



2024
Engineering Exposition -
Engineering Life Challenges

Saturday 23 March 2024
8:45 am - 12:30 pm

at HKIE Headquarters,
9/F, Island Beverley, Causeway Bay
Hong Kong



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Acknowledgements

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ATAL Engineering Group
CLP Power Hong Kong Limited
FSE Engineering Group Limited
Gammon Construction Limited
MTR Corporation Limited
Ove Arup & Partners Hong Kong Limited
REC Engineering Company Limited
The Airport Authority Hong Kong
The Hongkong Electric Company Limited

(Listed in alphabetic order)

Chairman's Message – Veneree Club

Veneree Club “睿賢學社” continues its good tradition and commitment of organising annual Engineering Exposition for young engineers. To enable more interactive communications, after the main talks delivered by the invited distinguished speakers, we organise break-out sessions, in which smaller groups of young engineers can interact more closely with the speakers.



We continue to choose “Engineering Life Challenges” as the theme to emphasise engineers needed to face and overcome challenges in their career. While it is important to equip ourselves with necessary technical knowledge to solve complex engineering problems, equally we need positive energy for further advancement.

The Engineering Exposition aims to provide a platform for distinguished engineers to share their valuable experience in how they overcome obstacles and navigate through their career path. Their sharing would certainly help broaden the horizon and exposure of the young generation. Hope all participants could benefit from the sharing.

Apart from this Engineering Exposition, Veneree Club as a society of retired engineers continues to organize monthly talks on various interesting topics so that our members could expand their knowledge as well as meet new and old friends.

On behalf of the Club, I would like to express my heartfelt gratitude to the sponsors who have provided us with much needed financial resources and enabled this meaningful activity to be carried out. I am also extremely grateful to all invited speakers for sharing their valuable career life experiences with young engineers. Of course, without the contribution of the organising committee members, it would not be possible to hold this event. Finally, I would like to thank all the participants for joining this event. I wish you all have a successful career.

Ir Simon CHUNG Fuk Wai
Chairman, Veneree Club
The Hong Kong Institution of Engineers
Session 2023/2024

Engineering Exposition 2024 Organizing Chairman's Message

Building on the success and encouraging feedback from participants in Engineering Exposition 2023, HKIE Venere Club has the great pleasure to continue organizing its annual signature event, the Engineering Exposition 2024, for young engineers. Through sharing of personal experiences and insights by our knowledgeable and seasoned speakers, we believe that our young engineers would gain a lot from participating in the event for their personal and professional development.



This year, again we have the honor to have five distinguished engineers and one HKIE Outstanding Young Engineer awardee with a total of more than 200 years of experience in different engineering fields to share with the participants their stories in their engineering career lives. Through the sharing, particularly in the breakout session, participants would deepen their understanding on the essence of being of a successful professional engineer in a higher and wider perspective.

As Hong Kong has basically recovered from the impact of COVID 19, deeper and tighter economic connections between Hong Kong and Mainland China are seen in every sector of our society. Engineering sector is of no exception. This means more opportunities for Kong Hong engineers in both Hong Kong and Mainland China in the near future. We trust the stories and insights shared in the event can help our participants to well prepare for the coming opportunities.

On behalf of the Organizing Committee, I would like to express my heartfelt gratitude to the sponsors, the participants and the members of the Organizing Committee for their contributions to make EngExpo 2024 another success.

Ir LO Pak Cheong
Organizing Committee Chairman
Engineering Exposition 2024

Engineering Exposition 2024 Organizing Committee

Organizing Committee Chairman: Ir LO Pak Cheong
Members: Ir David CHENG, Ir Simon CHIANG King Wah, Ir Heinz CHIU, Ir Simon CHUNG Fuk Wai, Ir Anthony KWAN Lok Fong, Ir Philip KWONG Sze Fai, Ir Allan POON, Ir Stephen LEE Ming Ching, Ir William LI Wai Lim, Ir Peter TSANG Kang Ho Peter
Advisor: Ir Dr CHAN Fuk Cheung

Past Engineering Exposition Events

The past Engineering Exposition Events are listed below:

2013 held on 11 May 2013 at Novotel Century HK Hotel

(jointly organised with HKIE Young Members Committee)

Speakers were: Ir CHEUNG Shu Wing, Ir Dr CHOI Yu Leuk, Ir Dr LAU Ching Kwong, Ir Gregory LO Chun Hung, Ir John SZE Tak Wei, Mr WONG Tak Ko, Ir Dr CHAN Fuk Cheung, Ir CHOW Che King, Ir LAM Hing Cheung, Ir Dr Wanbil LEE, Ir Ian ROBERTSON, Ir Jolly WONG CHun Kau

2014 held on 10 May 2014 at Regal Hong Kong Hotel

(jointly organised with HKIE Young Members Committee)

Speakers were: Ir Dr James LAU Chi-wang, Ir Dr Otto POON Lok-to, Ir Benny WONG Yiu-Kam, Ir Prof CHAN Ching-Chuen, Ir Dr CHENG Hon-Kwan, Ir Dr George SZE Lai-wah

