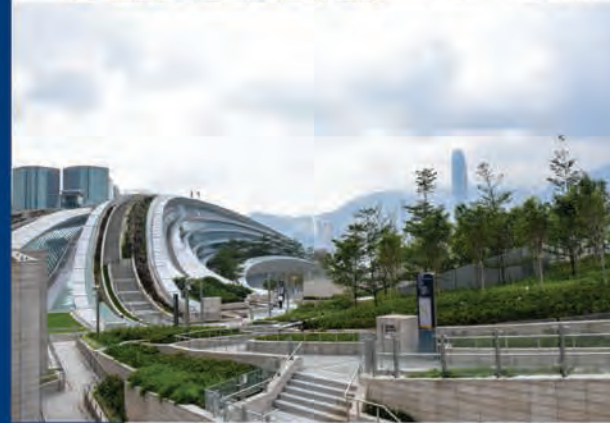
PLATINUM SPONSORS



ACEHK



Kai Tak Development - Trunk Road T2



West Kowloon Terminus

MEINHARDT

your FIRST CHOICE

Innovative • High-quality • Value-added Solutions

Over 50 Offices Worldwide

www.meinhardtgroup.com

www.meinhardt-china.com

mcehk@meinhardt.com.hk



Cross Bay Link



Hiram's Highway

A Leading Global Provider for
the Ultimate Engineering Solution

Meinhardt has been providing engineering and planning excellence to the international construction industry for **65 years**. We provide engineering consulting capabilities in Infrastructure and Environment; Civil and Structures; Mechanical, Electrical and Plumbing (MEP); Project Management and Urban Development.



Advanced Manufacturing Centre

Inventing for a Sustainable Tomorrow

Since 1930, Binnies has played a key role in developing Hong Kong's infrastructure. Today, we continue to help our clients solve complex challenges through delivering a full range of resilient, reliable and intelligent solutions, creating new possibilities to improve people's lives.

Find out more at [binnies.com](https://www.binnies.com)



Enhancing lives, communities and the environment





Introduction of **ACEHK**

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 is directed by a Council of elected representatives of its members, no member being allowed more than one representative at any time. The Council elects its Chairman, Vice Chairman and Officers, Hon Secretary and Hon Treasurer, each year and normally meets monthly.

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.



Ir Stephen Mak
Chairman
Meinhardt Infrastructure
& Environment Ltd



Ir Andy Kwok
Vice Chairman
Binnies Hong Kong Ltd



Ir Stephen Lai
Honorary Secretary
AECOM



Ir Dickson Law
Honorary Treasurer
Atkins China Ltd



Ir Victor Cheung
Council Member
J. Roger Preston Ltd



Ir James Sze
Council Member
Arup



Ir Francis Sootoo
Council Member
MVA Hong Kong Ltd



Ir Chris Lee
Council Member
C M Wong
& Associates Ltd



Ir Ole Wong
Council Member
Mott MacDonald HK Ltd



Ir Francis Yau
Council Member
Aurecon
Hong Kong Ltd



Ir Ivy Kong
Council Member
WSP (Asia) Ltd



Ir Simon Lau
Council Member
Au Posford
Consultants Ltd



Ir Alexi Bhanja
Council Member (Co-opted)
SMC Asia Ltd



Ir Kenneth Li
Observer
WSP (Asia) Ltd

Message from Chairman ACEHK



Ir STEPHEN MAK

Chairman, ACEHK

This year, our association celebrates its 45th Anniversary, and we have implemented a series of events all aimed at promoting the role of engineers in society; these are namely scholarships for university students to encourage aspiring young engineers, a short video competition to promote engineering industry, and a mentorship programme to cultivate young talents. Other than these new events, we will also be hosting our signature annual events ACEHK Annual Awards 2022, and of course, this ACEHK Annual Seminar 2022.

In this new era where technological advancement is propelling the construction industry into new heights, we, as consulting engineers, should proactively embrace emerging technology as creative tools to ensure sustainability in our work and methods. Not only do we have to seize every opportunity to exceed expectations placed on us, we shall continue to enhance the society which we serve with an open mind and with unwavering care.

Building upon our theme last year, this year's Annual Seminar will focus on four main topics, namely the Future of Better Construction, Revitalization by Young Engineers, Resilience on Climate Change, and Construction 3.0 - Integration of Artificial Intelligence and Blockchain Technology into Infrastructure Development. The seminar will provide a platform for a roster of leading experts and practicing engineering professionals to share and exchange ideas on sustainability and technological advancements.

I take this opportunity to thank our Organising Committee for bringing this event together. I trust that you will be inspired by this Seminar, and I look forward to seeing your continued support in our coming events.

Message from Chairman of the Organising Committee

Mr ANDY KWOK

Chairman of the
Organising Committee



It is a true pleasure to be the Chairman of the Organising Committee for this year's ACEHK Annual Seminar. This year marks the 45th anniversary of ACEHK. Beside welcoming you to this wonderful event, let me also take this opportunity to wish all of you, as well as your families, the very best for the remainder of 2022.

Although the pandemic has disrupted meetings and events of our industry in the past few years, especially during the 5th wave of COVID earlier this year, it has not deterred us from wanting to share latest technological developments and trends, as well as insights in tackling various industry challenges with each other. This year, we continue to embrace this vision via a hybrid approach in conducting this Seminar, as one of our many ways to adapt to a "new normal".

The Government has pledged various key initiatives and resources into major infrastructure developments for the future of Hong Kong. Besides feeling thrilled and optimistic for a bright future for our industry, ACEHK also feel the need to respond to these initiatives by exploring new technologies, innovations, new skill sets and mindsets, particularly for the young professionals, so that consulting professionals in our industry are well geared up for a wide spectrum of future challenges.

Our Organising Committee (OC) members have worked extremely hard this year to prepare this Seminar by engaging industry leaders and professionals to share their insights on how to embrace our industry for a better sustainable tomorrow. I would like to extend my gratitude to both the speakers as well as our OC members for their heartfelt contribution.

Lastly, I wish you a most fruitful day with interesting and stimulating discussions and exchange of knowledge so that we can, together, envisage the future of a new era.

About the Seminar

As we are entering an era of unprecedented global challenges and rapid innovation and technological transformation, our industry is facing a next level of challenges to provide the needs and expectations of our future generations. We need to face these challenges and strive to continue the path to embrace our industry for a better sustainable tomorrow riding on the support and the current policies outlined by our government on innovation and smart construction.

