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

Veneree Club 睿賢學社

社學賢睿

2019 Engineering Exposition -

Engineering Life Challenges

Saturday 13 April 2019

9:00 am - 2:00 pm

Presentation Session at

Chiang Chen Studio Theatre, G/F, Chung Sze Yuen Building
The Hong Kong Polytechnic University
Hunghom, Kowloon

Contents

Acknowledgements

The HKIE Veneree Club would like to express their gratitude to the following companies for their sponsorship to the Engineering Exposition.

ATAL Engineering Group
Atkins, member of the SNC-Lavalin Group
China Harbour Engineering Company Limited
CLP Power Hong Kong Limited
REC Engineering Company Limited
The Airport Authority Hong Kong
The Honghong Electric Company Limited
Tsuen Lee Metal & Plastic Toys Company Limited

(Listed in alphabetic order)

Chairman's Message – Veneree Club

Veneree Club "睿賢學社" continues its good tradition of organizing Engineering Exposition every year for young engineers. We have chosen 'Engineering Life Challenges' as the theme to emphasize the engineering spirit needed to meet and overcome challenges in one's career. While it is important to equip ourselves with necessary technical knowledge to solve ever changing engineering problems, equally we need positive energy to empower ourselves for further advancement. It is always the courage and vision that drive us and our society moving forward.

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

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

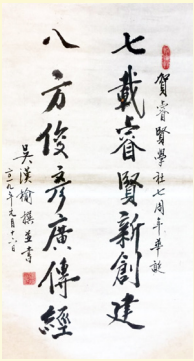
On behalf of the Club, I would like to express my heartfelt gratitude to the sponsors who have provided us with much needed financial resources and enabled this meaningful activity to be carried out annually. Also, I am most grateful to all the speakers for providing us the mottos and messages. Of course,without the contribution of the organizing committee members, it would not be possible to hold this Exposition. Finally, I would like to thank all the participants for coming to this event. I wish you all a successful career.

Ir Philip KWONG Sze Fai
Chairman, Veneree Club
The Hong Kong Institution of Engineers
Session 2018/2019

HKIE Veneree Club Activities

The following is a list of activities that Veneree Club organised during Apr 2018 to Mar 2019. In the third Wednesday morning of each month, Tea Gathering with guest speakers giving interesting talk is normally held.

Tea Gathering Talks



18 Apr 2018 Deep Learning and its recent developments
16 May 2018 Origami – the art and science of paper folding
13 Jun 2018 Introduction to Medical Imaging
18 Jul 2018 3D打印技術的概述與發展概況
15 Aug 2018 常見痛症的中醫治療與保健
19 Sep 2018 Cyber Security Outlook: The Day after Tomorrow
24 Oct 2018 Natural Gas Supply to Hong Kong and its future development
21 Nov 2018 Adventures of Antarctica, Africa and Artic through Photography
19 Dec 2018 Knowing Lung Cancer and its up-to-date treatment
16 Jan 2019 Can we win in Horse Racing using AI?
20 Feb 2019 中國藝術的復古、仿古與冒古
20 Mar 2019 Heart Surgery (Part 2)

Visits

11 Apr 2018 Elderly Resources Centre
14 Jun 2018 Zero Carbon Building
27 Sep 2018 InnoTech Expo
14 Nov 2018 HKPC - 3D Printing ONE and Smart Industry ONE

Engineering Exposition 2019 Organizing Chairman's Message

HKIE Veneree Club has the pleasure to continue to hold the Engineering Exposition for the seventh year. Trust that many young engineers benefitted from the talks and experience sharing by our speakers in the past Expositions.

This year, again we have invited five distinguished engineers and a HKIE Outstanding Young Engineer awardee to share their valuable experience with fellow engineers. Though coming from different fields, they all have a strong spirit to pursue excellence that has enabled them to achieve so much in their career and life. Through the talks and dialogue with them over lunch, participants could broaden their mind and learn from more experienced members, which would benefit their future development.

The world keeps on changing. Engineers bear the mission to further improve our living environment. Every step in carrying out that mission, however small it appears at the time, is significant.

I would like to take this opportunity to express my heartfelt thanks to our sponsors, members of the organizing Committee and those who have contributed to the success of EngExpo 2019.