2015 held on 30 May 2015 at HKPolyU Chiang Chen Studio Theatre

Speakers were: Ir Dr John LUK, Ir Victor NG, Ir Louis SZETO

Ir CHOW Tang Fai, Ir HO Chi Shing, Ir MA Lee Tak

2016 held on 30 Apr 2016 at HKPolyU Chiang Chen Studio Theatre

Speakers were: Ir Prof Daniel LAI, Ir Edmund LEUNG, Ir Greg WONG

Ir HO Wing Ip, Ir YING Tsie Cheong, Ir YUEN Sui See

2017 held on 8 Apr 2017 at HKPolyU Chiang Chen Studio Theatre

Speakers were: Ir Allan CHAN Sau Kit, Ir IP Pak Nin, Ir WONG Chi Kwong

Ir CHAN Chi CHiu, Ir Patrick NG Ying Piu, Ir Prof Joshua SL WONG

2018 held on 21 Apr 2018 at HKPolyU Chiang Chen Studio Theatre

Speakers were: Ir John SV CHAI, Ir Raymond LIN Kam Siu, Ir WONG Wai Ho

Ir LEE Wan Lik, Ir Dr Michael YH Li, Ir Stanley SIU Hiu Fai

2019 held on 13 Apr 2019 at HKPolyU Chiang Chen Studio Theatre

Speakers were: Ir Dr CHAN Chun Leung, Ir Regis CHEE Lap Gee, Ir HON Chi Keung

Ir Howard LOK Tat Hong, Ir TAI Tak Him, Ir Peter WONG Kwok Keung

(Due to COVID-19, no Engineering Exposition Events for 2020 and 2021 were held.)

2022 held on 19 Mar 2022 via Zoom

Speakers were: Ir Harry LAI Hon Chung, Ir Ivy LEUNG Yick Laam, Ir Timothy SUEN

Ir Dr HO Pui Tak, Ir Duncan WONG, Ir Arthur YUNG

2023 held on 18 Mar 2023 held at HKIE HQs

Speakers were: Ir Dr Alex CHAN Siu Kun, Ir Stephen CHIK Wai Keung, Ir CHOI Chun Ming, Ir Alfred SIT Wing Hang, Ir TANG Whai Tak, Ir Dr Herman TSUI Yik Wai

Ir Frank CHAN Fan

BSc(Eng), MSc(Medical Physics) and
MBA, HonFIMechE, and FHKIE

Discipline: Biomedical and Electronics



The former Secretary for Transport and Housing, overseeing policy and strategy, development and implementation of housing, logistics, air services, land and maritime transport. He was the Chairman of the Hong Kong Housing Authority, the Hong Kong Maritime and Port Board, the Hong Kong Logistics Development Council and the Aviation Development and Three-runway System Advisory Committee.

Prior to that, Director of Electrical and Mechanical Services, spearheading policy initiatives and law enforcement on energy efficiency and safety of railway, tramway, ropeway, gas, electricity, lift, escalator and nuclear power; and providing professional advice and service to government and statutory bodies in the capacity of General Manager of the Electrical and Mechanical Trading Services.

Ir Prof Chan is the Founding Chairman of the Association for Engineering and Medical Volunteer Services. Being a pioneer in assistive technology development in Hong Kong, now serves as Honorary Advisor of the Research Centre for Assistive Technology of the Hong Kong Polytechnic University. He was the Steering Committee Chairman of the Growing Partners Project, the Vice-Chairman (ABAC) and a Senior Advisor of the Hong Kong Community Chest.

Motto

Hold on to our core values even at times when it hurts.

Case 1

In 2003 when Hong Kong was besieged by Severe Acute Respiratory Syndrome (SARS), we engineers rose to the challenge and spearhead measures to protect the medical and nursing colleagues, and the community as a whole from harm.

It's a war against time, and it is with selfless devotion and all-out teamwork across the entire spectrum of the engineering community that we overcome and delivered. The risks and challenges were huge, decisions and actions were not taken easily. The followings are particularly noteworthy and details

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will be shared during the talk:

- A moment of truth at PWH where SARS broke
- Who to conduct on-site sample taking for buildings with confirmed cases
- Inspection and investigation on the path of propagation
- The birth of SARS Busters
- Mitigation and improvement measures
- Public education on Do's and Don'ts
- Construct a 8-bed infectious ward in HKU at no cost, in no time, for testing and endorsement for immediate retrofitting of intensive care wards
- Temporary extraction to provide negative pressure for all other wards
- All forms of air purifiers
- Establish design standard for negative pressure ward

The essence is not only what were done, but why and how they were done.

Case 2

The 2008 Beijing Olympic, with the equestrian event held in Hong Kong. We knew little about horses, not to mention equestrian events. Right from the beginning till the end, everything has to be learned.

With such a historic and monumental event, failure is not an option. Risks are everywhere, and the slightest hiccup could be disastrous. An inside story with lessons worth learning.

