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

Veneree Club 睿賢學社

2015 Engineering Exposition - Engineering Life Challenges

Saturday 30 May 2015 9:00 am - 2:00 pm

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

Engineering Exposition 2015 Programme

09:05 – 09:15	**Opening:** HKIE Vice President: Ir Joseph CHOI
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:** EngExpo2015 OC Chairman: Ir S W CHEUNG
12:30 – 14:00	**Lunch**

First Session Speakers:
Ir Dr John LUK
Ir Victor NG
Ir Louis SZETO

Second Session Speakers:
Ir CHOW Tang Fai
Ir HO Chi Shing
Ir MA Lee Tak

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禮樂賢膚

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Chairman's Message – Veneree Club

The HKIE Veneree Club "睿賢學社" was inaugurated on 18 Jan 2012. Since its establishment of Veneree Club, we aimed to enjoy the club activities in a retired & relaxed environment and at the same time, to contribute our experiences in serving the society. Each month, regular meetings were organized with interesting talks where retired engineers could expand their knowledge as well as meet both new and old friends. Some of these retired engineers also served as school engineers and school ambassadors, giving lectures in their own field. I am sure our Veneree Club organizes various meaningful activities for our retired members to enjoy and contribute.

With the remarkable successes in both 2013 and 2014 'Engineering Exposition' events, the Engineering Exposition 2015 is hence a repeated continuation. In Engineering Exposition 2015, we have six distinguished speakers and with more time devoted for questions and answers to enable more elicitation from our speakers. In order to enhance knowledge gains for our young participants of the Engineering Exposition 2015, a lunch gathering after the speakers' presentation and discussion is so arranged to enable young engineers to sit adjacent to experienced engineers for a deeper understanding and discussion with experienced engineers.

Currently, our Veneree Club represents HKIE to serve in the HKSAR Home Affairs Department 'AP Easy Building Maintenance Advisory Service Scheme' to provide professional advice for selected Owner's Corporation (of buildings aged 20 years) in to acquire consultant services. The Veneree Club has committed to deploy expert teams, comprising 2 experienced engineers each, as advisers for referral cases from HAD. Some young engineers also participated to assist these expert teams in keeping meeting record, appreciation in handling enquires and contractual issues. I believe it is also a good learning opportunity.

I would like to express our appreciation to our sponsors who provided the required financial support to enable this meaningful knowledge sharing be continued. I am most grateful to our 6 distinguished engineers for sharing their valuable career insights from motto, case experiences to engineering challenges. My thanks are also extended to our organising committee members for their hard work and contribution over the past few months of preparation. Finally, I would like to thank all our participants and wish them every success in their fullfilling career.

Ir John SZE Tak Wei
Chairman, Veneree Club
The Hong Kong Institution of Engineers
Session 2014/2015

HKIE Veneree Club Activities

The following is a list of activites that Veneree Club organised during Apr 2014 to Apr 2015. In the third Wednesday morning of each month, Tea Gathering with guest speakers giving interest talk is normally held.

Tea Gathering Talks

16 Apr 2014 Realising Economic Value via Voluntary Work - A Case of Residential Seepage
21 May 2014 Family doctor, Your health partner
18 Jun 2014 History of Engineering in Hong Kong
16 Jul 2014 Common Gastroitestinal & Liver Disease in Hong Kong--Prevention of Cancer
20 Aug 2014 NSA Surveillance, National Security and Privacy
17 Sep 2014 Dinosaurias
15 Oct 2014 3D Stero, 4K Cinema, and UHDTV in the Current Entertainment Industry
19 Nov 2014 Dementia
17 Dec 2014 Feng Shui and Sustainable Design
14 Jan 2015 Life After Retirement: 活齡人生 機遇無限
17 Feb 2015 《論嵇康 <聲無哀樂論> 與音樂和感情的關係》
18 Mar 2015 學對聯偶得
15 Apr 2015 「解除身心壓力」 禪修工作坊






Veneree Club Contributions to the HAD's AP Easy Scheme

HKIE Verenee Club represents HKIE to join the volunteering advice organised by the Home Affairs Department's 'AP Easy' Scheme aiming to assist HAD's selected eligible Owner's Corporation (OC) of buildings of aged 20 years and above with an average annual rateable value of residential units not exceeding $300,000. The Hong Kong Institute of Archetects and Hong Kong Institue of Surveyors also joined the above volunteering service. The Veneree Club will deploy expert teams, with each team comprising 2 retired engineers, to provide advice for referral cases from HAD. This Verenee Club project is under the leadership of our expertise engineer Ir Dr CHOI Yu Leuk as our Project Director. He will provide supports to all our HKIE expert teams.