Ir Simon CHUNG Fuk Wai
Organizing Committee Chairman
Engineering Exposition 2019

Engineering Exposition 2019 Organizing Committee

Organizing Committee Chairman:	Ir Simon CHUNG Fuk Wai
Members:	Mr David CHEUNG Sai Ping
	Ir CHEUNG Shu Wing
	Ir Simon CHIANG King Wah
	Ir Heinz CHIU
	Ir Anthony KWAN Lok Fong
	Ir Philip KWONG Sze Fai
	Ir Allan POON
	Ir Stephen LEE Ming Ching
	Ir William LI Wai Lim
	Mr Martin SIU Wai Kwong
	Ir Peter TSANG Kang Ho Peter
Advisor:	Ir Dr CHAN Fuk Cheung

Ir Dr CHAN Chun Leung

BSc(Eng), PhD, MBA, JD, FHKIE, RPE

Discipline: Information

Dr Chan has 20 years' experience in telecommunications industry expertised in telecommunication and information technology engineering and 8 years' experience in education industry in executive level.

He has been Managing Director of a securities company in HK and Managing Director of the China subsidiary company of an utilities corporation in HK. Currently, Dr Chan is the Chief Information and Planning Officer of HKU SPACE.

Motto

"Chance favours only the prepared mind." [Louis Pasteur (27 December 1822 – 28 September 1895) French microbiologist]

Case 1

Introducing automated mapping and facility management system to engineering departments in 90's. At that time, computer project was usually justified by cost saving. The launch of this project implied to laying off hundreds of drawing office staff and giving each engineer an additional work of updating the drawings by himself by computers. I led this project and therefore received tremendous resistance from the staff. Ultimately, the project was delayed and overspent. This lesson tells me that I must not underestimate the human factor in projects, no matter engineering or non-engineering ones.

Case 2

Setting up a new company in China in 20's. It was almost an impossible mission for completion in a very short time frame. Lots of difficulties were encountered in the process. The mission was completed and it was mainly because of a capable and cooperative project team. It tells me that a good project team is an essence.

Engineering Life Challenges

In 80's, I together with several engineers set up a start-up company which had developed an intelligent fax system which was prior at that time in Hong Kong. At that time, if it was pioneer in HK, it would likely be pioneer in Asia.

We were all engineers who had good engineering knowledge, excellent innovation but had limited knowledge outside the engineering field. We had no knowledge and connection of getting funds and loans to finance the company. We funded the company purely by our own money. As we had so good confidence on this product that some of us even borrowed money from our friends and relatives to invest on it.

We showed our product to some companies and received good response. However, without good knowledge and skill on productisation, corporate sales and marketing, not a single item was successfully sold over two years of selling work.

Ultimately, we changed our offer from providing system and equipment to providing an intelligent fax service platform. We successfully signed a service contract with a marketing company with a monthly income. As we were so ignorance to commercial terms and copyright, we did not realise that it was an exclusive contract which bound us from acquiring other new customers and the contract period was long. This contract led us operate under deficit for a long period of time and no further new product development can be afforded.

After two years, some similar systems were launched to the market by some big brands. This kind of systems have been popularly used by corporate for some years before internet began popular in 90's. Under this situation, our product got no more competitive edge over these new products. After losing so much money for so many years, the company was closed down after running for 5 years.

This experience made me realise that my knowledge and experience have to be deep and wide, i.e. not only deep in my expertised field but also wide enough to cover other fields. To be successful, we have lots to learn, in engineering and non-engineering fields. We should always keep a humble mind to appreciate others' expertise and keep on learning.

Ir Regis CHEE Lap Gee

BEng, MPA, MICE, MHKIE, RPE, CEng

Disciplines: Civil & Geotechnical

Upon graduation from the HKPU, Ir Chee started his career with Atkins China Limited and participated in the civil and geotechnical design works on projects ranging from MTR new lines to Discovery Bay's Master Plan development. He later joined the MTRCL and delivered the external works for the XRL Terminus.

Since joining the GEO in 2012, Ir Chee contributed as project engineer for the Landslip Prevention and Mitigation Programme, followed by formulating public education campaigns on slope safety. He is currently responsible for the public relations and media engagement tasks within GEO.

Ir Chee also served as committee members in the Civil Division, Geotechnical Division and Young Members Committee of HKIE, and was one of the first six HKIE President's Apprentices.