ACEHK, celebrating its 45th Anniversary this year, is organising an Annual Seminar on “New Normal - Embracing Engineering for Better Tomorrow”. The seminar will explore how the industry adapts to the evolving expectations of a sustainable built-environment and the ever-increasing efficiency of our works thanks to technological advancement. Our full-day seminar will cover exciting presentations covering hot topics of the engineering industry surrounding four pillars: (i) Future of Better Construction, (ii) Revitalization by Young Engineers, (iii) Resilience on Climate Change and (iv) Construction 3.0 - Integration of Artificial Intelligence and BlockChain Technology into Infrastructure Development.

Opening address:



Ir RICKY CHUN-KIT LAU, JP

Permanent Secretary
for Development (Works)
Development Bureau,
The Government of the HKSAR

Keynote speaker:



Mr YE SHUI QIU

Deputy Director-General,
Department of Educational,
Scientific & Technological Affairs,
Liaison Office of
the Central People's Government
in the HKSAR

Supporting Organisations



發展局
Development Bureau



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會



香港建造商會
HKCA

HKIE THE HONG KONG
INSTITUTION OF ENGINEERS
香港工程師學會



THE HONG KONG INSTITUTE OF
SURVEYORS
香港測量師學會



Platinum Sponsors

AECOM

aurecon

binnies
Enhancing lives, communities
and the environment

BuildKing

egis

MEINHARDT

Gold Sponsors

ARUP

ATKINS



新鴻基地產
Sun Hung Kai Properties

VSL
A member of
Bouygues Construction

INTRAFOR

WSP

Silver Sponsors

ceek
Engineering for Construction



中國港灣工程有限責任公司
CHINA HARBOUR ENGINEERING COMPANY LTD.
(於中華人民共和國註冊成立之有限責任公司)

FUGRO

M M
MOTT
MACDONALD

MTR

SYSTRA
MVA

Programme of the day

Morning Sessions

8:30 - 9:00am	Registration
9:00 - 9:05am	Welcome Remarks Ir Stephen Mak Chairman, The Association of Consulting Engineers of Hong Kong
9:05 - 9:15am	Opening Address Ir Ricky Chun Kit Lau, JP, Permanent Secretary for Development (Works) Development Bureau, The Government of the HKSAR
9:15 - 9:25am	Keynote Speaker Mr Ye Shui Qiu, Deputy Director-General, Department of Educational, Scientific & Technological Affairs Liaison Office of the Central People's Government in the HKSAR
9:25 - 9:35am	45th Anniversary Initiative: ACEHK 45th Anniversary Video and Group Photo

Session I: Future of Better Construction

Chaired by: James Sze

9:35 - 10:00am	Engineering for Innovation - Applied R&D in Infrastructure Construction Ir John Kwong, JP, Head of Project Strategy and Governance Office, Development Bureau, The Government of the HKSAR
10:00 - 10:25am	Building a Sustainable Future through Innovative Technologies Dr Winnie Tang, MH, JP, Founder & Chairman of Esri China (Hong Kong) Ltd and Founder & Honorary President of Smart City Consortium
10:25 - 10:50am	Embracing ACE Culture - Pursuing Advanced, Competent & Evolutionary Ir Cheng Ting-ning, Albert, Executive Director, Construction Industry Council
10:50 - 11:00am	Q&A Discussion
11:00 - 11:15am	Break

Session II: Revitalization by Young Engineers – Experience Sharing

Chaired by: Francis Sootoo

11:15 - 11:25am	45th Anniversary Initiative: Video Competition Award Presentation
11:25 - 11:50am	Revitalising the Job Description of Hong Kong Young Engineers Ir Shanshan Wang, Senior Engineer, Arup
11:50 - 12:15pm	The Role of Young Engineers in Exporting Hong Kong's Expertise Ir Jackie Cheung, Senior Geotechnical Engineer (Tunnel) AECOM
12:15 - 12:25pm	Q&A Discussion
12:25 - 1:45pm	Lunch Break

Afternoon Sessions

Session III: Resilience on Climate Change

Chaired by: Ivy Kong

- | | |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1:45 - 2:00pm | 45th Anniversary Initiative:
Launching of ACEHK Scholarship |
| 2:00 - 2:25pm | How to Improve Our Resilience on Climate Change?
Dr Chen Ji, Professor, Department of Civil Engineering,
Faculty of Engineering
The University of Hong Kong |
| 2:25 - 2:50pm | Decarbonising the Built Environment: Business as Usual?
Dion Anandityo, Sustainability Leader, East Asia
Mott MacDonald |
| 2:50 - 3:15pm | Strategy to Address the Impacts of Climate Change on Flood and Drought Disasters in Guangdong-Hong Kong-Macao Greater Bay Area Cities (to be conducted in Mandarin)
Dr. Li Chang Xing, Former Deputy Director
The Water Bureau of Shenzhen Municipal People's Government |
| 3:15 - 3:25pm | Q&A Discussion |
| 3:25 - 3:40pm | Break |

Session IV: Construction 3.0 - Integration of Artificial Intelligence and BlockChain Technology into Infrastructure Development

Chaired by: Chris Lee

- | | |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3:40 - 4:05pm | Shaping a Digital Future: Do or Die
Ms. Rosana Wong, Executive Director,
Yau Lee Holdings Limited and Founder and President,
Ophylla Ventures |
| 4:05 - 4:30pm | Route of a Construction 2.0 Pilot Project - Expansion of Sha Tau Kok Sewage Treatment Works
Miss Huky Li, Engineer, Drainage Services Department
Mr. Ron Hung, Site Agent, Build King - Kum Shing Joint Venture
Mr. Colin Chan, Technical Director, Binnies Hong Kong Limited |
| 4:30 - 4:55pm | The Use of Deep Learning for Structural Defect Detection
Ir Dr Ray Su, Associate Professor
The University of Hong Kong |
| 4:55 - 5:05pm | Q&A Discussion |
| 5:05 - 5:10pm | Closing Remarks
Ir Andy Kwok, Chairman of the ACEHK Annual Seminar 2022
Organising Committee |

Opening Address

Ir RICKY CHUN-KIT LAU, JP

Permanent Secretary for Development (Works)
Development Bureau,
The Government of the HKSAR



In October 2021, Ir Ricky Lau was appointed as the Permanent Secretary for Development (Works) to oversee public works policy and infrastructure development.

Ir Lau was the Director of Civil Engineering and Development from October 2018 to October 2021, and was responsible for overseeing the strategic planning and the implementation of various reclamation, new development area and major infrastructure projects. He joined the Hong Kong Government in 1992 as an Assistant Engineer. Before joining the Civil Engineering and Development Department in 2015, he worked in the Highways Department and the Development Bureau.