Our HKIE expert advice will focus mainly on the technical aspects on proper identification of maintenance items and consultant selection procedures. The advisers will have 4 interviews, at HAD's office, to answer queries raised by the OC. Our service for each case will be completed when the OC has appointed the consultants.

In 2014, twelve experienced members of the Veneree Club, with the help of eight experienced Veneree Club members of various disciplines, had been mobilized to provide expertise advice at the interviewing sessions with ten OCs. In order to allow experience transfer to the young engineers in handling public affairs, the Veneree Club has also recruited eight graduate engineers or young engineers as the assistants to observe the interviewing process and prepare notes of meeting for internal reference. In 2015, the Veneree Club has agreed to continue providing the advisory service for more cases to be referred by HAD. The HKIE Veneree Club will also provide technical talk on Building Maintenance in a regional education seminar organized by HAD for the OCs.

Team	Expert Teams (Experienced Engineers)	Young Engineers
1	Philip Kwong SF	Edward YT Ho
	Wong TK	
2	Pun KW	Kevin CF Chow
	Peter SO YH	
3	Gordon Cho WF	Nicholase CP Lee
	Ip PL	
4	Ko WM	Henry TW Leng
	Martin Siu WK	CHUN Yuk Heng, Ivan
5	Anthony Kwan LF	Dave MW Chu
	Lam CS	
6	Chan KC	Joshua FW Chong
	Ho KK	

Engineering Exposition 2015 Organizing Chairman's Message

This is the third year HKIE Veneree Club orgainsing the Engineering Exposition. We will continue with last year's theme Engineering Life Challenges.

This year we have successfully invited six experienced engineering professionals to come and share with us their valuable experiences. I am sure our participants will enjoy their sharing and learn from their career challenges.

As the Chairman of the Organizing Committee, I also want to thank all our sponsors and the committee members to make this event successful.

Ir SW Cheung
Organizing Committee Chairman
Engineering Exposition 2015

Engineering Exposition 2015 Organizing Committee

Organizing Committee Chairman:	*Ir CHEUNG Shu Wing*
Members:	*Mr CHEUNG Sai Ping David*
	Ir KWONG Shi Fai Philip
	Ir LI Wai Lim William
	Ir PUN Kwok Wa
	Mr SIU Wai Kwong Martin
	Ir SZE Tak Wei John
	Ir TSANG Kang Ho Peter
Advisor:	*Ir Dr CHAN Fuk Cheung*

Dr John LUK Wang Kwong

BSc(Eng), MSc(Eng), PhD(Eng), MBA, DBA, LLB,
DipInternational Arbitration, LLM, MAArbDR, MA(Mus),
EdD, 法學碩士(人民大學), 藝術碩士音樂(中央音樂院),
LTCL(Vocal-Trinity).
FICE, FIStrE, FHKIE, FCIArb, FHKIArb, CEng,PE(NY),RPE,
AP,RSE, Arbitrator: HKIAC, CIArb,AIA,ICC, BeijingArbCom.
Mediator HKIAC, PPHKIE, PPHKIArb, PPACMA,
PCICE(HK Branch), PPRotaryClubHKIE, Barrister at law (UK, HK)

Disciplines: Civil, Structural, Soil Mechanics, Business Management, Law, Music, Education.

Projects in the USA: World Trade Centre, John Hancocok Tower, Sears Roebuck Tower, Embardero Centre, 8th St Subway New York.
Projects in Hong Kong: Worldwide Centre, Admiralty Centre, Tsim Sha Tsui Centre, Empire Centre, Wing On Plaza, South Sea Centre, Houston Centre, Mandarin Plaza, Peninsula Centre, Far East Financial Centre, Central Plaza, IFC, ICC, Route 3, South East Landfill etc.
Projects in mainland PRC: Beijing – Dong On Centre, Fong Jong Centre; Shanghai – IFC, ICC.

Project manager at Cheung Kong Holdings Ltd
Property Development Manager at Sino Realty Ltd
Assistant to Chairman and CEO at Sun Hung Kai Properties Ltd

AP, RSE, C.Eng., Arbitrator, Mediator, Adjudicator, Dispute Resolution Adviser.