Motto

The more your learn, the more you realize how little knowledge you've got - and there comes the desire for more knowledge!

Case 1

Engineers nowadays not only take up the role in designing and constructing a better future for the world, but also play the important role in bridging the communication between the general public and the engineering world. During my posting as the project engineer responsible for delivering the natural terrain hazard mitigation works in Lamma Island, the Lamma Island (North) Rural Committee (LIRC) and Island District Council (DC) Members, being unfamiliar with the nature of natural terrain hazard mitigation works, midway-stopped the respective works in Lamma Island and wrote series of letters of complaint to the Department. By initiating transparent and mutual communication among the project team, contractor and other relevant government departments with the LIRC and DC Members and relieving their concerns on the project, I not only managed the successful completion of the concerned works, but also turned the letters of complaint from the LIRC into letter of compliment.

Case 2

Engineers not only dealt with scenarios that they are familiar with, but also adventure for new knowledge. Being a civil engineer in profession, I was initially a bit directionless when being assigned with the task to explore the feasibility of incorporating VR technologies into public education campaigns on slope safety topics. I then started to seek advice from fellow engineers in other relevant disciplines, attended technology forums held in Hong Kong, met with different visual technology vendors and visited numerous public exhibitions in Hong Kong with VR booths to equip myself with the necessary knowledge in delivering the project. The final product, "VR landslide experience videos", was well received by the public during various roving exhibitions and won recognition as a shortlisted finalist of the HKICT Awards 2018 and Excellence Award Winner of the 3rd Asia Advanced Imaging in Motion Awards.

Engineering Life Challenges

Dreaming to be an engineer since childhood, I've decided to pursue the path towards civil and geotechnical engineering during my university studies. Upon joining the industry in 2005, the blossoming of the industry allowed me to gaining invaluable hands-on experiences on a wide range of civil engineering knowledge, including the planning and design of site formation works, slope upgrading works, railway projects, blasting assessments, etc. Yet engineering is a professional career which requires continuous professional development and lifelong learning. With an intention to broaden my horizon in the industry, I boldly left my comfort zone - the consultancy sector, and starting working at the frontline for the Express Rail Link Terminus, managing a couple of external works related to piling construction, temporary traffic arrangement and utility diversions. These experiences equipped me with new engineering knowledge and enhanced my project management skills, which later on enabled me to confidently manage roadside slope upgrading works under the Landslip Prevention and Mitigation Programme. Without stepping out of my own comfort zone, I would not have attained the necessary knowledge for delivering my current tasks. This was also the propelling force behind my pursing of Master of Public Administration studies, which provided me with new lenses to understand governance and management contexts within the public sector.

Apart from stepping out from my own comfort zone, the participation in institutional affairs also provided me with invaluable vision towards my

profession. The peer support and sharing amongst members of different discipline in the Young Members Committee of HKIE nurtured me with cross disciplinary engineering knowledge. The opportunities in learning from prominent and veteran engineers also enriched me with in-depth understanding of the engineering profession. So, fellow young engineers and engineering students, keep chasing your dreams and gearing up yourself for the opportunities ahead, and I'm assuring you all a prosperous engineering career!

HKIE Engineering Exposition 2018 Speakers' Motto

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 照顧他人需要達致雙贏
Shaping your life with brilliant ideas讓生命添上彩虹

Holistic wellbeing with Technology, Intelligence and Caring

Ir HON Chi Keung

BSc (Eng); MPA, FHKIE; FICE; FCIArb;
Adjunct Professor (HKU)

Discipline: Civil

Ir Hon had worked in the civil service for over 35 years. He joined the Government as an Assistant Engineer in 1983. After he became professionally qualified, he worked in different departments on a number of major infrastructure projects including the Hong Kong West Drainage Tunnel, Kai Tak Stormwater Transfer Scheme, Tai Hang Tung Storage Scheme, Harbour Area Treatment Scheme (HATS) Stage I, Cross-border delivery of surplus public fill, Central Reclamation Phase III, Wanchai Reclamation Stage II, Central-Wanchai Bypass, Liantang/Heung Yuen Wai Boundary Crossing Point etc. He had been the Director of Civil Engineering and Development from January 2011 to April 2015 before his appointment as Permanent Secretary for Development (Works). Ir Hon retired from the service in October 2018.

Motto
Set your goal with heart; be innovative and faithful to attaining it.

