



The Institution of  
Engineering and Technology

The Institution of Engineering and  
Technology Hong Kong  
工程及科技學會香港分會

## Chairlady's Message

During our 150th anniversary year, the IET is sharing the magic of STEM with the wider society and highlighting how truly crucial it is to the world around us. The series of celebrations by IET Hong Kong was kicked off with a press conference on 3rd August, at which 5 corporate giants signed a MOU with IET Hong Kong, signifying a long-term partnership in promoting local STEM and young talents development. These partners include HKE, CLP, Cyberport, MTR and Key Direction. The MOU is a steadfast commitment amongst the industry to collectively promote and support STEM, and to develop engineers for the future.

As part of our STEM and Young Talents Strategies, we want to step up our collaboration with industrial partners, to raise awareness on STEM, and to inspire innovation via a more structural and effective manner. Under this MOU, our focuses will be on immersing students into the latest technologies and facilities, mentorship program, sharing by industry professionals, life and career planning support, and STEM Ambassador Programme. I strongly believe that fascinating stories shared by our fellow engineers will inspire many of our young people to join the engineering and technology industry.

The ceremony was witnessed by Professor Kam Fai Wong, Associate Dean of Engineering Faculty at Hong Kong Chinese University, and various other STEM partners, including VTC STEM Education Centre, HKSTP, and Autodesk.

Besides the MOU signing ceremony and special editions of our annual flagship events, such as Power Symposium and ICT Conference, most of the actions actually took place in Hong Kong Science Park on 14th and 15th August as part of the IET 150th Anniversary Celebration.

In the IET@150 Global EngTalks Series, technology giants and world influencing visionaries from different parts of the world share with us their achievements and views that would steer the next wave of technology revolution. We are grateful to have Dr. Jolly Wong as our host and Professor CC Chan as our keynote speaker in Hong Kong to walk us through the Electronic Vehicle / Green Energy industry in the Mainland China. In particular, Professor Chan introduced the practice of 4N4F integration as pathways to a carbon neutral future. The conference also looked into the fourth and fifth industrial revolution and their implications. This event is currently being broadcasted through the IET virtual platform and will be shared through the IET Hong Kong social media channels in due course.

To also celebrate the launching of the IET Strategy 2030, which is our vision and commitment to the Society for the next decade, we had discussed this strategy, focusing particularly on the two themes: Digital Future and Sustainable Planet, in the IET Engineering Conference: Our World in 2030. Mr. Victor Lam, Hong Kong Government Chief Information Officer shared, in tandem with Dr. Winnie Tang, Mr. Vinlex Wong, Mr. HW Chan, and Dr. Victor Li, on the two themes with specific insight on the technological development for the next 10 years.

Ir. CS Chang and Mr. KW Pang walked our young ladies from STEM 4 Girls Programme and other audiences through different career prospects in the industry in EDI Session with topics spanning from smart cities and railways to aircrafts and radar technology. Female Panelists also touched on interesting stories throughout their careers.

Whilst all these conferences and Faraday Challenge Hong Kong Final were happening, a thrilling IET Engineering Carnival also took place to promote the importance of STEM to the younger generation and to inspire them about future technologies. There were more than 20 different STEM game booths for kids and family to participate in, with interesting themes, such as electric current maze, mini remote control car race, shooting, Morse code, Virtual Reality, Artificial Intelligence, and robotic experiences. As children had fun and enjoyed a small brain work-out, they were also learning to apply innovative technology in daily life. Participants could even collect stamps to redeem candies and attractive prizes.

The ultimate eyeball-catcher of the event was the Interactive LED Birthday Card, towering at 5 meters tall in the exhibition hall, and was sure to command the attention of children and their parents. Players could use their mobile phones to go online and create a one-of-a-kind electronic greeting card for IET's 150th birthday. This interactive game was also available on the IET150 website (<http://iet150.org>) and certainly excited young future engineers.

Over 5000 people attended the event series over the two days, and there had been at least 1300 online viewings through our virtual platform and social media channels to date. There had been 18 media coverage from major TV channels, and printed and online journals and at least 15 posts from STEM related influencers and interest groups.

Most importantly, we had lots of fun, despite the impossible hard work that had been put into this by our organizing committee and fellow volunteers. We also have to thank our sponsors and supporting organizations for stepping out of their comfort zone and joining us in this big, crazy party.

The IET has created great histories in the past 150 years, and I am sure that this event series will become one of the most exciting memories in the future. I am extremely proud to take part in this world-class organizing committee. In the meantime, I'll take a good rest and look forward to the Difference Makers Talk and STEM Career Congress - the Grand Finale of our Birthday celebration.

*Justina CY Ho*  
*Chairlady of Session 2021, The IET Hong Kong*  
*Council and Board Member, The IET*  
*September 2021*



## IET@150 – Opening Ceremony cum EngTalk

The IET is celebrating its 150th anniversary in 2021, and the IET Hong Kong had successfully held the IET@150 –Opening Ceremony cum EngTalk in Hong Kong Science Park on 14 August 2021. The event was attended by more than 150 professionals and engineers in person and another 500 audience joined the Ceremony livestream.

The Ceremony began with welcome address by Professor Danielle George MBE, President of the IET and Mr Nigel Fine MBE, Chief Executive and Secretary of the IET.



*Welcome Address by Prof. Danielle George MBE, President of the IET*



*Welcome Address by Mr Nigel Fine MBE, Chief Executive and Secretary of the IET*

Followed by an opening address by Ms Justina Ho, Chairlady of IET Hong Kong 2021. She mentioned “embracing challenges is the very nature of engineering” and emphasized the importance of engaging and inspiring young people to embrace and solve challenges in an engineering way: professionalism, perseverance, passion and spirit. Nurturing the younger generation is one of the focus of IET Hong Kong Local Network.