Mr YE SHUI QIU

Deputy Director-General, Department of Educational, Scientific & Technological Affairs, Liaison Office of the Central People's Government in the HKSAR

Hong Kong Engineering and Construction Industry – A New Era of Opportunities

President Xi Jinping's speech on 1 July 2022 to celebrate the 25th anniversary of Hong Kong's return to the motherland contained significant details for the city's future development.

Mr Ye will discuss some key points of the president's speech and their implications for the future development of Hong Kong, in particular, how the construction industry can benefit from the Central Government's support and policies for Hong Kong.

On the other hand, the Governments of Guangdong, Hong Kong and Macao have collaborated to establish measures for consulting engineers and businesses to practise in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) cities, including a simple registration system to facilitate eligible enterprises and professionals to start businesses and practice in the GBA. All of these have remarkably opened the doors to unprecedented opportunities for consulting businesses and engineering professionals of Hong Kong.

**Keynote
Speaker**

REIMAGINE POSSIBILITIES

As a leading engineering, design and advisory company that is committed to creating a better future for all, Aurecon brings together engineering excellence, innovative design and building expertise to create a sustainable and resilient future.

From the seed of an idea to better outcomes, we collaborate with our clients to bring ideas to life.

aurecongroup.com



Engineering for Innovation - Applied R&D in Infrastructure Construction

Ir JOHN KWONG, JP

Head of Project Strategy and Governance Office,
Development Bureau, The Government of the HKSAR



Speaker Bio

John Kwong was appointed Head of Project Strategy and Governance (PSGO) in April 2019 for formulating strategic initiatives to strengthen governance and uplift performance of public works through reinforcing the existing gateway process for cost management; enhancing project delivery capability; leading strategic developments to enhance cost-effectiveness and enhancing collaboration with international counterparts and local industry stakeholders.

John is a civil engineer by training. He graduated from the University of Hong Kong and obtained several postgraduate degrees in engineering and laws. Before joining the Development Bureau, he worked in the Drainage Services Department and the Commerce and Economic Development Bureau.



Abstract of Presentation

The construction industry has been facing the challenges of high construction costs, ageing workforce, declining productivity, etc. In addition, the 2021 Policy Address has put forward massive development programmes ahead to address the economic and social needs of Hong Kong, including the Northern Metropolis initiative, the Lantau Tomorrow Vision, Hospital Development Plan, etc. It is necessary to uplift productivity and capacity of the construction industry in order to deliver the development programmes in a more efficient and cost-effective manner.



Since 2018, the Government has been promoting Construction 2.0 by advocating "Innovation", "Professionalisation" and "Revitalisation" to uplift the performance of construction industry. In the 2022-23 Budget, the Financial Secretary has earmarked \$30 million to further enhance construction innovation by promoting applied R&D in infrastructure construction which will not only enhance productivity, uplift cost-effectiveness in the delivery of public works projects but can also benefit the construction industry in the long run by facilitating adoption of new materials, advanced technologies and innovative construction methods.

Programme 2

Building a Sustainable Future through Innovative Technologies

Founder & Chairman of Esri China (Hong Kong) Ltd and
Founder & Honorary President of Smart City Consortium

Dr WINNIE TANG, MH, JP



Speaker Bio

Dr Winnie Tang, MH, JP is an Adjunct Professor in the Department of Computer Science, Faculty of Engineering, Department of Geography, Faculty of Social Sciences and Faculty of Architecture at the University of Hong Kong (HKU). She is one of the local born IT entrepreneurs from Hong Kong. In the 1990s, Dr Tang founded Esri China (Hong Kong) Limited to develop and promote Geographic Information System (GIS) software and solutions. She is also the Founder and Honorary President of Smart City Consortium. Over the years, she has been actively advocating the use of technology and sharing her views regarding the ICT industry, eHealth, environmental conservation, entrepreneurship and smart city through her services in government and non-government organizations in Hong Kong.

In recognition of Dr Tang's work, she has been awarded the Honorary Fellow by Lingnan University in 2020, the Distinguished Alumni by the Faculty of Science, HKU in 2009, the Ten Outstanding Young Persons in 2006, and the Women of Influence - Young Achiever of the Year Award by the American Chamber of Commerce in 2004 and the Ten Outstanding Young Digi Persons Selection in 2001.

Abstract of Presentation

Pandemic provides impetus to change the world that we live in. The architecture, engineering and construction (AEC) industry must be smarter than ever in order to overcome unprecedented challenges. The idea behind smart construction is to use technology and data to make better decisions, deliver a better quality of life and create a sustainable future.

This presentation will share about:

- Global trends of smart cities and AEC industry
- The journey of Hong Kong towards a smart city
- How emerging technologies empower smart construction
- What's next for achieving a sustainable future



Build with Professionalism Innovation Integrity

Build King Holdings Limited
利基控股有限公司

6/F., Tower B, Manulife Financial Centre, 223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
香港九龍觀塘偉業街223號宏利金融中心B座六樓

T +852 2272 3680 F +852 2375 3655 E info@buildking.hk

www.buildking.hk



IMAGINE
CREATE
ACHIEVE
a sustainable future

Egis is an international player active in the consulting, construction engineering and mobility service sectors. We design and operate intelligent infrastructure and buildings capable of responding to the climate emergency and helping to achieve more balanced, sustainable and resilient territorial development.

With operations in 120 countries, Egis places the expertise of its 17,000 employees at the disposal of its clients and develops cutting-edge innovation accessible to all projects. Through its wide-ranging fields of activity, Egis is a central player in the collective organization of society and the living environment of citizens all over the world.

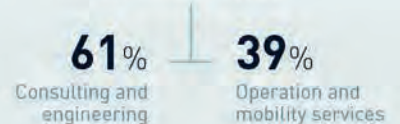
With the establishment of our Asia Pacific region in 2021, headquartered in HK, Egis will continue to provide an outstanding contribution to Hong Kong. Our key achievements include Term Maintenance for the Hospital Authority for New Territories East Cluster (2022-2027) – Building Services; Hong Kong West Kowloon High Speed Rail Station - Façade and Building Maintenance Unit; Cityplaza Ice Palace Renovation Project - Architecture and Interior Design and Consultancy Services for Upgrade/ Replacement of Air Navigation System for Hong Kong International Airport Three-runway System.

In Asia Pacific, we are involved in innovative and low carbon program projects such as Environmental Studies for Carbon Reduction Pathway in Fujian, PRC; the System Engineering & Turnkey for PSD for the Metro Manila Subway Project (MMSP), Philippines; and Tunnel Operation and Maintenance Services for Western Harbour Tunnel in Sydney, Australia.