Case 1
In around 1997, the section of Nathan Road between Boundary Street and Nullah Road suffered from repeated inundation during rainy seasons. This had caused major social disruption to the district concerned. The flooding resulted mainly from the time lag in undertaking upstream drainage improvements upon completion of the West Kowloon Reclamation. To cure the problem permanently, major infrastructure works in the pipeline included stormwater transfer and storage schemes; however the programmes aimed at completion by 2004.

To provide interim relief, the drainage pipes under this busy section of Nathan Road had to be upgraded. The traditional way of replacing the pipes section by section following the traffic management plan would take 5 years. A bold and innovative method was devised by diverting the north-bound traffic to the adjacent Portland Street. Whilst many challenges did arise during implementation, the works were completed in 9 months, well ahead of the original schedule.

Case 2

The SSD (now called HATS) Stage I suffered major setback ever since works commencement in 1995. The key item involved a JV contractor to build 24 km long sewage conveyance tunnels traversing built-up areas fronting Victoria Harbour. These were up to 150 metres deep though major water inflows were revealed soon after tunnelling works commencement. The JV took a drastic move of stop work in order to renegotiate their contractual position with the client.

After some tough negotiations, the JV was expelled in late 1996. New contractors were appointed and completion works recommenced in phases from mid-1997. To facilitate their works, limits for allowable water inflow into the tunnels were relaxed. This had caused surface settlement at several built areas including Tseung Kwan O, Chai Wan and Kwai Chung. Notwithstanding this and other challenges, tunnelling completed in end 2001 and compensation from the original JV contractor was subsequently also secured.

Engineering Life Challenges

"Engineering is the art of directing the great sources of power in nature for the use and convenience of man." I consider this quote by a renowned engineer more than two centuries ago best describes what engineering is about. To me, I find immense satisfaction when an infrastructure project which benefits most of the community is accomplished. Invariably, engineering involves the challenges of coping with nature and hence combating the related constraints. Further, it is an art because the process affects many people during implementation and upon commissioning and it demands interpersonal and fostering skills.

When Nathan Road suffered repeated flooding, there was public outcry as chaos of such nature and extent was rare in urban areas. Swift actions to contain the repeated malfunctioning were therefore necessary. When the traditional method could not solve the problem, more creative solutions were called for. Whilst ideas might sound bizarre and dubious in the first instance, an open mind proved to salvage the situation eventually. Diverting the north bound traffic of Nathan Road to Portland Street was unprecedented. Despite the initial worries and also obstacles faced during actual implementation, innovation had demonstrated success in this case.

To attain one's goal, one has to persevere. When the tunnelling works of SSDS Stage I came to a standstill in 1996, I was drafted to the project team to assist. The tough negotiations with the original tunnelling JV contractors had obliged and also incentivised me to ensure success of the completion works. Nevertheless, strenuous efforts were plagued with numerous difficulties including breakdown of defective tunnelling kits left by the JV; adverse ground conditions encountered; widespread settlement at built up areas, etc. Public sentiment was particularly critical to the project team causing enormous pressure. Despite all the adversities, endurance eventually paid off with commissioning and also compensation by the JV accomplished in end 2001.

The above stories attest that success has to be driven by a clear goal, open and innovative attitude, and perseverance during one's professional career life.

HKIE Engineering Exposition 2018

For six years in a row, Veneree Club organized the Engineering Exposition 2018 on 21st April for young engineers under Scheme 'A' training. The theme of the Exposition was 'Engineering Life Challenges'. Every year, Veneree Club invites 6 distinguished engineers to be the guest speakers to share with the young engineers their career experience and life challenges, and how they overcame hurdles in their career path. Their presentations greatly broadened the exposure of the participants imbuing them with a positive spirit for further advancement. About 200 engineers attended this event. The speakers this year include, Ir John Chai, Ir Raymond Lin, Ir Wong Wai Ho, Ir Lee Wan Lik, Ir Dr Michael Li and Ir Stanley Siu. Apart from messages on how they embraced their life challenges, they also gave the audience mottos to guide their career development.

Ir Howard LOK Tat Hong

B.A.Sc., FHKIE, FCIBSE, MIET

Discipline: Building Services & Electrical

Worked as a contractor for nearly 40 years with strong interest in Project Management.
Over the years, had served the following organizations:
Past Chairman of the Building Service Division – HKIE
Past President of the Hong Kong Electrical Contractors 'Association
Past Chairman of the Federation of the Electrical and Mechanical Association
Member of the E&M Training Board

Motto
Where there's a will, there's a way.