*Opening Address by Ms Justina Ho, Chairlady of IET Hong Kong*

Dr David Chung, Under Secretary for Innovation and Technology Bureau (ITB) of the Hong Kong Special Administrative Region introduced the current works of ITB and various upcoming opportunities for young people. He highlighted there are many on-going mega projects which need engineers and professionals such as Hong Kong Airport Third Runway, New Premium Warehouse and SkyCity as well as Tuen Mun South Extension and new facilities at Hong Kong Boundary Crossing Facilities.



*Address by Guest of Honor Dr David Chung, Under Secretary for Innovation and Technology Bureau (ITB) of the HKSAR*

The most exciting moments of the event was the Kickoff Ceremony when distinguished guests and Chairlady and officers of IET Hong Kong were invited on stage.



*(From left) Mr Geddy LEE, Hon. Treasurer of IET Hong Kong; Dr HL YIU, Head of Re-Industrialisation, Hong Kong Science and Technology Parks Corporation; Mr Eric CHEUNG, Senior Director - Power Systems, CLP Power Hong Kong Limited; Prof. C C CHAN SBS, Founding President of the World Electric Vehicle Association; Dr David CHUNG JP, Under Secretary for Innovation and Technology Bureau, the Hong Kong Special Administrative Region; (from right) Mr SL MAK Hon. Secretary of IET Hong Kong; Mr William WAN, Head of Electrical Engineering, The Hong Kong Electric Co. Ltd.; Mr Keith CHAN, Vice Chairman of IET Hong Kong; 中央人民政府駐香港特別行政區聯絡辦公室青年工作部宋來副部長; Ms Justina HO, Chairlady of IET Hong Kong*



The Address by Venue Host, one of IET Hong Kong partners, Dr. H.L. Yiu, Head of Re-Industrialisation of Hong Kong Science and Technology Parks Corporation (HKSTP) said “We are more focus on selecting companies creating high skills employments, product technology, process advancement, R&D element and our mission is to create more opportunities for youngsters in building a better future”.



*Address by Venue Host Dr. H.L. Yiu, Head of Re-Industrialisation of Hong Kong Science and Technology Parks Corporation*

After that, a keynote speech titled “Smart Energy & Smart Transportation Promotes Carbon Neutralization—Evolution from 4th towards 5th Industrial Revolution” was given by Prof. C C Chan, Founding President of the World Electric Vehicle Association.

In Prof. Chan’s latest research and publication, he introduced the theory of “Four Networks and Four Flows (4N4F)”. The Four Networks are Energy network, information network, transportation network and humanity network. The Four Flows are Energy flow, information flow, material flow and value flow. He talked about how this theory of 4N4F can promote the 4th Industrial Revolution (AI) to the 5th Industrial Revolution (AI plus humanity and environment). He also discussed the features of smart energy and smart transportation respectively, and how these could promote carbon neutralization more effectively through the theory and practice of the 4N4F integration.



*Keynote speech by Prof. C C CHAN SBS, Founding President of the World Electric Vehicle Association*

The Engtalk end with a debate on the challenges faced by female engineers. Prof. Chan said that he saw discrimination on female engineers when he travelled around the world. Justina brought out the importance of Equality, Diversity and Inclusion (ED&I) policy, and introduced the various programme IET Hong Kong established such as STEM for girls, Women In Science and Engineering (WISE), Women Engineering Award to accredit the female engineers’ contribution and encourage young girls to join the engineering field.

*Reported by Amy Ng  
Chairlady of Railway and Transport Section, IET Hong Kong*



*(From left) Dr Jolly Wong, Past Chairman of IET Hong Kong; Prof. C C CHAN SBS, Founding President of the World Electric Vehicle Association; Ms Justina Ho, Chairlady of IET Hong Kong*





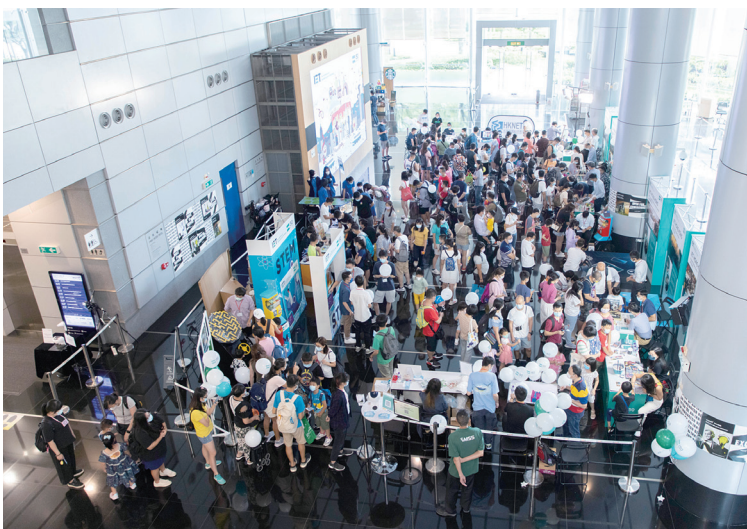
## IET@150 Engineering Carnival

It's incredible and thankful that the first time of IET in organising the Carnival could have such a big success! Beginning from confirming Carnival is one of the IET150 celebration activities, how to attract the youth and kids in enjoying games with STEM educated or having digital future sense was the big challenge to the organising committee. During the process of discussing the content of the carnival booth with Sponsors, Section Committees, and Supporting Organisations, all of them were extremely innovative and supportive. We had VR game, AI game, fun games by controlling the mini robot, racing car and excavator which make all participants enjoy with smiling face around.

Through the carnival, we inspired, informed and influenced our future engineers with the engineering and technology games. The happiness of the youth and kids telling us we achieved our goal and encouraged us to organise the similar event in coming future. In here, I would like to take the opportunity to thank you all sponsors, section committees, supporting organisations and helpers who contributed to this big event that IET Hong Kong had ever organised.