€1.16
BILLION
TURNOVER IN 2021



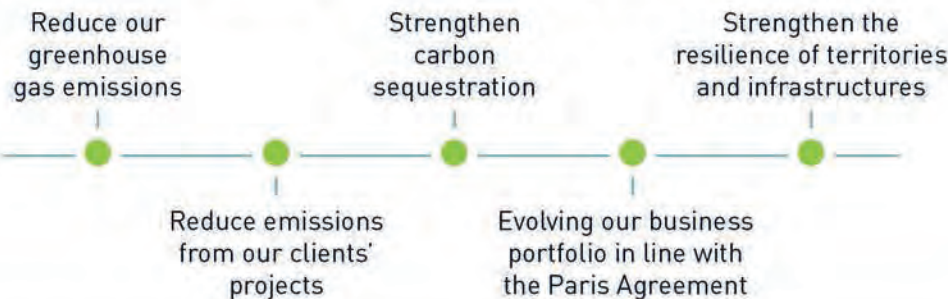
17,000
EMPLOYEES
IN THE WORLD



Climate emergency, our absolute priority

OUR 5 COMMITMENTS

to take concrete action for the environment on a daily basis



Professional Services for ANS Equipment to HK CAD

www.egis-group.com

Follow Egis on:

Contact us:
Frank Daniel, Business Development Director, APAC
✉ Frank.Daniel@egis-group.com

📍 12th Floor, OTB Building, 160 Gloucester Road, Wan Chai, Hong Kong

APAC Main Offices:
Hong Kong, Beijing, Shanghai, Shenzhen, Bangkok, Jakarta, Manila, Singapore, Melbourne, Sydney, Brisbane

Embracing "ACE Culture" – Pursuing Advanced, Competent and Evolutionary

Ir CHENG TING-NING, ALBERT

Executive Director, Construction Industry Council

Speaker Bio

Ir Albert Cheng is the Executive Director of Construction Industry Council of Hong Kong and a seasoned construction professional with over 30 years' experience in the planning, design, management and implementation of mega public works projects.

Prior to joining the Construction Industry Council, Ir Cheng was the Head of the Hong Kong-Zhuhai-Macao Bridge Hong Kong Project Management Office of the Highways Department and the Head of the New Territories East Development Office of the Civil Engineering and Development Department. Ir Cheng is the Immediate Past President of the Hong Kong Institution of Highways and Transportation, currently a Fellow Member of the Hong Kong Institution of Engineers.



Abstract of Presentation

The construction expenditure in Hong Kong will exceed HK\$300 billion per annum over the next ten years, bringing enormous opportunities to the industry and substantial social and economic benefits to the economy. However, the Hong Kong construction industry has been plagued by the age-old problems of stagnant productivity growth, unsatisfactory performance in safety and sustainability, and manpower shortage.

The construction industry, like many other industries, must adapt to a new normal in the post-COVID environment. Innovation has obviously become the key development direction for the industry transformation. Ir CHENG would provide an overview of the current situation and challenges of the Hong Kong construction industry. He would also reveal his vision and the Construction Industry Council's strategies and initiatives to address the challenges. Insights on how engineers should equip themselves to be future-ready, and how the industry should embrace readily available technologies will be shared to achieve "Construction 2.0" for a smart and sustainable city.

Revitalising the Job Description of Hong Kong Young Engineers



Ir SHANSHAN WANG

Senior Engineer
Arup

Speaker Bio

A graduate from the Hong Kong University of Science and Technology, Shanshan is currently a senior civil engineer at Arup working across several Asian countries. She has been the project manager for a number of large-scale infrastructure projects, through which she has gained great insight into works in China, the Philippines, Vietnam, Singapore, Indonesia, Malaysia, Thailand and India. Passionate about sustainable development and works in developing countries, she leads projects to bring positive impacts to different stakeholders and invigorate the way engineers work.

Shanshan received a Certificate of Merit at the Young Engineer of the Year Award 2022 from the Hong Kong Institution of Engineers.

Abstract of Presentation



Site Visit

Hong Kong has long prided itself as Asia's World City. Being in Hong Kong, young engineers can contribute to exciting opportunities throughout Asia and deliver meaningful impacts. Embracing such excitement, in the past five years, Shanshan has stationed in 3 different cities managing projects covering 8 countries. Her clients range from NGOs to developers, local government departments and the Asian Development Bank.

In this presentation, Shanshan will share her learnings along this journey, helping young engineers to reflect on their job descriptions and the seniors to understand how to nurture the emerging generation.



ATKINS

Member of the SNC-Lavalin Group

INNOVATION TO BRING CLARITY TO COMPLEXITY

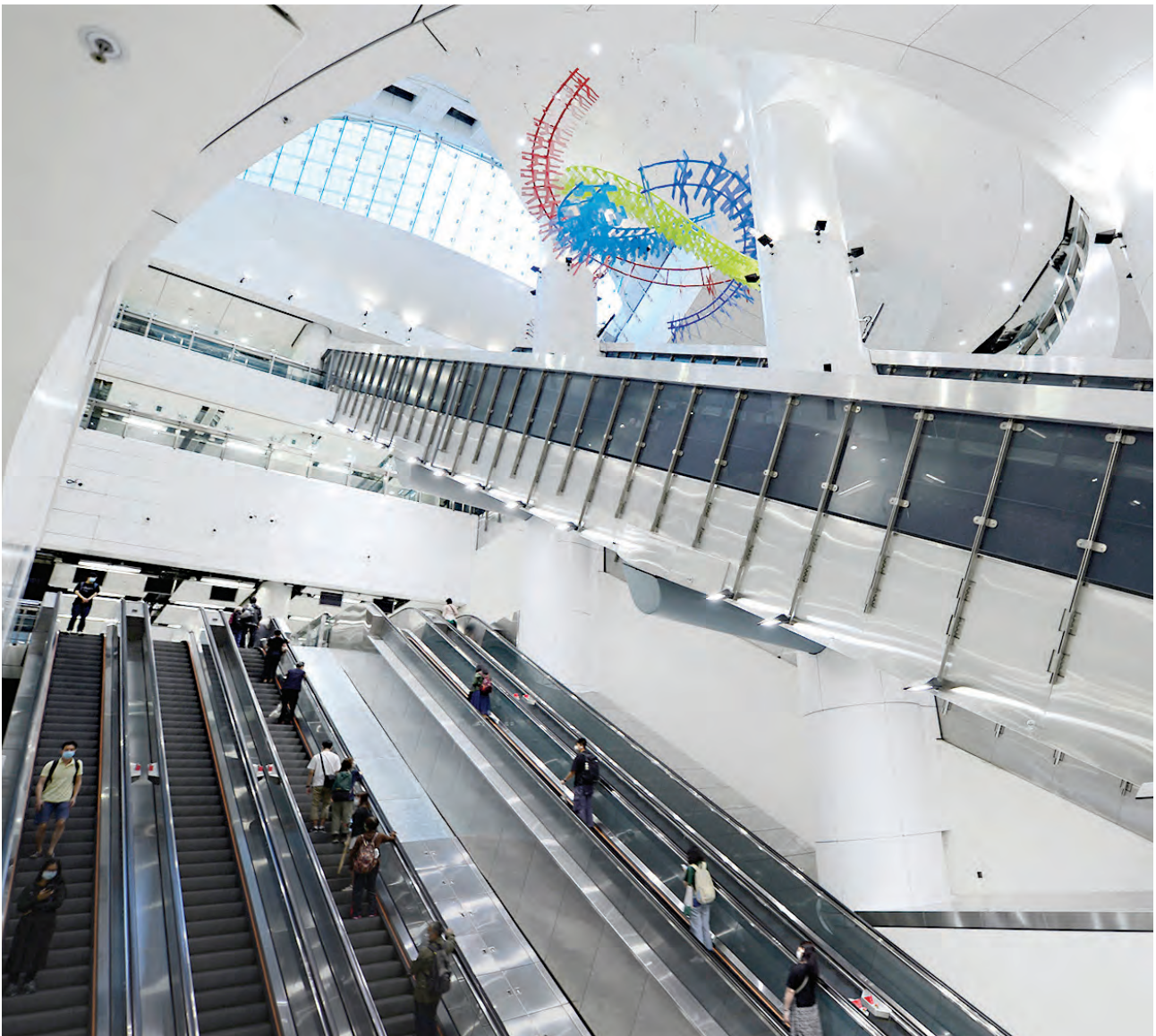
At Atkins, we strive to create and implement transformational solutions to geotechnical challenges whilst developing an enriched and liveable world. Our visionary, multidisciplinary teams are at the forefront of digital transformation utilising integrated domain expertise to navigate complexity and enhance deliverables for our clients and society.