Engineering Life Challenges

"Live as if you were to die tomorrow, learn as if you were to live forever."

During my forty plus years' public service, change in job posting was frequent, and posting to the provisional Hospital Authority, policy bureaus and special assignments such as the 2008 Beijing Olympic and the 2005 WTO Ministerial Conference. From electrical engineering graduate to electronics engineering graduate, from telecommunication to biomedical engineering, and then moved on to cover gas and energy, lift and escalator, vehicle, cable car and railway. In many instances, I had to learn from scratch, and learn to be humble. To me, it is a challenge as well as a blessing, and I learn on my way.

Apart from engineering expertise, there is much to be learned. Stalling of LPG taxis, town gas explosion, dislodgement of cable car, falling of lift and serious escalator incident – all these had to be remedied. Apart from engineering expertise, people skills and political acumen are equally, if not more important. At times of adversity, we have to hold on, and hold on to our core values.

I'll share with you critical moments when my inner self called.

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Ir Dr Clarence Edward CHOI

Ph.D, B.Sc, MHKIE

Disciplines: Geotechnical



Areas of expertise: slopes, landslides, and ground improvement.

Major achievements: 1) Journal publications acknowledged and cited in nine technical engineering design guidelines by HKSAR Government for landslide hazard mitigation; 2) HKIE Outstanding Young Engineer of the Year Award in 2023; 3) The 3rd Hutchinson Lecture by Federation of the International Geo-engineering Societies in 2023; 4) Oldrich Hungr Award by the International Consortium of Landslides (ICL), UNESCO in 2022; 5) International Society for Soil Mechanics and Geotechnical Engineering Bright Spark Award in 2021; 6) Best Geotechnical Paper Award in 2022 from the HKIE; 7) Best paper award in Landslides from ICL, UNESCO; 8) Telford Premium Prize from Institution of Civil Engineers, United Kingdom, in 2017; and 9) R.M. Quigley Award from the Canadian Geotechnical Society in 2017.

Motto

"Hard work beats talent when talent doesn't work hard"

Life is not meant to be fair. The only currency that is the same for everyone is that we each have 24-hours each day. If we work just one hour more each day, that's 365 hours in a year. A lot can get done in 365 hours.

Case 1

Accomplishment: Recognized expert in the field

Lesson: Persevere

The thing with academia is if you want to work at a research-intensive university, there are limited positions available globally. When a position

pops up, everyone eligible around the world guns for it. It takes will power and you need to be patient to not give up along the way. If your mind is strong and you persist, others will give up and you have end of as one of the strongest candidates in the global pool. You have to believe in your dream and persist. This is particularly tough when you start to compare with your peers so you must have a strong mind and understand that everyone takes a different path.

Case 2

Failures: Career rejections

Lesson: Success is built on failures

My losses surmount my successes. I've lost a lot in terms of failed proposals, rejected papers, and failed job interviews. So, I want to tell the younger engineers in this room, I think it is absolutely okay losing. I lose all the time. Just try to gain perception with each loss.

Engineering Life Challenges

Lesson: Take care of your health TODAY and be disciplined

When we are young, we think we are immune to illness. Unhealthy work habits and poor diet can affect your health in the long run. We always think we can achieve this first and then take care of our health at a later stage. The truth is whatever harm you do compounds.

Make sure you have the discipline to routinely do exercise and take care of your health. You need to exercise like your life depends on it, because as you get older, well, your life does depend on it. Prioritize time for exercise each week. When we ask most people what is most important to them, they often say "health". But then if you look at how many hours, they spend on health each week the answer is often zero. This seems contradictory to what is perceived as a priority.

Ir Gary KO Chi Wai

BSc (Hons) in Electrical Engineering
MA, MBA, CEng, R.P.E. (Electrical)
FHKIE, FIET



Discipline: Electrical, Energy

Started as a graduate trainee in China Light & Power Company Limited, Gary has established himself as an all-round distribution engineer before joining Kum Shing Group to embark on a career in contracting. He is currently the Executive Director and Chief Operating Officer of the same company.

In The HKIE, Gary has been a Council Member and Chairman of five different Committees / Panel. A recipient of The President's Award in 2017, Gary is instrumental to develop the competence-base professional assessment of admission for corporate member in April 2019.

In the industry, Gary is an Honorary Advisor of The Hong Kong & Kowloon Electrical Engineering & Appliances Trade Workers Union, and, the President of The Hong Kong E&M Contractors' Association.

In social service, he is the Vice Chairman of the Admissions, Budgets and Allocations Committee of The Community Chest.

In serving the Government, Gary is the Chairman of the Lifts and Escalator Safety Advisory Committee and a Member of the Election Committee in 2011 and 2021 respectively.

Motto

Chances are for people who are prepared (機會是留給有準備的人)

Case 1

I have implemented a contracting model to include delivery of equipment from port, local modification to meet specific client requirements, testing of critical parts / components, delivery to site, final assembly and testing since 2001. This model reduces interfaces between various parties and introduces a quality control point for final installation at site.