*Reported by Joanne Tse  
PIC of Carnival & Vice Chairlady of Management Section*





## IET Engineering Conference - Our World in 2030



*Chairlady of IET Hong Kong, Ms Justina HO, introduced the "IET Strategy 2030" to the audience*

On 14 August 2021, the IET Engineering Conference - Our World in 2030 was successfully organized in Hong Kong Science Park which was one of the events to be held by IET Hong Kong in 2021 to celebrate the 150th anniversary of the IET. The Conference attracted five hundreds participants from those both attended physically in the Auditorium as well as live broadcasting platform on the Internet.

At the beginning of the Conference, Chairlady of IET Hong Kong, Ms Justina HO, introduced the "IET Strategy 2030" announced by the IET on how the engineering profession will make a difference over the next 10 years and to continue to be relevant to the stakeholders and ensure the IET is resilient enough to survive the next 150 years.

The Conference invited Mr Victor LAM - Government Chief Information Officer of HKSAR and industrial leaders, specialists and scholars which including Ir HW CHAN, Prof Victor OK LI, Dr Winnie TANG and Ir Dr. Anthony Lo as guest speakers to share their visions and insights on the chosen Societal Challenges in IET Strategy 2030, namely Digital Futures and Sustainable Planet, to discuss on the needs and challenges of our audiences so as to innovate, advocate and drive the agenda for Engineering and Technology to 2030 and beyond.

During the panel discussion, Justina and all guest speakers discussed the innovation and technology development in Hong Kong. They also recommended young engineers to pursuit of skills in Artificial Intelligence, Health Technology, FinTech and Cyber Security for the Digital Futures.

*Reported by Lee Tsz Fei  
Coordinator of the IET Engineering Conference*



*"IET Engineering Conference - Our World in 2030" was successfully organized by IET Hong Kong with the support from the guest speakers.*



*Justina and guest speakers joined the panel discussion.*



## FIRST® Lego® League Challenge Prize Award Ceremony 2020-21

The FIRST Lego League (FLL) Challenge 2020-21 has come to a perfect end with the holding of the Prize Award Ceremony at the Hong Kong Science Park on 07-August-2021. IET Hong Kong is one of the co-organizers, together with Trumptechnik (HK) Limited (Trumptechnik), The Hong Kong Federation of Youth Groups (HKFYG), and The Hong Kong Association for Computer Education (HKACE).

The aim of the FLL is to encourage the motto of "Tomorrow's innovators practice imaginative thinking and teamwork". Guided by two or more adult coaches, different FLL teams have to carry out research based on a real-world problem such as food safety, recycling, energy, etc., and are challenged to develop a solution. They must also design, build, and program a robot to compete on a table-top playing field.

Although the society is still being affected by the risk of Covid-19 this year, over 80 teams manage to participate in the competition. IET Hong Kong provides 16 professional members to serve as the judges and referees. Not only for the Robot Game Competition, they also have to assess their performance in the Innovation Project, Robot Design, and Core Values of all teams. The final competition was organized on 25-July-2021. Queen's College, Carmel Secondary School, and True Light Middle School of H.K. were the winners of overall first, second, and third prize respectively.

The Prize Award Ceremony was held on 07-August-2021. Miss Justina Ho, the Chairlady of IET Hong Kong delivered the Motivational Speech for all participants and introduced the core missions of IET. With a grateful atmosphere, the 2020-21 session of FLL was completed after the prizes awarding and winner sharing programme.

On behalf of the organizing committee, we would like to express our high appreciation for the contribution of the IET judge/referee team, and the full support from the STEM task force.

*Reported by John Chow  
Branch Committee of IET Hong Kong*



Group photo of the organizing committee





# 19th Annual Power Symposium on “Challenges for Future-Proof Power Systems in the Digital Era”

The 19th Annual Power Symposium on the theme of “Challenges for Future-Proof Power Systems in the Digital Era” organized by Power & Energy Section (PES) was successfully held on 18th June 2021. It is of vital importance that we future-proof the power network to ensure that consumers can continue to benefit from the most reliable electricity supply systems in the world.

The Symposium's objective was to provide an excellent and interactive communication platform for engineering and technology experts, practitioners, academia, regulators, and other relevant stakeholders to exchange information and share experience.

For the first time, this year's Symposium was held in a hybrid format, with over 300 delegates joining online and 50 delegates and guests attending in person.

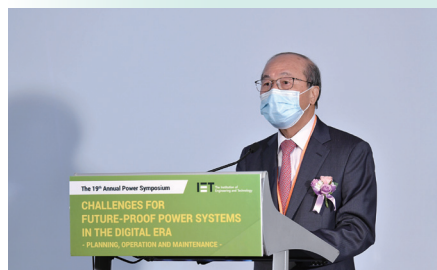
There were two lead papers presented by the distinguished speakers. The first lead paper was presented by Ir Eric Pang of Director of EMSD HKSAR on “Carbon Neutral Pathway to Power system Transition” and the second lead paper was presented by Ir Dr. NF Chin, Power Nets Marking Limited on “Future Proof Power System – A Snapshot of the Evolutionary Development Process”.

There were also 6 technical papers presented by speakers from different organisations including China Energy Engineering Group Guangdong Electric Power Design Institute Co (HK)Ltd, CLP Power Hong Kong Limited, The Hong Kong Electric Company Limited, The Hong Kong Polytechnic University, Schneider Electric and the University of Hong Kong.

On behalf of PES, we expressed our sincere gratitude to all participating guests, OC members, session chairmen and sponsors who had supported and contributed to the event.