Shaping places of tomorrow

Constantly innovating, Arup infuses advanced technologies and sustainability ethos into the planning, design and construction of complex, city-shaping projects, creating quality public spaces that make a real difference to our communities.

Admiralty Station, Hong Kong



The Role of Young Engineers in Exporting Hong Kong's Expertise

Ir JACKIE CHEUNG

Senior Geotechnical Engineer (Tunnel)
AECOM



Speaker Bio

Mr. Jackie Cheung is a Geotechnical Engineer practising in the field of geotechnical engineering and tunnelling projects for 13 years. He has wide experience in both the design and construction of various types of deep excavations, site formation and tunnelling works. His tunnelling experience includes TBM tunnels, Drill and Blast tunnels and mining tunnel design.

Since joining AECOM, Jackie has been involved in various geotechnical, tunnelling and urban development projects in Hong Kong and overseas, such as Express Rail Link (XRL), South Island Line (SIL), Hong Kong West Drainage Tunnel (HKWDT) and the Trunk Road T2. Overseas project includes Riyadh Metro Line 1 (Saudi Arabia), Ho Chi Minh City Metro (Vietnam), KVMRT Line 2 (Malaysia) and MRT Orange Line (Bangkok).



Abstract of Presentation

Hong Kong's engineers are active in exporting their services to the region, particularly the Chinese mainland and Southeast Asia. In the construction sector, major types of professional engineering services that are currently being exported include project management, engineering design services and consultative engineering services.

As a young engineer, how can we export our professionals to contribute to the engineering industry on a global scale? This presentation will give a personal experience sharing from global and local projects. The speaker will share his experiences and challenges encountered from those projects, which the challenges and opportunities in engineering can be compared in these two regions.



Programme 6

How to Improve Our Resilience on Climate Change?



Dr CHEN JI

Professor, Department of Civil Engineering,
Faculty of Engineering, University of Hong Kong

Speaker Bio

Ji Chen is a Professor at the Department of Civil Engineering of The University of Hong Kong (HKU). He obtained his PhD degree from UIUC in USA, and ME and BE degrees from Tsinghua University in Beijing, and joined HKU in September 2004. His research interests lie in water resources, terrestrial hydrologic processes, climate change, urbanisation, natural hazards and remote sensing. He has graduated twelve PhD students and supervised four postdocs. Prof. Chen is an associate editor of three international research journals: Journal of Hydrology, Journal of Hydro-Environment Research, and Stochastic Environmental Research and Risk Assessment.

He was ex-president of the Hydrological Sciences Section in Asia Oceania Geosciences Society (AOGS) (2018-2020) and chairman of the International Association for Hydro-Environment Engineering and Research (IAHR) - Hong Kong Chapter (2019-2021).

Abstract of Presentation

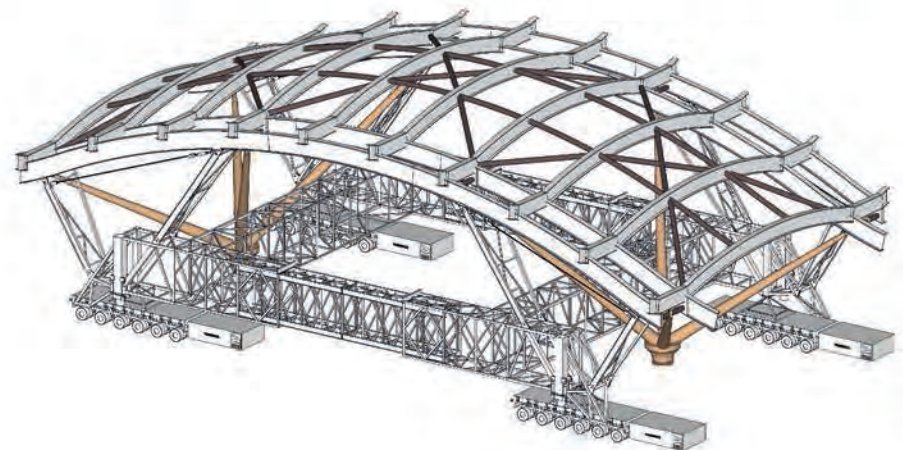
Various extreme weather events and related disasters frequently occur nowadays, and this has attracted world attention, specifically in science and engineering fields. Some people argue that those events were caused by climate change. How could we improve our resilience on climate change? How could we reduce the related damages to our human beings? This talk will share some thoughts on the matter.