In building up this capability, investment in more working capital, larger storage area, testing equipment / facilities and technical personnel are required.

Case 2

In 2011, I began to replace portable generator by battery storage system to provide electricity for lighting and electrical tools during overnight work of switchgear replacement when power interruption is unavoidable. It does not only minimise the generation of noise and reduce pollution to air but also reduce the emission of carbon dioxide.

Because of the lack of demand of similar system during that period, there were limited sources of suppliers. Design of the associated electrical system was carried out inhouse to suit the battery finally purchased.

Engineering Life Challenges

Engineers play a critical role to improve the environment and livelihood of humankind. Yet in the course of our professional work, we must endeavour to preserve the environment and generate minimum impact to every matter that we may encounter. Human life is probably the most important consideration among all others. Whilst safety first is a saying spoken by most people, how many of them walk the talk in face of cost, programme, trade practice, individual behaviour?

Work method may have profound impact on safety. Since the enforcement of restriction on the use of hand-dug caissons for foundations in 1995, fatal accidents in foundation work have been reduced substantially. In the revised Code of Practice for hand dug tunnel in 2018, a minimum clear height of 1.8m and openings at every 25m of length of tunnel have been introduced. Safety environment has been improved considerably.

Method statement, Code of Practice are some of the planning processes to improve safety. To me, a more dictating factor is design. Has safety been considered and catered for in the course of construction including temporary works, operations and maintenance, asset replacement? Design for safety will probably be a direction of our profession to pursue further if we believe in and implement safety first.

Ir Enoch LAM Tin Sing

BSc (Eng), LL.B, PgD(IT), MPA, MA(BS), MHKIE,
FCI Arb, FCIWEM, FHKIUS, Barrister



Discipline: Civil

Ir Lam joined the Government in 1980. He has worked in various government bureaux and departments including the Highways Department, the former Housing Bureau, the Civil Engineering and Development Department and the Development Bureau (DEVB). He was the Director of Water Supplies from 2013 to 2017 and is currently working in DEVB as the Strategic Advisor.

Ir Lam has over 40 years' experience in civil engineering, highways, urban and rural development, drainage and water supplies projects. He is also proficient in formulating and implementing works policy initiatives covering works procurement, construction safety, carbon neutrality, construction manpower, dispute resolution and water resources.

Ir Lam is currently the Deputy Chairman of the Education & Examinations Committee and a member of the Civil Discipline Advisory Panel of the Hong Kong Institution of Engineers, the Chairman of the Supervisory Board of the Chartered Institute of Plumbing and Heating Engineering (Hong Kong Branch), a Board member and Chairman of the Development & Tender Committee of the Ocean Park Corporation and a member of the Development Committee of the West Kowloon Cultural District Authority.

Motto

Do the best to do the best

Case 1

Do the best to do the best – Never give up until the last ball falls

In August 1982, I started my final year training in a Highways regional office to acquire design experience for the Institution of Civil Engineers (ICE) Professional Review scheduled for late 1983. I was supposed to complete a design submission for ICE by summer of 1983. There was however no readily

available project in the office pending design at the juncture for this purpose. I waited until early 1983 when there was not much time left. I told myself not to give up but ask for transfer to another office. I was successful but soon found myself facing several hurdles viz (1) I was assigned a footbridge design with an unusual alignment that might require more time to finish; (2) I had to use a newly published design code brand new to the office; (3) I had to complete the design within six months in order to meet the ICE deadline. I told myself not to give up but prepare myself for working day and night and seeking advice from practically all engineers in the office (so long as I could gain access for using the new code). In parallel, I had to spare time for writing the training report, practicing the technical and management essays, rehearsing the interview, etc. Throughout the period, I told myself not to give up ----- I finally made it and was enrolled as MICE in December 1983.

Case 2

Do the best to do the best – Don't be afraid because you are young

In 1994/95 when ISO 9001 Quality Management (QM) certification was a hot but novel topic, I volunteered to the Head of the Office (to which I was newly posted) to work with a QM consultant to secure the ISO certification for the office. I was subsequently appointed as the QM Manager (in addition to my office duties). To me, the key to a successful certification was to compile a set of self-written and succinct Quality Procedures and Instructions, etc. This would be conducive to clear understanding and compliance by colleagues and less likelihood of failure at quality audits. However, at the merge of completing the writing of the documents, some senior colleagues of the office (after sight of the draft documents) approached me suggesting that we should incorporate details of the government circulars and handbooks into the documents direct rather than making reference to them. I told myself that I should not be afraid because I was young. I explained to them that this would otherwise make the QM system bulky and not user-friendly. Upon failure to persuade them at the juncture, I had no time to wait but seek help and directive from the Head of the Office who appointed me as the QM Manager. He supported me----- We finally and smoothly won the ISO certification in 1996/97 (probably the first amongst fellow engineering works departments). At the Certificate Award ceremony, I met with the senior colleagues. They told me that a simple set of documents was indeed better and easier to accept and follow by colleagues.