*IET Chairlady Ms. Justina Ho to present certification to CIC representative Ir Dr. Richard PANG, Director - Industry Development, CIC*



*Ir C T Wan - Managing Director of Hong Kong Electric Company Limited to deliver the opening remarks in the Symposium*



*Ir K L Yau - Chairman of Power and Energy Section, IET Hong Kong delivered the welcome speech at the beginning of the symposium*



*Reported by Kevin Tang  
Power and Energy Section, the IET Hong Kong*

*Morning Keynote by Ir Eric Pang,  
JP- Director EMSD HKSAR*



*Group photo of Organizing Committee & speaker*



*Closing address by Mr. Edmond Leung,  
Chairman of Organizing Committee, 19th  
Power Symposium 2021*

## Webinar - New Era of Automation

**Date: 24th April 2021 (Saturday)**

**Time: 16:00 to 17:15**

**Platform: Zoom**

Automation in industrial applications has been maturely developed throughout the decades. With the help of Computer Numerical Control (CNC) machines, manufacturing processes are now safer, faster and more efficient. While automation in the manufacturing industry is very well known, the benefits brought by automation are not limited in the industrial sectors. In fact, automation also contributes to the betterment in the construction industry. With the goal of automating processes and thus increasing productivity, robotics are being used to get work done quicker, lower costs and achieve greater precision.

O-Matic Intelligent Robot Limited is a Hong Kong-owned private enterprise. Focusing on the development of industrial and construction robots through intelligent technologies, the company has many mature products such as cable robots, transportation robots, welding robots, grinding robots, and more.

It is an honour for the Continuing Professional Development (CPD) team to have Mr Carlos Lee, CEO of O-Matic Intelligent Robot Limited, to introduce the advanced applications of robots in the construction industry on 24th April, 2021. An audience of total 41 joined the webinar that day, of which 31 were members of the IET.

The event began with an introduction to the IET and the YMS by Ms Angel Yeung, the CPD team member. Then, Mr Carlos Lee began his sharing with an introduction of three major applications of robotics in the construction industry, namely,

inspection, material modification, and transportation. Automation can be used to reach high positions of a building surface to inspect for water leakage or draining pipes, eliminating the risk of falling should it have been a worker performing the inspection. Besides, welding, cutting and polishing work can also be done in an easier and more precise way by robotic arms. Robots designed specifically for transporting construction materials are capable of carrying tons of loading in the construction site and are much much smaller than traditional lifting machinery like crane or boom lift; and only a little larger than an average construction worker. The sharing given by Carlos brought new insights on how the construction industry will benefit from the development of new technology.

With the development of automation, even Artificial Intelligence, we can foresee a safer, faster, and easier working environment for the construction industry. We are glad to see participants asking questions in the Q&A section, showing interests in career development in the automation industry.

Some of the event photos can be found by scanning the following QR code:



*Report by Angel S.N. Yeung  
Ordinary Member (2021)  
Continuing Professional Development Committee  
Younger Members Section*

## Webinar - The Future Electrification of Urban Transportation

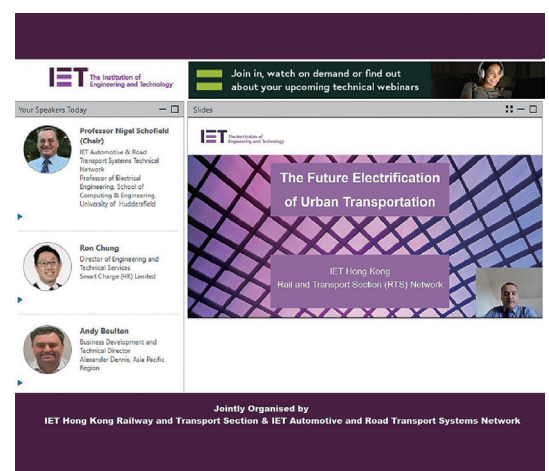
The Future Electrification of Urban Transportation webinar has been conducted on 2 June 2021. The webinar was jointly organised by IET Hong Kong – Railway and Transport Section (RTS) and IET Automotive and Road Transport Systems Network (ARTS). 195 persons from different regions participated the webinar via the online broadcasting.

The move to decarbonise our transportation networks requires a considerable change to our existing systems and way of implementation, the adoption of new and possibly disruptive technologies and, importantly, a need for more smart solutions to make the changes a reality.

The first speaker, Mr. Ron Chung, the Director of Engineering and Technical Services at Smart Charge (HK) Limited delivered the Electric Vehicles and associated charging station facilitates development and future roadmap in Hong Kong followed by different charging station models in Hong Kong and worldwide. The second speaker, Mr. Andy Boulton, the Business Development and Technology Director at Alexander Dennis (Asia Pacific) Limited presented the emissions concerns of traditional transportation and the various challenges of developing lower emission buses.

The Q&A session was then chaired by Professor Nigel Schofield, Chair of Automotive and Road Transport Systems Network. On behalf of IET Hong Kong RTS, we thank to all speakers to share their valuable experience, ARTS for the first joint co-organised event and all technical support to the event as well as all participants to join the webinar. Video is available online NOW

<https://event.on24.com/wcc/r/3110899/D615370A76E8B26EE5D7D5A59EEB712D>



Jointly Organised by  
IET Hong Kong Railway and Transport Section & IET Automotive and Road Transport Systems Network



## Webinar: Virtual Visit to Towngas – From Operation to Innovation

The captioned event was held on 10 August 2021 via Microsoft Teams and attracted over 200 attendees. Founded in 1862, The Hong Kong and China Gas Company Limited (Towngas) was Hong Kong's first public utility. The culture of agile innovation allows full play to employees' creativity and fosters business growth. Four speakers from Towngas were invited to share the evolution of Towngas business and digitalized operation.