Building Homes with Heart

Sun Hung Kai Properties Limited's spirit of 'Building Homes with Heart' and constant pursuit of excellence have made it a leading Hong Kong property company. It has built many distinctive landmarks over the years and helped define the city as a major international metropolis. ICC at Kowloon Station is the tallest building in Hong Kong and remains a focal point on the skyline forming the stunning Victoria Harbour Gateway with Two IFC on the opposite shore.



YOUR CONSTRUCTION PARTNER



- Post-tensioning
- Stay cables
- Special construction methods
- Precast construction methods
- Heavy lifting
- Climbform and formwork systems
- Superstructure erection
- Bearings and movement joints
- VSoL retained earth
- Precast concrete arches
- Deep foundations
- Diaphragm walls
- Grouting
- Ground anchors
- Vibrocompaction
- Dewatering
- Ground investigation
- Product testing
- Repair and preservation
- Instrumentation & monitoring
- Bridge and building dampers:
 - Viscous dampers
 - Visco-elastic dampers
 - Friction pendulum dampers
 - Tuned mass dampers



A member of
Bouygues Construction



www.vsl.com

www.intrafor.com

Decarbonising the Built Environment: Business as Usual?



DION ANANDITYO

Sustainability Leader, East Asia
Mott MacDonald

Speaker Bio

Dion leads Mott MacDonald's Sustainability services in East Asia, working collaboratively with private and public clients in multiple countries in Asia. As a designer focusing in sustainable design, Dion advocates low carbon solutions in city planning, new build and existing asset portfolio conserving resources while enhancing the overall spatial and environmental quality. In Mott MacDonald, Dion holds project director and project manager roles for sustainability framework, green certification, building performance and carbon management strategy coordinating between various specialist consultants to achieve the project's sustainability goals.

In his professional career, Dion has led the successful growth of the Sustainability teams in Surbana and Arup for more than a decade before joining Mott MacDonald. His project experiences spans from low energy high rise mixed development achieving LEED Platinum, creating sustainability framework for the new Indonesian capital city, to establishing a decarbonisation roadmap for a multi-national developer for their global portfolio.

Abstract of Presentation

Climate change is here to stay and the most obvious way to reduce its impact is a holistic decarbonisation of all sectors, including the built environment. Regulations and financial requirements all leads into the need to decarbonise and minimise future risks. In this opportunity, we explore what is possible in the built environment sector to decarbonise and how this should be challenging the business as usual. From nature-based solution, passive design intervention to engineering solutions, there are decarbonisation strategies we can implement on our existing assets to help mitigate climate change. Although these looks to be capital-intensive but they provide the best financial risk mitigations from business as usual. Hence should decarbonisation be our future business as usual?

Programme 8

Strategy to Address the Impacts of Climate Change on Flood and Drought Disaster Situation in Guangdong- Hong Kong- Macao Greater Bay Area Cities

Former Deputy Director, The Water Bureau of Shenzhen Municipal People's Government

Dr. LI CHANG XING



Speaker Bio

Dr. Li Chang Xing is a PhD(Eng) and Professor in Engineering that has received the special recognition from the State Council. He is also a member of the 11th Council of Chinese Hydraulic Engineering Society and the former Deputy Director of the Water Bureau of Shenzhen Municipal People's Government. Dr. Li graduated from Xi'an University of Science and Technology, studied at the Cambridge University, and had short-term studies in both the University of Southern California and the Hong Kong Polytechnic University. Dr. Li has been engaged in the Shenzhen River training project jointly organised by the Shenzhen and Hong Kong Government. Dr. Li's study interest includes hydrology, water resources and engineering management.

Abstract of Presentation

The Guangdong-Hong Kong-Macao Greater Bay Area (GBA) is located in the South subtropical maritime monsoon climate zone. The impacts of climate change on flood and drought disaster situation mainly include climate warming, rise in sea level, frequent typhoon rainstorm, flood and drought, and shortage of water supply, etc. The GBA is distinctively characterised by its economic prosperity, large population, developed transportation network, as well as a weak tolerance to natural disasters. To enhance the cities' ability to cope with flood and drought in the GBA, we should strengthen monitoring of climate change and rise in sea level, conduct in depth study of the distinctive topographic and geomorphic features in the GBA, reinforce the information and resource sharing, step up infrastructure construction for flood control and drought relief, as well as establish a joint defense mechanism for rescue and relief efforts.

Be *Future Ready* Today



*Tseung Kwan O
Desalination Plant (First Stage)*

Our Future Ready mindset puts WSP at the heart of delivering a sustainable, prosperous and resilient society. By researching on key trends related to climate change, society, technology and resources, we empower our teams to work with clients for long-term solutions that bring positive change to our world.



CEEK is a versatile multi-disciplinary engineering consulting company endeavouring to provide optimised and practical technical solutions to assist the delivery of our Client's project.



Areas of Expertise - Temporary Works Design for :

- Underground works in all types of ground conditions
- Bridges including pre-cast, segmental & cable stayed
- Modularised and prefabricated solutions
- Independent Checking Engineer & Dispute Resolution

Singapore Office:
90 Lor 23 Geylang,
#04-02 Agrow Building,
Singapore 388393
Tel: +65-6816 6789
Email: ceek@ceek.com.hk

Shenzhen Office:
Unit 1001, 10/F,
3A Building, Huaqiang Creative
Park, Guangming District,
Shenzhen, Guang Dong Province,
China Tel: +0755 2348 2862
Email: sxkj@shenzhenkeji.com

Hong Kong Head Office:
Unit D, 11/F., Block 2,
Tai Ping Industrial Centre,
55 Ting Kok Road, Tai Po, NT
Tel: +852-2893 0019
Email: ceek@ceek.com.hk
www.ceek.com.hk



SYSTRA MVA is a leading global transport planning and traffic engineering consultancy



Our services:

- Aviation + Airport
- Business + Market + Social Research
- Car Park Design
- Master Planning + Land-Use Development
- Pedestrian + People Movement
- Property Development Traffic Study
- Public Transport
- Rail Planning + Station Design
- Traffic + Highway Engineering
- Traffic Management + Control
- Transport Investment
- Transport Modelling + Simulation
- Transport Planning
- Vertical Transportation

MVA was established in the UK in 1968 and set up its regional head office in Hong Kong in 1978 to provide in-depth professional consultancy services in the Asia Pacific Region. Other offices in the region:
Beijing, Shanghai, Shenzhen, Chengdu, Bangkok, Singapore, and project office in Ho Chi Minh City.