Case 1
A diesel standby generator was installed in a residential building and during the dummy load test the generator set could not reach 110% of its rating. Investigations were carried out and found the main issue was not enough ventilation (problems on air inflows and air outputs) of the generator room casing increase in temperature, as a result the generator cut out due to overheating.

Observation: performance of the M&E equipment could be affected by many other factors.

Case 2
A 11KV/3.3KV transformer and switch panels was supplied and installed for a 3.3KV chiller system. During the site test, circuit breaker was activated by the differential protection relay. It was found wrong connection on the polarity of the current transformer causing the discrepancy and leading the trip.

Hence it is imperative that the differential protection scheme be commissioned before first-time energisation of the transformer.

Engineering Life Challenges

The challenges I had in the past was negotiations for contracts in Macau, had to deal with the external side and internal side. Change of shareholder of the company had made the situation very complicated.

External
The terms and conditions written in the Contract which many of our specialist contractors considered to be an "Unfair Contract". Some examples were: a) unilateral termination, b) provision of Professional Indemnity Insurance, c) contractor to be responsible for the change of laws/regulations etc...

After submission of tender, negotiations began, not much on the technical sides but mainly on contractual terms. After a few rounds of meetings and tough negotiations with different professionals, i.e. QS, lawyers, project teams from both sides, the gap had been narrowed down and nearly reached the position of awarding the contracts.

Internal
The new shareholder of the company had different concepts and conservative in this high risk and low gain contracting business which made us very difficult to handle.

During the progress of the negotiations with client, the top management changed their mind and kept on requesting for further negotiations. The client lost their patience and gave an ultimatum if we did not give a positive reply, they would consider other contractor to take up the works.

In the past, our internal meetings were with all Directors present and people was just waiting for the MD to decide. With this observation, I changed the strategy which was to approach them individually. The first person I contacted was the Finance Director and reiterate to him we had carefully reviewed the contracts and prepared our Risk Analysis with solutions to manage such risks. Furthermore, we need the contract (contract sum over 700 million) to sustain our operation. He was open minded and looked at things more on the commercial side and agreed to convince the MD. Eventually approval was given, and the contract was award to us.

Conclusion Where there's a will, there's a way.

Ir TAI Tak Him

B.Sc.(Electrical Eng), M.Sc.(Public Health Eng), FHKIE, MIET

Disciplines: Electrical

1)Managing the design, operation and maintenance of various types of sewage pumping and treatment facilities
Serving 4 chief engineer posts and as Assistant Director/E&M, head in E&M Branch of Drainage Services Department

2)Leading and managing the delivery of various E&M engineering services with all necessary supporting systems to over 100 government departments & public bodies, including Airport Authority & Hospital Authority under the trading fund accounting arrangement. The business annual turnover is about $7000M, involving over 4000 direct professional and technical staff and over 100 contractors for serving E&M assets in more than 8000 buildings and facilities.
Serving 2 assistant director posts and as the Deputy Director/trading services, head in trading services arm of Electrical and Mechanical Services Department

3)Serving as Chairman of Electrical Division and EOM Council member of HKIE , plus other committee services, discipline advisory panel and engineering registration board as well as published a book "EE筆寫".

Motto
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

Case 1 Quality Journey to enhance E&M engineering services delivery

Quality management is vital and well known to engineering professions in product development and manufacturing, and is no exception for the delivery of engineering services. It is, however, quite different or even more complicated for the latter as it involves professional experience & judgement, changing environment & circumstances, alternative solutions and innovation.

I have been involved with 20 years of experience in the quality management systems(QMS) in project service delivery and O&M of sewage treatment facilities, as

well as integrated management system(IMS) and total quality management(TQM) for E&M engineering services delivery.

In adopting international practice from ISO systems, we generally apply IMS with ISO 9001 (quality management), 14000 (environment management), and 18001 (health & safety management) systems. There is now a need to include energy management ISO 50001, and ultimately the asset management, ISO 55001, for total life cycle management. It covers design, construction as well as subsequent facility management for engineering services. The enterprise governance approach should also adopt total quality management (TQM) concept, which includes strategic planning, strategic initiatives implementation, and performance measurement from key performance indicators(KPI) in a balanced scorecard (BSC).