Engineering Life Challenges

To me, life challenges can bring both joy and pain. It all depends on how you will see through the meaning of success and failure. Against this, I love the Chinese story of 塞翁失馬 焉知非福 (A blessing in disguise but a blessing in disguise). It is worth reading and has a deep meaning inside.

To fellow young engineers, I would congratulate you on becoming an engineer at your young age. It is however time to landscape your life to better equip yourself for facing future life challenges. Life challenges = career challenges + marriage challenges + parenting challenges + relationship challenges + further studies challenges + health challenges + financial challenges + personal growth challenges +

In light of time/word constraint, I would share my few challenges and advice for your perusal.

After chartership, two things came to my mind: marriage and further studies. The former is a challenge in view of the rather limited social circle to engineers in general. The latter is a challenge because of the variety of choices in front of me but limited time. It took me three years to complete the first project whilst I chose to study LL.B, PgD(IT) and MPA for the second and managed to get qualified to wear a barrister's wig in addition to wearing an engineer's helmet. It turned out that these further studies had helped me in the career work. My plan to pursue yet further studies was frustrated when I started to assume a Chief engineer post in government.

In the next 20 years thereafter before retirement, there have been varying challenges in life, my advice to cope with these challenges is fourfold (4S) as highlighted below:

- **Sustainable life balance:** Work/studies aside, know how to relax, eat, play, chat, help others (eg serve HKIE) and make a hobby (sports/music/art/wine tasting).
- **Skill sets:** Multitasking, research, co-ordination, communication, relation building, creativity and innovation, strategic thinking and ability to master a helicopter view.
- **Social circle expansion:** Make more friends in different sectors, join clubs, play sports/music/art (make friends you may seek support and advice when needed)
- **Steady mindset:** Appreciation to others' help, empathy, humility, positive thinking, sense of humor, readiness to embrace change, growth mindset, flexibility, self-compassion/care

Ir Joseph LEUNG Chi Ming

BSc (Hon) in Electrical & Electronic Engineering (HKU), MBA (HKU). C Eng, RPE, FHKIE, FIET, FCIBSE, FIEAust, REA

Disciplines: Electrical, Building Services and Fire



Joseph joined JRP in 1981 immediately after his graduation and joined the partnership of the practice in December 1992. His professional career spans over 40 years of JRP's History.

His landmark projects includes the Hong Kong Bank Headquarters in the CBD and the Iconic IFC2 the first super high-rise building in Hong Kong, standing 420m tall at the waterfront. Joseph continued to invest effort in developing businesses in the high-rise commercial, Data Centre projects, healthcare facilities etc same time develop businesses for the JRP Singapore and Malaysia offices.

He also dedicated much of his private time in the last two decades to engage himself in public duties. He was Appointed by the HKSAR Government in 2013 as a Justice of the Peace, JP.

Motto

Integrity, study and acquiring new knowledge

Case 1 International Finance Centre 2 (IFC, 420m tall building in Central)

Joseph was the project in-charge of the project, the first tall building back in 1993 -1997. The project is a mixed development with 180,000 m2 office space (including HK Monetary Authority situated at the topmost zone); a IFC Retail mall situated right below; and the Four Seasons Hotel (1000 rooms) next by.

It is a very challenging and unprecedented project in HK. My vision was for JRP to develop Engineering design "Locally" in HK, and retain the knowledge base in HK for future projects. Expert team was put together to develop software such as for "Lift Traffic study with multiple sky lobbies"; Energy - efficient hydraulic break to tackle a 40 bar hydraulic stacks; high-rise building Fire Safety enhancement for evacuation etc.

Later, JRP was also appointed as the M&E consultant for ICC (International

Commerce Centre – 520m tall) and the SZ Ping An Insurance headquarters (599m tall)

Case 2 Care

I have served the HKIE – Electrical Division for over two decades, and subsequently as EOM for the council and the Executive committee. Joseph also served the ERB for 7 years.

I recognize the importance of the regulatory framework contributed to the long-term success of HK . Fortunately, I was invited to be the Chairman of the ESAC of the HKSAR (Electrical Safety Advisory Committee) for consecutive 3 terms . the proud projects that EMSD took lead alongside with the ESAC committee members are ,

- 1) Change of Cable colour code
- 2) Continuous Industrial training and registration of REW (registered Electrical workers)
- 3) Updating of EMSD COP on Electrical wiring and installations

Engineering Life Challenges

We live in a fast changing world and a generation of slashers. On one hand, Engineers are talented individuals, trustworthy, enthusiastic, ambitious, committed and dedicated.

- 1) Formulate a path of your professional career progression.
- 2) Be proactive and resourceful, be observing things happening around you (not just engineering related).
- 3) Lead by Examples – managerial focused and technical competence.
- 4) People skill and clear communication are very important (fast mind – reading of your audience) .
- 5) Life-long commitment to engage thoughts in innovation and carbon reduction .
- 6) Reach out and engage with community to enhance image of Engineer (we are a party of the society) .
- 7) Be altruistic – CSR and ESG , need your effort to pay a little back to the society. We are well placed to do that .
- 8) Prepare yourself well on the Engineering economics, budgeting techniques, cost and time implications to any projects you undertake.
- 9) Make a difference, differentiate yourself and gain recognition.