The event started with a comprehensive introduction, delivered by Ms Ivy Ko - Learning & Development Manager. Ir Kathy Wong - Senior Grid Control & Strategic Planning Manager then shared the real-time monitoring system of the gas pressure regulating system. In case of third party damage, the geographical information system (GIS) can simulate a sequence of gas valve on-off for isolation and project the number of affected customers. It allows seamless communication on-site during emergency handling. Ms Doris Tang - Customer Service Hotline Manager had demonstrated how E-service aids the workflow in enquiry handling. Ir Trevor Tang - Senior Business Innovation Manager had revealed the secret formula: Growth = Innovation x Implementation. The event was wrapped up with a virtual guided tour in Towngas Hall of Innovation. Various creative inventions by Towngas engineers were exhibited and explained, such as Artificial Intelligent (AI) gas pipe inspection, smart metering and micro water heater hydropower generator. The webinar was very informative and inspiring, and ended with a fruitful question-and-answer session.

*Reported by Winky Lui  
Power and Energy Section, the IET Hong Kong*

## Report on ECS Technical Webinar – Nowcasting Weather prediction using latest remote sensing technologies

In recent years the speed of climate change gives meteorologists a great challenge in providing accurate weather forecast to the public. As such, engineers have been developing advanced technologies in dealing with these by means of data collaboration in real time across continents (referred as nowcasting [short-term forecasting]). ECS is delighted to invite Mr. Clarence Fong, founder of Weather Underground of Hong Kong, to share with audiences on how do nowcasting technologies are adopted in weather organizations.

After giving a short brief of the history of Weather Underground of Hong Kong, Clarence gave a warm up to audiences by explaining some of the weather terminologies and weather radar basics as the start. These are followed with discussion of weather nowcasting method – Quantitative Precipitation Estimation (QPE) based on various sources like rain gauge, radar (By means of rain rate and rain drop size distribution data collection) and satellite. The radar-based techniques are used for formation of rainfall isohyet charts for public's understanding on weather information, while satellite technologies can provide



*Mr. Kelvin Hung - Chairman of ECS presented souvenir to speaker Mr. Clarence Fong*

the view of storm patterns. Another weather nowcasting method is Quantitative Precipitation Forecast (QPF) where rainfall nowcast patterns can be formulated based on comparison of rainfall patterns for motion field calculations. These advanced technologies can also provide short range warning of intense rainstorms which is particularly useful for the public living in locations of high-risk flooding.

Clarence's insightful webinar has attracted more than 68 participants who enjoyed a great evening in learning how communications technologies is adopted in meteorological sector. ECS would like to express gratitude to Clarence for his valuable sharing.

*Reported from Aubrey Lam  
Electronics and Communications Section (ECS)*



*Group photo of ECS committee and speaker Mr. Clarence Fong*



## BIM Forum 2021 – “Visualisation and Integration Modeling through Data Environment”



The BIM Forum 2021 – “Visualisation and Integration Modeling through Data Environment” was successfully held on 12nd June 2021 in Webinar Platform Zoom. There were in total: 89 (75 members, 14 non members).

Building Information Modelling (BIM) has been facilitating the building and construction industry since 1980s. Over the past decades, it has adopted many new technologies and concepts. This year, we continued to organize the BIM Forum to provide a platform for government officials, university researchers, and major industry professionals to share their views on the government policy, the latest development and the newly developed applications in BIM (including the digital transformation in the architecture/construction, the integration of structured data to produce a digital representation and holistic process of creating and managing information for a built asset), as well as facilitating the ecosystem and smartcity in Hong Kong which entails interdependencies among technological, process and organisational/cultural aspects.



This year's forum consisted of 1 keynote speech, 4 topic speech and 1 panel discussion. We were honoured to have Ms. Ada Fung, Chairperson for the Committee of BIM, Construction Industry Council (CIC), to share with us how the public sector help facilitate the adoption of BIM in local construction industry, as the keynote speech. Followed by that, we had Dr. Jack Cheng, Associate Professor of HKUST, to share about different aspects of BIM and how it can be plugged with other new technologies from the academic prospective. Then, Mr. Eric Chan, Assistant Secretary, Development Bureau, HKSAR shared their experience and BIM for Better Information Management. After that, we had Mr. Ken Soh, Director of APAC Government Affairs at Autodesk and Froky, WONG Yuen Hung,

Manager - BIM at Airport Authority Hong Kong, to share about how the private sector are actually making good use of BIM to generate value. At the end, the forum was concluded by a panel discussion with all the speakers to discuss about the future development of BIM.

The Informatics and Control Technologies Section of IET Hong Kong will continue to bring together brilliant minds to explore the adoption and development of Building Information Modelling. The Chairman and Members of Organizing Committee would like to thank all speakers, participants, supporting organizations for the success of BIM Forum 2021.

*Reported by Steve Chu  
Informatics and Control Technologies Section*

## Technical Webinar on Power Line Harmonics Overview

On 15th July 2021 (Thursday), the Power and Energy Section (PES) organised a technical webinar about the overviews of harmonics and its mitigation solutions. There were more than 60 participants joined the webinar.

Mr. Tai Tsang WAN of ABB (Hong Kong) Limited introduced the generation of harmonics in theories and calculations. He shared the common methods with comparison to mitigate the harmonics including the use of passive filters and active filters. The configurations of the passive and active filters were also discussed in terms of technologies, costs, dimensions and accessories required. Mr. WAN demonstrated the changes of waveforms during the starting and de-energising of a motor and the harmonics mitigation effects of using different types of filters. At the end of the webinar, examples with calculations were presented on how to estimate the system Total Demand Distortion (TDD) and to check whether the estimated TDD can comply with relevant standards especially IEEE 519 – IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems.

On behalf of PES, we would like to express our gratitude to ABB (Hong Kong) Limited to make the webinar successful.