The issue of adopting quality management system in an engineering service organization is "change management" in a holistic, strategic and sustainable way. Staff and contractor reaction, adjustment, acceptance, full commitment, participation and sustainable development on the quality journey are key issues for success. All organizational subjects should be geared up for the purpose. The organization performance, both at corporate and working levels, should have a direct link to the various management systems. This is in line with the principle of "what gets measured what gets done". The HR incentive system should be linked to the quality performance monitored by KPIs.

Noting its continuous improvement on existing process and service development, the real challenge ahead would be the integration of innovation with new technologies to the management systems in this fast moving world.

Case 2 Digital transformation of E&M engineering services, a new era of management information system (MIS) for optimal performance

Digital transformation of an organization involves profound transformation of business and organizational activities, processes, competencies and models to fully leverage the changes and opportunities of a mix of digital technologies and their accelerating impact across society in a strategic and prioritized way. Management information system has been traditionally critical for good corporate management & performance, and is no exception for engineering services organization. In going smart and industry 4.0 for E&M engineering services, the investment on E&M asset digitization must come with a renewed comprehensive model and plan on business process and a new powerful MIS driving for optimal performance.

For more than 20 years, I have been involved in MIS development and application in both operation & maintenance of sewage treatment facilities and E&M assets of government facilities, taking the digital transformation as the key driver.

Case 2 Digital transformation of E&M engineering services, a new era of management information system (MIS) for optimal performance

The transformation requires careful planning:

i) to add appropriate digital components to the existing engineering systems and business processes - E&M assets and engineering services digitization must take into consideration the life cycle performance and capability to integrate with the ever-changing environment, framing the digital asset management model;

ii) to get the right information and analysis on time from the various business processes & activities in the service delivery chain and working locations - Data Integrity should be ensured in the automatic collection and transmission process. Proper data analysis with performance indicators on various dimensions, not just financial and costing aspect, but also on asset & energy performance, reliability; and

iii) to devise the renewed powerful reporting systems including dashboard to facilitate prompt management decision and action. - Systematic and timely reporting of the analytical results , use of dashboard in the new MIS to ensure prompt follow up from various level of management. Today, the digital technologies, including big data analytics, artificial intelligence (AI), etc., open a new arena in MIS on corporate governance

There are 4 levels of E&M engineering services to be achieved under this digital transformation journey:

包攪掂 (cost effective asset maintenance in reducing shutdown)
包冇事 (high asset reliability in supporting customer business)
包滿意 (customer satisfaction with optimal asset performance)
包醒目 (smart asset management)

Engineering Life Challenges

1) To pursue engineering excellence under budget and time constraints - put extra effort and time in devising one added value element during your execution

2) To have an impact on people working with me for excellence - let everyone working with fun and team spirit for ultimate job satisfaction and collaborative performance

3) To keep abreast of technology development and colleagues' experience of various engineering systems - prepare a good network of people and organization, i.e. get connected and participate actively in knowledge management system and make it sustainable with discipline

4) To have impact on the organization management systems for betterment - practising various management and leadership skills in addition to engineering knowledge

Ir Dr Peter WONG Kwok Keung

BSc (Civil), MSc(Geotechnical), DBA, FHKEng, FHKIE, FICE, FIStructE, FHKIHE, FHKIoD

Discipline: Civil, Geotechnical, Electrical Power and Generation System, Corporate Management and Real Estate Development

Expertise and accomplishment:

Ir Dr Wong is one of the most respected and trusted figure in Hong Kong's engineering and construction industry as well as in business and political circles. In addition to his practice in academic research and professional consulting for over decade, he has managed many large scale infrastructure projects in Hong Kong, mainland China and Canada for over 35 years. As the Chairman and CEO of Kum Shing Group, he has led its transformation from a small family subcontractor company founded by his late father in 1963 to a large multi-disciplinary group with business portfolio covering civil infrastructures, power distribution, transmission and generation, public lighting operation, transportation power facilities and real estate development. With over 3,000 team members of the Group, including 50 qualified professionals in various disciplines, the Group has built an excellent brand characterized by reliability and professionalism. Kum Shing Group continues to play a critical role in the development, operation and maintenance of the city's energy and mobility infrastructures to enable sustainable growth of Hong Kong.