Ir WAI Chi Sing

BSc(Eng), Civil Engineering (HKU). MSc, Transportation Engineering (Purdue University, USA). FHKIE, Fellow of Hong Kong Academy of Engineering Science. FICE, Fellow of Geological Society of London, UK. Fellow of Chartered Institute of Civil Engineering Surveyors, UK. Hon Fellow of Chartered Institute of Highway and Transportation, UK. Hon Fellow of Hong Kong Institute of Utility Specialist. Hon Fellow of Hong Kong Institute of Surveyors



Disciplines: Civil

Ir WAI CHI SING, a professional engineer with multi-disciplinary experience, has been awarded the HKIE Gold Medal for his exceptional contributions to the engineering profession and Hong Kong. Throughout his 38 years of civil service, he played key roles in different government departments and bureaux. Notably, he spearheaded major projects including the Hong Kong-Zhuhai-Macao Bridge and High-Speed Rail Link. After retiring as the Permanent Secretary (Works) of the Development Bureau, Ir WAI became the Managing Director of the Urban Renewal Authority in 2016, focusing on revitalizing old urban districts with a holistic forward-thinking approach, incorporating new planning concepts and advanced technologies. He is also dedicated to educating young professionals, and has received numerous accolades including the Gold Bauhinia Star.

Motto

Self-driven continuous education is one of Ir WAI's mottos, which is an on-going self-development process expanding his skill base to navigate through diverse challenges in the complex and heterogeneous working environment.

Case 1

Ir WAI was the first and, is so far the only civil service engineer in the HKSAR works departments, who has been appointed as the Chief Resident Engineer responsible for delivering a mega cable stayed bridge - Ting Kau Bridge. At the time of construction, the bridge was the world's first 3-single-tower 4-span cable stayed bridge. The bridge was removed from the Airport Core Programme (ACP) to reduce the potential impact on the financial resources of Hong Kong, but was subsequently reactivated after all the ten ACP core projects had commenced works. Owing to shortage of time,

and counting on self-driven learning, Ir WAI took up the challenge of spearheading the project implementation with a small team of civil service engineers instead of employing consultants

Case 2

Without a working history in estate development, Ir WAI is the first engineer appointed to head the Urban Renewal Authority. There were skeptical commentaries about the suitability of appointment. Taking advantage of the skill set developed from managing major infrastructure projects, Ir WAI relies on a self-directed learning approach, and has radically transformed the urban renewal process by replacing the conventional “project-led” to a “planning-led, district based” approach to unleash the redevelopment potential of the old urban district. New planning tools have been developed for the purpose, and in a bid to incentivize private market participation. Ir WAI has also brought up the long neglected issues on building maintenance by promoting preventive maintenance among property owners to extend the service life of existing buildings.

Engineering Life Challenges

To be a successful individual is the major life challenge of Ir WAI, which is the prerequisite to achieving a successful career. Ir WAI holds ancient Chinese wisdom in high regard, which has identified twelve key factors (below) that contribute to one’s prospering life. Emulating these characteristics will help one focus on their personal growth and responsibilities for success.

1. 命 - People are born with different intrinsic traits of talent which cannot be altered. However, these innate qualities, once unfolded, will become driving force for success.
2. 運 - Development of events are beyond one’s control, but individuals have the impetus to make choices to influence the outcome.
3. 風水 - Select a comfortable working space which will create satisfaction that leads to a greater will to produce good results.
4. 積陰德 - Aesop said, “No act of kindness, no matter how small, is ever wasted.”. One always reaps what he sows.
5. 讀書 - Self-motivated learning is a strategy to expand knowledge base and to unlock one’s full potential for career growth.
6. 名 - “Making” a name for oneself is an important part of building one’s professional identity.
7. 相 - Building confidence, presence and amiability unleashes one’s unique charisma.

8. 敬神 - Engineering is a profession that harness the force of nature for the benefit of mankind. We should be compassionate about conserving the environment.
9. 交貴人 - We all need to sharpen our networking skills regardless of where we are on the ladder. Networking is a powerful tool for building connections with influential individuals.
10. 養生 - The oriental concept of “health” involves a balance of a person’s need, body and spirit as the foundation of a good life. Leading a healthy lifestyle improves one’s success by increasing their productivity
11. 擇偶 - People with supportive spouses are more likely to take on potentially rewarding challenges giving themselves better prospect to succeed.
12. 催吉避凶 - By incorporating risk assessment into decision-making processes, one can make more informed choices maximizing opportunities for success.

HKIE Venere Club 2023 Activities

The following is a list of activities that Venere Club organised during Feb 2023 to Feb 2024. In the third Wednesday morning of each month, Monthly Talk by guest speakers giving interesting topics is normally held.