*Reported by Ralph Lau  
Power and Energy Section, the IET Hong Kong*

## Technical Webinar on Volt - Dip Ride - Through Function for HV Chiller

The Power and Energy Section (PES) organised a technical webinar about Volt-Dip Ride-Through technology on 24th March 2021 (Wednesday). There were more than 70 participants joined the webinar.

Mr. Alex LAM of Johnson Control Hong Kong Limited introduced the major causes of voltage dips such as adverse weather conditions or destruction of underground cables etc. Mr. LAM subsequently shared the influences on the Heating, Ventilation and Air Conditioning (HVAC) systems due to voltage dips in the high voltage chiller plants such as tripping of main switch due to system overloading. Mr. LAM further introduced the solution of quick start with Catch a Spinning Load (CASL) to restart the chiller motors with a view to preventing high starting currents and potential damage of chiller motors after the resumption of voltage level.

On behalf of PES, we would like to express our gratitude to Johnson Controls Hong Kong Limited to deliver the webinar.

*Reported by Ralph Lau  
Power and Energy Section, the IET Hong Kong*

## Webinar on Major revisions of Code of Practice for the Electricity (Wiring) Regulations 2020 Edition, and CLP Power Eco Charge 2.0 in support of Government's EV - charging at Home Subsidy Scheme Overview

The Power and Energy Section (PES) organised a webinar on 7th May 2021 (Friday) about the major revisions of Code of Practice for the Electricity (Wiring) Regulations 2020 Edition and CLP Power Eco Charge 2.0 in support of Government's EV-charging at Home Subsidy Scheme. More than 70 participants had participated in this webinar.

The webinar consists of two sessions. The first session was delivered by CT Sze Johnson from Electrical and Mechanical Services Department. Ir. Sze had introduced the major revisions of the new edition of "Code of Practice for the Electricity (Wiring) Regulations" which has been issued on 31 December 2020. The revisions included the recommended adoption of arc fault detection devices (AFDDs), requirements on USB outlets, renewable energy power system, charging facilities for electric vehicles and installation for modular integrated construction, etc. The second session was delivered by Ir MK Lam from CLP Power Hong Kong Limited on the topic of the Eco Charge 2.0 which had been launched in support of Government's newly launched EV-charging at Home Subsidy Scheme. Ir. Lam had introduced the new advanced service which will provide one-stop technical support and customer service to Green Motorists interested and qualified in applying for funding for electric vehicle (EV) charging-enabled infrastructure in the car parks of private residential blocks.

On behalf of PES, we would like to express our gratitude to Electrical and Mechanical Services Department and CLP Power Hong Kong Limited to make the webinar successful.

*Reported by Loki Li  
Power and Energy Section, the IET Hong Kong*

# HK-SG-MY Young Professionals Event - IET YP Global Chat #1 Post Event Report

Event Name : IET YP Global Chat #1

Event Venue : Online, Zoom Meeting

Event Date : 18 August 2021 (Wed)

Number of registrations : 88

Event Time : 7.30pm – 8.30pm

Number of attendees : 45 (38 members and 7 non-members)

## 1. Introduction

In collaboration with IET YMS Hong Kong, IET YP Malaysia and IET YP Singapore, the IET YP Global Chat #1 was held successfully in August 2021. This event invited 3 speakers to the panel to discuss on several topics related to the Young Professionals community.

## 2. Event description

The moderator Mr Krishnakumar, Vice Chairman of the IET YP Malaysia, announced the event agenda and introduced panellists. The invited panelists members were:

- Mr Chong Yi Sheng, Chairman of YP Singapore
- Dr Ivan Ling, Chairman of YP Malaysia
- Mr Olaf Li, Chairman of YMS Hong Kong

During the chat, the invited speakers took turns to share their views on the following three topics:

1. How do you survive the challenge times during COVID Pandemic?
2. How can a young engineer take up soft skills?
3. What inspired/motivates you to be part of IET? / to volunteer for IET?



The speakers shared their tips on how to adapt to the changes to personal and work life brought by the COVID-19 restrictions. For instance, although people are not allowed to go out, one can do work out at home regularly to release mental stress while up keeping body health. On the second topic, the young engineers are encouraged to learn the skills by practicing them in any occasions. For example, one can practice their leadership skills by taking up a role in any organization, club or society like IET. Lastly, the speakers also shared their IET experiences. They all agreed that the IET is a good platform for networking, full of opportunities and learning. They wish to share their joy and experience with anyone who is interested to join the IET family. The discussions also had intrigued the active participation of the audience.

*Reported by Jarek S.S. Tam  
Global Network Affairs Coordinator (Session 2021)  
Younger Members Section*



## Co-organizing Event: Ada Lovelace Day 2021 Hackathon

Organized by: Teens in AI  
 Partner: IET Hong Kong  
 Date: 2 - 17 October 2021

To celebrate Ada Lovelace Day 2021, Teens In AI is running a global #AdaHack2021 Hackathon to inspire hundreds of girls and young people from underrepresented communities aged 11-18 across the world into artificial intelligence for impact.

For more information:  
<https://www.teensinai.com/ada-lovelace-day-hack-2021/>

## Supporting Event: Global AI Challenge for Building E&M Facilities – Technical Conference

Organised by: Electrical and Mechanical Services Department (EMSD)  
 Supported by: IET Hong Kong  
 Conference Details:  
 Date: 12 Oct 2021  
 Time: PART 1: 9:30am - 12:00pm (GMT+8)  
 PART 2: 1:00pm - 6:00pm (GMT+8)  
 Format: ONLINE  
 Enquiry: [info@globalaichallenge.com](mailto:info@globalaichallenge.com)

The Electrical and Mechanical Services Department (EMSD) of the Government of HKSAR and Guangdong Provincial Association for Science and Technology proudly present to you the Global AI Challenge for Building E&M Facilities – Technical Conference. The international conference will focus on AI technologies in the building electrical and mechanical (E&M) industry and gather innovators from around the world who share a common interest in practical solutions for smart cities through AI innovation. It will explore one of the most important issues of our time: how can data and AI create a smarter world?