Philanthropist supporting education and charitable projects

Ir Dr Wong is an active philanthropist supporting education and charitable projects in Hong Kong, mainland China and the surrounding region. Upon his successful transformation of the family business, Ir Dr Wong has set up the [WKF Charity & Education Foundation - 金城王錦輝慈善教育基金] fully funded by the Group to support education and medical projects. A total of more than HK$200 million dollars has been donated to the charity and education projects in mainland China and Hong Kong.

Community Services in Hong Kong and Mainland China

His community leadership and managerial skills were employed in the capacity as the Chairman of Kowloon City District Council for eight years. His involvements in numerous political and business bodies in Hong Kong and at the provincial and national level have catapulted him into the limelight as a visionary, effective and generous community leader.

Major Achievements and Honors Received :

Ir Dr Wong is a Honorary Citizen of his home town, City of Dongguan. For his insights and contribution as a leader in so many fields of interests, as well as his promotion of many philanthropic projects especially in educational institutions and with a focus on helping the unprivileged, Ir Dr Wong has been awarded numerous honors and awards from Hong Kong , China and Canada. Among the more notable, he was appointed as a Justice of Peace (JP) in 2005. In 2008 and 2014,he received s Silver Bauhinia Star Medal and a Gold Bauhinia Star Medal respectively by HKSAR Government for his distinguished public services in Hong Kong. Other honours and awards includes Honorary University Fellow by Hong Kong University of Science & Technology, Doctor of Social Science, honor is causa degree by the Hong Kong Baptist University,[2010 Hall of Fame]by the Hong Kong Institution of Engineers, Director of the Year Award by the Hong Kong Institute of Directors. Ir Dr Wong has been awarded "Distinguished Alumni Awards" by his Alma Mater - University of Calgary, University of Saskatchewan and Hong Kong Polytechnic University.

Motto

- 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。

Case 1

Founded by Ir Dr Wong's father Mr Wong Kam Fai in 1963, Kum Shing started out as a humble sub-contractor. Instead of taking up an offer by the Government as a Professional Geotechnical Engineer when he came back to Hong Kong in 1986, Ir Dr Wong has chosen to take up the family's humble business. Since taking up and in charge of the family business in 1986, Ir Dr Wong played a transitional role to instill the spirit of corporate governance into a traditional entrepreneurial company. He explored various business areas and focused particularly on quality management by introducing international management systems. Through offering integrated quality services to power, utility and transportation companies, he managed to build and strengthen Kum Shing's important role in the major market shares. Today, Kum Shing Group with a team of 3000 including over forty professionals in various disciplines provides comprehensive engineering solutions to the entire electricity supply system from power generation, transmission, distribution,utilization, public lighting installation and maintenance. It also offers diversified services from civil to electrical engineering for the operation, enhancement and extension of the railway networks and the new airport extension works. After operating Kum Shing Group for 35 years, Ir Dr Wong stepped down as the CEO of the Group in December 2018 and the entire business is successfully pass to the third generation for continuous operation.

Conclusion

When the chance comes to you, focus on this opportunity by fostering "a Craftsmanship Spirit" of striving for the best for doing everything and you will be success.

Case 2

Ir Dr Wong's ever-present desire for knowledge and never-give-up spirit served asthe key to his success. Back in late 1960s, his failure to complete the higher diploma of structural engineering in the Hong Kong Technical College (HKTC, forerunner of PolyU) did not discourage him from striving for academic and professional competence.

Fifty years later, as a successful business entrepreneur, Ir Dr Wong returned to the University and obtained his Doctor of Business Administration (DBA) degree in two years' time (normally 3 years program) from the PolyU in 2016 at the age of 70, its eldest graduate and he has subsequently be awarded "2017 Distinguished Alumni Award" by the Hong Kong Polytechnic University. Ir Dr Wong can made his dream successful because of his fighting spirit as he has a record of not giving up in the face of adversity.