22/F, Genesis, 33-35 Wong Chuk Hang Road, Hong Kong
+852 2529 7037
www.mvaasia.com info@mvaasia.com



Shaping a Digital Future: Do or Die

Ms ROSANA WONG

Executive Director, Yau Lee Holdings Limited
Founder and President, Ophylla Ventures



Speaker Bio

Ms. Rosana Wong is an Executive Director of Yau Lee Holdings Limited and leads the Group to be an integrated green corporation providing multidisciplinary construction services. She is passionate about technology, innovation, science and dynamic spatial data, and has solidified her vision by founding Ophylla Ventures and a group of start-ups to study and explore four pillars of sustainable smart city - smart environment, infrastructure, care and transformation.

Ms. Wong is also a Director of Hong Kong Cyberport and the Chair of Construction and Facilities Committee, Vice President of Smart City Consortium and the Chair of Smart Living Committee, Deputy Director of China Green Building (HK) Council, and member of various Government bodies, including the Environment and Conservation Fund Committee, Transport Advisory Committee, Chair of Transport Complaints Unit, Green Minibus Operators Selection Board, Longterm Decarbonisation Strategies Support Group of Council for Sustainable Development and Sub-committee on Access of Rehabilitation Advisory Committee. She is also a member of the Construction Industry Council's Committee on Building Information Modelling, member of CIC Advisor Panel for Signature CDE Course, Council Member of the HKTDC Mainland Business Advisory Committee and member of HKTaxi Industry Innovation Committee.

Abstract of Presentation

Digitalization has no alternative in view of the future upward development of the construction sector since it offers to change and optimize the whole supply chain with a number of advantages and benefits. With over a decade of experiences, Ms. Wong will share different real cases to illustrate how a construction corporation transformed from traditional to digitized by implementing 5D BIM, automation, MiC and its blockchain multifunctional platform, AI, digital twin, big data as well as other edging technologies. All these are the fundamental elements for lean and sustainable construction. She will further introduce the latest autonomous solutions together with NFT and immersive Metaverse experiences to demonstrate how digitalization could be a major boost of business performance.

Route of a Construction 2.0 Pilot Project – Expansion of Sha Tau Kok Sewage Treatment Works



Mr COLIN CHAN

Technical Director,
Binnies Hong Kong Ltd.

Mr. Colin Chan, Technical Director, Binnies Hong Kong Limited – Mr. Chan has over 20 years of experience in design and construction supervision of a wide range of sewerage and waterworks infrastructure projects. He has been the Deputy Project Manager of the Expansion of STKSTW responsible for the design and construction supervision.

Miss HUKY LI

Engineer,
Drainage Services Department



Miss Huky Li, Engineer/Consultants Management, Drainage Services Department, HKSAR – Miss Li graduated from the Department of Civil Engineering, University of Hong Kong in 2014 and joined the Government since graduation. She is currently DSD's project engineer responsible for the Expansion of STKSTW. She is the winner of the Ombudsman's Awards 2019, a prestigious recognition for her professionalism and enthusiasm in serving the community.



Mr RON HUNG

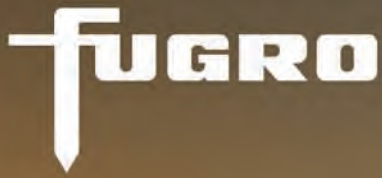
Site Agent,
Build King - Kum Shing Joint Venture

Mr. Ron Hung, Site Agent, Build King – Kum Shing Joint Venture – Mr. Hung leads the contractor's team under this Project. He has over 16 years of experience in the civil engineering industry and he is also the main coordinator of "Construction 2.0" on STKSTW Expansion.

Abstract of Presentation

The Development Bureau has implemented "Construction 2.0" since 2018, and in concerted effort with the construction industry, to lead the industry to reform by advocating "innovation", "professionalisation" and "revitalisation", so as to uplift the productivity, capacity and sustainability of the industry and prepare for the expected increase in workload. Being the first Construction 2.0 pilot project for Drainage Services Department, the project team of the Expansion of Sha Tau Kok Sewage Treatment Works, Phase 1, has spearheaded since the start of the project in late 2018, to adopt and pilot different advanced construction technologies.

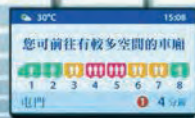
In particular, design for manufacture and assembly (DfMA) is applied to the structural and E&M works of both the Temporary Sewage Treatment Plant and the permanent Sewage Treatment Works. Centralised Management Platform is adopted in conjunction with BIM model and many on-site and off-site instruments to closely monitor site safety, environmental, progress performance, etc. Smart confined space works system is also developed amongst many other innovations. The Project Team will share the route of sourcing and implementing these new innovations including the difficulties encountered in the past 3.5 years and how they were overcome collaboratively.



Since the early 1970s, Fugro (Hong Kong) Limited was the first international geotechnical specialist to establish consulting services in Hong Kong. We provide civil, structural, geotechnical, asset integrity assessment and management, offshore and coastal engineering services. Our expertise also embraces digitalization and innovative solutions that best suited to the Client's needs.

Contact us:
Tel: 852-2577 9023
Email: fhk@fugro.com

fugro.com



車廂載客情況顯示



心繫生活每一程

Go smart
Go beyond
載向自在未來

行程指南



不斷提升MTR Mobile及站內智慧科技，
讓你享受更貼心旅程。

Continuous upgrade of MTR Mobile and smart initiatives
at stations, to deliver a more personalised journey!