### TOPICS

- How data and AI can create a smarter world
- How AI applications revolutionise the traditional electrical and mechanical (E&M) industry
- How AI applications lay the groundwork for smart cities

The impressive lineup of speakers include world-renowned AI leaders from organisations including Amazon Web Services, ATAL Building Services Engineering Limited, ASHRAE BACnet™, Colorado School of Mines, Hong Kong Baptist University, Hong Kong Polytechnic University, Hong Kong Science and Technology Parks Corporation, Huawei Technologies Co., Limited, International Business Machines Corporation, International Energy Agency Annex 81 "Data-Driven Smart Buildings", Microsoft Corporation, Pacific Northwest National Laboratory, Jardine Schindler Group, Siemens Limited, Tencent Holdings Limited, The Hong Kong and China Gas Company, PropTech Alliance, Veolia, World Green Building Council, WSP, and more!

Get your FREE pass now via this link:  
<https://globalaichallenge.com/reg/conference.php?lang=en>

Please stay tuned to the programme and speakers lineup on [www.globalaichallenge.com](http://www.globalaichallenge.com)

(Recommended browser: Google Chrome, Microsoft Edge, Apple Safari, Firefox)

## Webinar - Be Smart Online, Defend Against Extortion Attacks

Organized by: Younger Members Section Committee, IET Hong Kong  
 Date: 13 October 2021  
 Time: 19:30 – 20:45  
 Venue: Online meeting platform Zoom  
 Host: CPD committee members  
 Language: English in text, Cantonese in vocal  
 No. Participants: 100  
 Registration: [www.theiet.org/hongkong](http://www.theiet.org/hongkong)  
 Fees: Free of charge  
 Enquiry: Andrew Chiu,  
[ChunYin.Chiu@ietvolunteer.org](mailto:ChunYin.Chiu@ietvolunteer.org)

The concern for Cybersecurity is beginning to worry more and more individuals and companies as they begin to realise almost every part of their lives are connected to the internet. From things we share on social media, to email conversation between one another, to personal information and even bank accounts, it becomes doubtful whether our privacy would be well-protected on the internet.

The importance of cybersecurity is rapidly becoming clear as the number of cybersecurity incidents is on the rise, it is necessary for people to equip themselves with basic knowledge about Cybersecurity and the awareness of it. In order to prevent being attacked or lost of personal information on the internet, there are many measures that individuals and companies can take. However, how can we ensure the measures we take are effective against the cybersecurity attack nowadays?

The CPD team is honoured to have Mr NG Yu On, Security Consultant of HKCERT, to introduce the latest cyber security attack and give advice on security measures.

## Supporting Event: Race to Zero Webinar Series

Organized by: Arup  
 Supported by: IET Hong Kong  
 Time: 18-22 October 2021 and 10 November 2021  
 Venue: Online  
 Fees: Free of charge  
 Enquiry: Jasper Hilkhuijsen  
[jasper.hilkhuijsen@arup.com](mailto:jasper.hilkhuijsen@arup.com)

Website: [https://arup-racetozero.eventx.io/?auth\\_token=9a24278e-41ff-4e4e-8adb-eb2c09c0e97a](https://arup-racetozero.eventx.io/?auth_token=9a24278e-41ff-4e4e-8adb-eb2c09c0e97a)

As the sustainability consultant for COP26, Arup, in partnership with leading organisations and think tanks, is organising the Race to Zero webinar series building up to the global summit.

We will bring together experts and thought leaders from various fields in China, Japan, the Philippines and Vietnam looking at the global issue in local perspective and coming up with united actions to achieve our common goal of carbon neutrality.

A total of 13 events will be held across five major cities in Asia, supported by over 30 leading organisations and with over 50 thought leaders to share their insights and actions to transform the systems that underpin our daily lives and economies.

## Supporting Event: Webinar on “Reliability and failure”

Organized by: CAiRS

Supported by: HKIE, SOEHK, IMechE, HKSTP, HKEIA, HKEIC, IET Hong Kong

Date: 27 Oct 2021  
Time: 9:15am – 11:30am

Venue: on-line

Enquiry: 21625161  
Email: [info@cairs.hk](mailto:info@cairs.hk)

Registration:  
[https://docs.google.com/forms/d/e/1FAIpQLSdDI00dJq6iF1AanoaAT857-rOwDfU6zByeQ4o7QdZ4YylzXQ/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSdDI00dJq6iF1AanoaAT857-rOwDfU6zByeQ4o7QdZ4YylzXQ/viewform?usp=sf_link)

In the Webinar, local and overseas professional experts and renowned industrialist will share their industrial and research experiences on failure and reliability analysis for different products and systems.

## Supporting Event: Symposium on Innovation & Technology

Organized by: Hong Kong Electronics & Technologies Association (HKETA) & Hong Kong Trade Development Council (HKTDC)

Supported by: IET Hong Kong

Date: 27 October 2021 (Wednesday)  
Time: 10:30 - 16:10

Venue: The Stage, Hall 1, Hong Kong Convention and Exhibition Centre & Online Streaming

Enquiry: 5498 7817  
Email: [admin@hketa.org.hk](mailto:admin@hketa.org.hk)

Website: [http://hketa.org.hk/events/categoryDetail.shtml?category\\_id=340&type=1](http://hketa.org.hk/events/categoryDetail.shtml?category_id=340&type=1)

Registration Link: <https://bit.ly/3BOITrc>

We strive for the excellence in revealing the top tech trends by inviting the renowned speakers worldwide to the Symposium, sharing the insights with the audiences and connect them for a better world.