Monthly Talks

- | | |
|-------------|--|
| 18 Jan 2023 | 牙齒健康如何影響身體健康? |
| 15 Feb 2023 | I have taken Nothing and I have added Nothing - Yim Tin Tsai |
| 15 Mar 2023 | 前列腺增生 |
| 19 Apr 2023 | 新冠病毒的中醫康復治療和調理 |
| 17 May 2023 | 大灣區的電競發展 |
| 21 Jun 2023 | Following the Footsteps of Ancient Sculptures |
| 12 Jul 2023 | 糖尿病中醫保健及調理 |
| 16 Aug 2023 | 運動與健康 - 人體的工程學 |
| 20 Sep 2023 | 中國剪紙藝術欣賞與創意 |
| 18 Oct 2023 | Understanding Enduring Power of Attorney in Hong Kong |
| 16 Nov 2023 | 慎終追遠 - 香港華人喪葬禮俗與中國傳統文化 |
| 20 Dec 2023 | An inquisitive engineer’s journey into history |
| 17 Jan 2024 | Images of Ancient Chinese Women |

Visits

- | | |
|-------------|---|
| 23 Mar 2023 | Visit to University of Chicago Francis and Rose Yuen Campus |
| 26 Jun 2023 | Ex-Sham Shui Po Service Reservoir, Mission Hill |
| 23 Aug 2023 | Swire Archives Centre |
| 19 Dec 2023 | CLP Pulse (museum) |

Motto Collection from Eng Expo 2013 - 2023

2023

- Assessment and taking control of likely situations have been a major part of my life including my career and services to the community.
- "What can I do to serve better and bring joy to others?"
- "As much as you are able, that you should dare to do."
- To make a difference for the betterment of the community.
- Step Out – of comfort zone / of the box / to explore. Step Up – the game / to the challenge / to lead the change.
- Passion in innovation, Persistence in curiosity, Proactive in learning. To think out-of-the-box and innovate, it takes bold assumptions and careful analysis. 大膽假設，細心分析

2022

- Best application and good use of professional knowledge, experience and expertise acquired in making meaningful contributions to the society and international community.
- "There are no limitations to the mind except those we acknowledge."
- Always provide innovative ideas with solutions focusing on value for money to clients and collaborators with professionalism for the betterment of the general public and the future generation.
- 「學而不思則罔，思而不學則殆」
- Strong interpersonal and business skills are just as important as a solid technical background in one's career as an engineer.
- Honesty and Modesty are the motto which enable me still standing here today.

2019

- "Chance favours only the prepared mind."
- The more you learn, the more you realize how little knowledge you've got - and there comes the desire for more knowledge!
- Set your goal with heart; be innovative and faithful to attaining it.
- Where there's a will, there's a way.
- Practising with highest professional ethics and standards, creating values to the community, and leading the profession to excel with both local and international market and technology development.
- Ever earnestly striving toward and treating others with sincerity 自強不息以誠待人
- Foster "a Craftsmanship Spirit" of striving for the best for doing everything 每做一件事都是以「工匠精神」以致每事達到「精益求精，力求完美」。
- When at the time of difficulty (逆境), always take a PMA (Positive Mental Attitude) and that things will get through towards success. 人生不如意事十常八九，要以樂觀、積極(PMA)的心態面對逆流，學習在「危機」中尋找「商機及機遇」，在逆境中挑戰自己；面對順境，做到自強不息，居安思危，始終腳踏實地。不論面對順境或逆境，行動最重要，「千里之行，始於足下」，窮則變，變則通，保持不斷學習的態度，所有問題將迎刃而解。

2018

- Be devoted to what one has committed. If one cannot live up to the challenges, try change the challenges. There is no obstacle that cannot be overcome.
- Be prepared, continuous learning, accept challenges and mobility.
- Successful engineers need to have good salesmanship
- Care and Respect for people and never give up.
- Do not mean in giving more 不怕蝕底
- Never give up 永不放棄
- Think about the needs of other people to achieve win-win solution 照顧他人需要 達成雙贏
- Shaping your life with brilliant ideas 讓生命添上彩虹
- Holistic wellbeing with Technology, Intelligence and Caring.

2017

- Be humble
- Continuous learning. Build on your strengths and differentiate yourself from your peers.
- Without challenges, your life journey will be less memorable. Shaping your life with devotion and right attitude, your memories will never be bitter though they may not be as sweet as you wish.
- Don't just let other people say how successful you are. It is for you to decide for yourself.
- Whatever we do, fall in love with it and despite the adversities we face, don't quit. Always get prepared for an opportunity to come but not complain about not having it. Exercise more power with people than power over people.
- Use it or Lose it.