詳情請掃QR碼
Please scan the
QR code for details

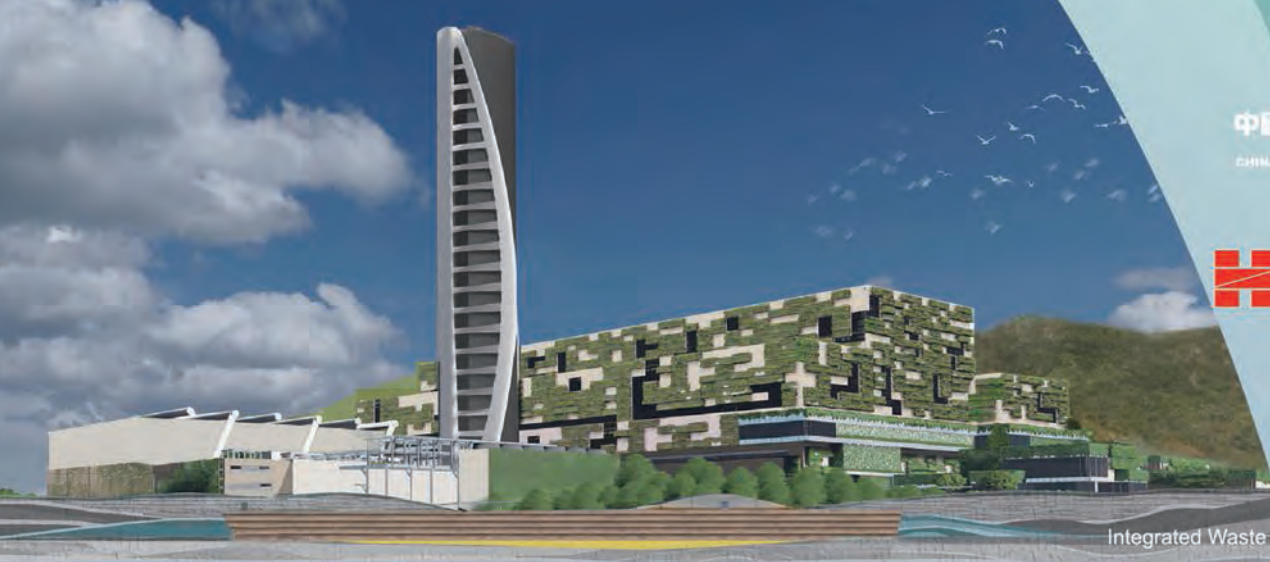




中國港灣工程有限責任公司

（於中華人民共和國註冊成立之有限責任公司）
CHINA HARBOUR ENGINEERING COMPANY LTD.
(Incorporated in People's Republic of China with limited liability)

振華工程有限公司
ZHEN HUA ENGINEERING CO., LTD



Integrated Waste Management Facilities Phase 1
Shek Kwu Chau, Hong Kong



Waste-To-Energy, Integrated Waste Management Facility
Tuas Nexus, Singapore

M
M
MOTT
MACDONALD

Our purpose is to improve society by considering social outcomes in all we do, relentlessly focusing on excellence and digital innovation, transforming our clients' businesses, our communities, and employee opportunities.

At Mott MacDonald, we're delivering social, economic and environmental value by connecting innovation to outcomes.

Find out more about how we drive digital transformation:

<https://www.mottmac.com/digital>



The Use of Deep Learning for Structural Defect Detection

Speaker Bio

Ray Su is an Associate Professor in structural engineering at The University of Hong Kong. Dr Su's research interests include sustainability and resilience of concrete structures. He recently applied AI techniques to identify defects in concrete buildings. He has published over 200 technical publications. Dr. Su has an international standing in the research areas of concrete and composite structures, which is reflected by his invited presentations as keynote speaker at various international conferences. Dr. Su's overall contribution to the engineering profession has been recognised formally by his election as a Fellow of the Institution of Structural Engineers (2018) and the Hong Kong Institution of Engineers (2019). Currently, Dr. Su is an Editor for HKIE Transactions and Associate Editor for ICE-proceedings Structures and Buildings and Innovative Infrastructure Solutions.



Ir DR RAY SU

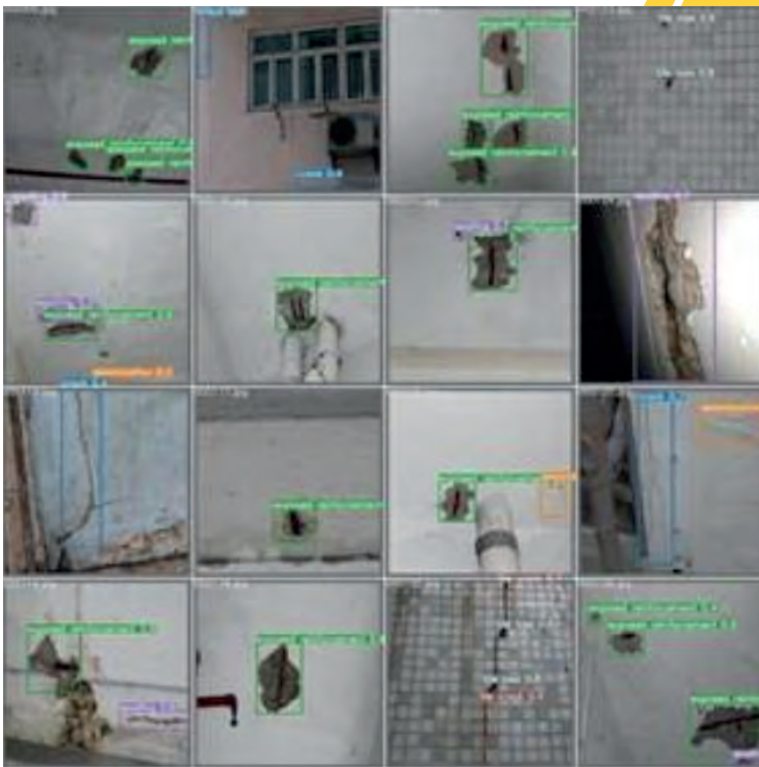
Associate Professor
The University of Hong Kong

Abstract of Presentation

Deterioration of reinforced concrete buildings is recognised as a major problem worldwide. Due to the subtropical climate of Hong Kong and lack of proper building inspection and maintenance, many old concrete structures have seriously deteriorated.

This seminar will present an application of computer vision-based technique to automatically locate and classify structural defects including cracks, cover delamination and spalling, exposed reinforcement, rust stains as well as tile cracks and loss. An advanced object detector, YOLOv5s, is adopted for the recognition of common structural defects. Precision-recall curve is employed for judging the effectiveness of the object detector. The accuracy of object detection is

measured in terms of mean average precision. Basic knowledge and general procedure for the application of deep learning techniques to civil engineering problems will be introduced. Lastly, further extension of computer vision-based techniques from defect identification to defect quantification will also be briefly discussed.





Organising Committee Chairman

Ir ANDY KWOK

Members

Ir ANGELA CHAO

Ir IVY KONG

Ir CHRIS LEE

Ir JAMES SZE

Ir FRANCIS SOOTOO

Ir OLE WONG

Organising Committee Chairman



Ir Andy Kwok

Organising Committee
Chairman
Binnies Hong Kong Ltd

Members



Ir Angela Chao

Organising Committee
C M Wong
& Associates Ltd



Ir Chris Lee

Organising Committee
C M Wong
& Associates Ltd



Ir Francis Sootoo

Organising Committee
MVA Hong Kong Ltd



Ir Ivy Kong

Organising Committee
WSP (Asia) Ltd



Ir James Sze

Organising Committee
Arup



Ir Ole Wong

Organising Committee
Mott MacDonald HK Ltd



Delivering a better world

At AECOM, we envision a world where **infrastructure creates opportunity for everyone.**

By harnessing the power of digital technology and innovation, and connecting our technical experts around the world, we deliver tailored sustainable solutions and transformative outcomes for our clients, communities and planet.

No.1 ranking by Fortune magazine as World's Most Admired Company in its industry