The symposium contains nine sub-themes: Trend Forecast, 5G/6G Network, IoT & Connectivity, AI & Deep Learning, Virtual World, Clean Energy, Healthcare & Wellness, Space Tech and Blockchain.

Let's build the future together!

## Joint ICE HKA G&S x IET HK YMS Webinar - Introduction to 5D BIM simulation and project management

Organized by: Younger Members Section Committee, IET Hong Kong and Graduates and Students Division, Hong Kong Association, Institution of Civil Engineers

Date: 4<sup>th</sup> November 2021

Time: 19:30 – 21:00

Venue: Online platform Zoom

Host: ICE HKA G&S and IET YMS CPD committee members

Language: English

No. Participants: 500 (the other 500 allocated for ICE)

Registration: [www.theiet.org/hongkong](http://www.theiet.org/hongkong)

Fees: Free of charge

Enquiry: Andrew Chiu,  
[ChunYin.Chiu@ietvolunteer.org](mailto:ChunYin.Chiu@ietvolunteer.org)

Building Information Modelling (BIM) software and tools are frequently used in construction projects to make better design decisions and improve building performance. Meanwhile, experts in the fields are also continually improving BIM by adding additional dimensions of data to it. Adding construction sequencing and cost information to the already familiar “3D” BIM, we have “5D” BIM.

Enabling optimisation on time and cost planning and comparison of several scenarios, 5D BIM facilitates communications between stakeholders; thus allowing better planning, control, collaborations and decisions, which are exactly the four key matters for construction project management.

ICE HKA G&S and IET HK YMS are honoured to have Mr Patrick Lam, Project Manager of SoftwareOne, to deliver a talk on the current technology landscape in Hong Kong. The webinar will introduce the application of 5D BIM simulations in project management, and how the construction industry can be benefited from them.

Mr Patrick Lam has been leading the MTWO team in Hong Kong that provides advisory and implementation strategy on digital transformation, enterprise management and 6D building information model project lifecycle platform. With over 13 years of experience in design, construction and project management in transportation and infrastructure developments, Mr Lam can definitely deliver massive engineering knowledge and experience to you.

## Supporting Event: Capture the Flag Challenge 2021

Organized by:	HKCERT & HKPC
Supported by:	IET Hong Kong
Date:	12-14 November 2021
Enquiry:	(852) 2788 5884 <a href="mailto:tracyc@hkpc.org">tracyc@hkpc.org</a>

The CTF Challenge 2021, which is jointly co-organised by cyber security organizations in Hong Kong, will be held on 12 - 14 November 2021. This year the contest is enhanced to have an Open group in addition to the student groups. The objectives are to arouse the cyber security awareness of the public and to encourage problem solving with teamwork, cyber security skills and creative thinking among students and security practitioners. The winners of the contest will be presented the awards in November 2021. More information can be found in <https://ctf.hkcert.org>

## IET Wireless Symposium – Next Generation Networks and Applications Embracing Smart City

Organized by:	Electronics and Communication Section Committee, IET Hong Kong
Supported by:	CLP Power, HK Electric, Chinese Institute of Electronics Hong Kong (CIE HK); Connected Cities Alliance (CCA); HKIE Electronics Division (HKIE EN); IEEE Consumer Electronics and Oceanic Engineering Society, Hong Kong Chapter (IEEE CE/OC); IEEE Industrial Electronics Society, Technical Committee Standards (IEEE IES TC Standards); IEEE Product Safety Engineering Society; IEEE Product Safety Engineering Society, Hong Kong Chapter (IEEE PSES); School of Science & Technology, Hong Kong Metropolitan University (HKMU); Smart City Consortium (SCC)
Date:	26 - 27 November 2021
Time:	09:30 - 17:30 on 26 November 2021 09:30 - 12:30 on 27 November 2021
Venue:	Hong Kong Metropolitan University in Hybrid Mode, Physical and Virtual Conference
Speaker:	Please refer to the rundown in event website <a href="http://sci.ouhk.edu.hk/wireless_symposium/">http://sci.ouhk.edu.hk/wireless_symposium/</a>
Language:	English
No. Participants:	500 (first-come first-served)
Registration:	<a href="http://www.theiet.org/hongkong">www.theiet.org/hongkong</a> (Deadline of registration: 11 November 2021, Thursday)

Fees:	Free of charge
Enquiry:	Dr. KF Tsang (Email: <a href="mailto:ee330015@cityu.edu.hk">ee330015@cityu.edu.hk</a> ) Mr. Stanley Lau (Email: <a href="mailto:stanley.my.lau@gmail.com">stanley.my.lau@gmail.com</a> )

“IET Wireless Symposium”, is organised by the Electronics and Communication Section (ECS) of IET Hong Kong as an annual flagship event. It aims to provide a forum for government officials, university researchers, and major industry practitioners to discuss the latest issues on smart city and ABloT development, including Artificial Intelligence (AI), Blockchain, 3D printing, healthcare, logistics, transportation, smart metering, mobile communication infrastructure, and Internet of Things (IoT). The discussion will focus around ABloT applications and challenges in Hong Kong and the Greater Bay Area.

Riding on the success of past Symposiums, this year we strive to organise the event amidst challenges of the prevailing pandemic situation. The two-day event with a theme of “Next Generation Networks and Applications Embracing Smart City” will be conducted in hybrid mode on 26 November 2021 at the campus of Hong Kong Metropolitan University (HKMU), and in full virtual conference on 27 November 2021.

Online Registration: [www.theiet.org/hongkong](http://www.theiet.org/hongkong)

### IET Hong Kong

Administration: [admin@theiet.org.hk](mailto:admin@theiet.org.hk)  
Event Registration & Enquiry: [reg@theiet.org.hk](mailto:reg@theiet.org.hk)

For enquiry on advertising or any of the activities organised by IET Hong Kong, please contact Community Manager, IET Hong Kong:

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