Conclusion

When at the time of difficulty always take a PMA (Positive Mental Attitude) and ever earnestly striving to overcome it so that things will get through towards your success(逆境中自強不息以正面思維應對)

Engineering Life Challenges

Ir Dr Wong encountered various challenges and setbacks during his formative years. He flunked the English Subject in the Hong Kong School Certificate Exam despite scoring among the top in his class. He then entered the three-year Higher Diploma In Structural Engineering Program of the Hong Kong Technical College (HKTC), PolyU's predecessor, in the hope of obtaining a higher diploma and then work for his father's company. But this hope was disillusioned when he could not make up the passing grade of 60% for promoting to year 2 by a mere 0.6 points simply because of failing the thermodynamic subject with very low marks, 8 marks only. (27 out of 36 of the same class have illumined for the same reason).

He then worked for his father's small civil subcontractor firm. Ir Dr Wong did not give up his academic career. He enrolled the Chu Hai College for the part-time evening civil engineering degree course while working on the daytime for his father. Three years later, he went on to the University of Saskatchewan for his graduate studies and obtained his MSc. degree in Geotechnical

Engineering. While working in Canada, Ir Dr Wong took one year of intensive studies at the University of Calgary, and got another BSc(Civil) degree. He passed the Professional Examination of the Institution of Civil Engineers and the Instruction of Structural Engineers of UK in the same year and became a qualified professional Engineer.

Ir Dr Wong returned to Hong Kong in 1975, joined international consultants and involved in many large-scaled projects in Hong Kong and Canada, including Tuen Mun New Town Development, Prince of Wales Hospital and redevelopment of HSBC Building Mongkok, 1982 Expo site formation and ALRT substation at Downtown Vancouver.

After ten years of engineering consulting practices, Ir Dr Wong took the baton from his father in 1985 and transferred the company to a multi-disciplinary engineering and construction business group supported by over 3,000 associates. Ir Dr Wong received various honours and awards from Government and Institutions for his distinguished public services. He is a Fellow of four professional institutions and also honoured as one of the [2010 HKIE Hall of Fame]. In 2017, Ir Dr Wong was appointed as Professor of Practice (Quality Management)by the Hong Kong Polytechnic University. Ir Dr Wong has been admitted to the Hong Kong Academy of Engineering as a new Fellow in 2018 (FHKEng).

Ir Dr Wong's personal experience in his career from failure to success would give our young engineers some advice when young people has chosen engineering profession as his/her life job career:

- Make up your mind that engineer is your life career (i.e. you must like this profession).
- Select a discipline of engineering which is your most favorite discipline for career development and success.
- Try your best effort to learn and practice as much as you can from your senior through your HKIE training program until becoming a qualified Professional Engineer (PEng).
- Whenever any opportunity comes to you, think carefully and make a right decision
- Earnestly striving toward and treating others with sincerity.
- Foster"a Craftsmanship Spirit" of striving for the best for everything.
- When at the time of difficulty, always take a PMA (Positive Mental Attitude) and that things will get through towards success

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

Veneree Club 睿賢學社

社學賢睿

This is to certify that

_____

attended the

Engineering Exposition 2019

on

13 April 2019

from 09:00 - 14:00

at

Chiang Chen Studio Theatre,
The Hong Kong Polytechnic University
Hunghom, Kowloon

* 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.

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

Veneree Club 睿賢學社

睿賢會

Engineering Exposition 2019 Programme

09:05 – 09:15	**Opening**: HKIE President: Ir Ringo SM YU
09:15 – 10:40	**First Session** (Speaker presentation and Panel Discussion)
10:40 – 10:55	**Coffee Break**
10:55 – 12:20	**Second Session** (Speaker presentation and Panel Discussion)
12:20 – 12:30	**Closing**: Veneree Club Chairman: Ir Philip KWONG
12:30 – 14:00	**Lunch Discussion Session**

First Session Speakers:
Ir Dr CL CHAN
Ir Regis CHEE
Ir CK HON

Second Session Speakers:
Ir Howard LOK
Ir TH TAI
Ir Dr Peter KK WONG

After the Engineering Exposition at Chiang Chen Theatre around 12:30, we shall have lunch in a Chinese Restaurant, The Banqueting House (御苑皇宴). Your CPD Certificate will be chopped at the restaurant. Each Table, there will be an experience engineer and you can choose your table unless the table is already full. Please feel free to ask questions during the lunch gathering.

The Banqueting House
Shop 148, 1/F, Empire Centre,
68 Mody Road, Tsim Sha Tsui
御苑皇宴
尖沙咀麼地道68號帝國中心1樓
148號舖

Engineering Exposition is Organised by HKIE Veneree Club