2016

- Treat hard work as learning, and learning is a life-long experience. To achieve perfection or full score, you have to double your effort.
- People are born equally smart. Those who plan ahead, work hard and focus sharply will be more successful. 計劃，辛勤和專注是成功之道。
- Contribute one's best effort and try to do a perfect job every time.
- Be innovative to stay competitive. Be honest, honourable, generous, fair and considerate.
- Challenges make life difficult, but meaningful!
- Adversities in Life can be overcome; Work responsibly to minimize regrets
- 勤有功 Labor Omnia Vincit 非以役人 乃役於人 To Serve But Not To be Served 居安思危 Be Prepared

2015

- 為學當如金字塔，要能廣大要能高。 Be versatile as Leonardo de Vinci and Exquisite as Michaelangelo.
- Enjoy your work everyday. Learning is Fun! Be innovative.
- Never give up! Professional integrity is of highest importance!



- Miracle of engineering help to build the infrastructure of the Society.
- Manageable of New Technology to ascertain Safety, Environment Green & Energy Saving
- Navigator of innovative and Creative Design in Engineering for the Public
- Control of all projects on time and within budgets
- Those are the “thousand miles” journey of MMNC for the Professionals in the Society 機械輪機造船及化工-工程學是社會百樂的千里馬
- Where there is a problem, there exists a solution 有問題就有答案
- Be at ease in all encounters, give of yourself, as conditions permit. 隨遇而安，隨緣奉獻。
- Solid knowledge, good dedication and passion, and flourishing imagination
- Help one climbing new heights and exploring new work frontiers for building sustainable systems and projects for the benefits of mankind.

2014

- Be positive, when the opportunity comes along, grab it.
- To commit, to perform, to deliver
- Don't just follow rules and practices. Go to the fundamentals and understand the basis of these practices.
- 6Is: Inspiration, Imagination, Innovation, Integration, Implementation and Investment
- Onwards & Upward. Seeking truth from facts
- Be honest & trustworthy. Work diligently, Know & help more people. Be flexible.

2013

- Personal Belief – uncompromising integrity, be trustworthy and honest
- Personal Value – family, health, honesty, respect and diversity
- Job behaviour – commit, communicate and change
- 在平凡中創新求進步！工程不外乎有機應用知識以改善民生！
- Innovate for progress from routine work. Engineering is nothing else but the systematic application of knowledge for the betterment of livelihood!
- 不要錯過爭取專業知識的機會，增強實力，前途是掌握在自己手中。
- 自強不息與時並進 Self-discipline (in development). To advance with times.
- Never Say re-tired 永不言休
- Be honest and trustworthy. Work diligently. Know and help more people. Be flexible.
- Once you go into something, you should concentrate on it, no matter how hard it is.
- 勇于創新，小心求証，成功經驗，推廣傳承。
- If you want to get or achieve something, you must have appetite for it.
- Do the right thing right.
- Learn from masters and test for myself, keep mental stimulus by change of industry, change of role, change of problems' solutions (respect and love my team).
- Stay fresh and versatile.

This is to certify that

attended the

Engineering Exposition 2024

on

23 March 2024

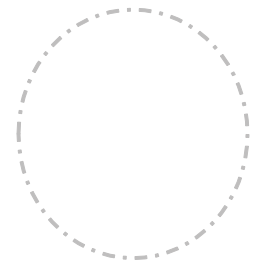
from 08:45 - 12:30

at

**The Hong Kong Institution of Engineers
9/F Island Beverley, No 1 Great George Street
Causeway Bay, Hong Kong**



- * 1. Name of participant to be written by the attendee.
2. Attendee should seek certification of his/her attendance by having the stamp of the organizer immediately after the event.
3. This certificate serves the purpose to record participation of an attendee only. The duration of the activity indicated above does not automatically grant the equivalent CPD days, but is entirely up to the discretion of the 'Engineering Supervisor' for pre-Corporate Membership.
4. Please contact your 'Engineering Supervisor' for further advice for recognition of CPD activities.



Engineering Exposition 2024 Programme

08:45 – 09:00	Registration
09:00 – 09:05	Opening by Organising Committee Chairman: Ir PC LO
09:05 – 10:20	First Session (Speaker presentation and Panel Discussion)
10:20 – 10:30	Session Break for 10 minutes
10:30 – 11:45	Second Session (Speaker presentation and Panel Discussion)
11:45 – 11:50	Remark by Veneree Club Chairman: Ir Simon CHUNG
11:50 – 11:55	Moving to Breakout Room
11:55 – 12:30	Breakout Session (with one Speaker in a Breakout Room)

First Session

Speakers:

Ir Frank CHAN Fan
Ir Dr Clarence CHOI
Ir Gary KO Chi Wai

Second Session

Speakers:

Ir Enoch LAM Tin Sing
Ir Joseph LEUNG Chi Ming
Ir WAI Chi Sing

Arrangement at Breakout Session:

Speaker

Ir Frank CHAN Fan
Ir Clarence CHOI
Ir Gary KO Chi Wai
Ir Enoch LAM Tin Sing
Ir Joseph LEUNG Chi Ming
Ir WAI Chi Sing

Breakout Room

9/F, James Chiu + Dragages Room
9/F, Sophie Chan Room
9/F, ATAL Room
10/F, Chun Wo Room
10/F, Paul Y Room
10/F, Hsin Chong Room