Motto
「為學當如金字塔，要能廣大要能高」胡適.
Be versatile as Leonardo de Vinci and exquisite as Michaelangelo.

Case 1

As a young engineer I worked in the US in a heavy civil and foundation specialist contractor and consultant firm. When I worked on my assignments I always tried to come up with alternative solutions for value engineering purposes even took time out of my own. For the company's own construction works costs were thus saved. For consultant works clients appreciated that and for difficult projects many of them offered the company the works on cost plus basis. The boss of the company was so happy that he offered me full tuition fee at Columbia University for a part time post graduate degree in engineering and soil mechanics. Paradox: Was that a bonus for my performance or a way to ask me to work more for the company?

Case 2

When I was practising as AP and RSE I ran into tall building design problems then I pursued my PhD study at HKU. When I was practicing as executives in property development companies I ran into management problems then I pursued my MBA study at CUHK. When I ran into construction contract problems I pursued my legal studies. All these are job related.

For the music and education studies they are my personal interests.

Paradox: For myself they are either pragmatic or interesting. But some of my friends said "有自吾在,'才羅'苦來辛". However I enjoyed the process and outcome of these studies.

Engineering Life Challenges

Experience and vision in Continuing Learning/Lifelong Learning:

1. In secondary school I read Hu Shih's "Learning is like a pyramid, it should be board and big at the base and tall in height"「為學當如金字塔，要能廣大要能高」，胡適〈讀書〉.

2. Psychology indicates average people only use 3-5% of their brain power with lot of rooms for improvement.

3. Even in Renaissance many people were very versatile: Leonardo da Vinci and Michealangelo.

4. A super computer can perform multi-tasks simultaneously.

5. At HKU BSc (Eng) graduation, Professor Mackey advised that:

"Career in civil engineering calls for continuous learning: a good designers and drafter; a good team leader, a technical director, a business partner, and may be finally a politician as your career advances."

6. Alvin Toffler: three waves of the human civilization. First wave about 5000 years ago in Mesopotamia, between the two great rivers of Tigris and Euphrates. Changed hunting and nomadic mankind into settled farmers developed its ancient civilization. Second wave, Industrial Revolution started about 250 years ago in UK, revolutionized industrial production and manufacturing and brought about economic and military successes for those countries. Third wave, Information Revolution started about mid-20C in USA. Currently the world is trisected into: the first wave sector supplies agricultural and mineral resources; the second wave sector provides cheap labour and mass production works; the third wave sector strives for dominance based on new ways they created knowledge.

7. Even within the first wave and second wave sectors, new knowledge and innovations would bring about breakthroughs and successes. In the first wave sector, Yuan Longping (袁隆平)'s successes in the cross-breeding of water-rice plants, directly helped to solve the starvation problem of the world. In the second wave sector, new inventions and innovations brought about the increase and utilization of industrial or manufactured products for the benefits again to mankind. These all show the importance of knowledge, be they in the first, second or the third wave sector.

Ir Victor NG Kwok Ho

BSc(Eng), CEng and FHKIE

Disciplines: Electronics,
Information Technolgoy

Ir Ng graduated from the University of Hong Kong with Electrical Engineering Degree in 1976. He founded Micom Tech Limited in 1981. In the first few years, he had managed several successful technology-based projects including the development of Micom68 Microprocessor Development System in 1982 (first in HK), two award winning intelligent talking toys (Winners of "Toys of the Year 1985") and the Cellular Notebook PC which won the Governor's Award in 1989.

With the success of the projects, his team gained the recognition of the industry. Under his leadership for the past 33 years, over 2,700 designs were completed and turned into production for world-wide clienteles, which was a leading record of the field in the region.

As an expert of electronic technology, Ir Ng was appointed by HKSAR Government serving as Board Members for three R&D centers (ASTRI, LSCM and NAMI) and panel members for the three major schemes of Innovation Technology Fund (ITSP, SEARP, DesignSmart).

Motto

Enjoy your work every day. Learning is Fun! Be innovative. Never give up! Professional integrity is of highest importance!

Case 1

In 2000, we were approached by a world famous toy manufacturer for developing an intelligent robotic dog which could walk, sit, standup as well as doing all kind of tricks with verbal commands. The target product cost was only 20% of the Sony's model. An 80% cost cut was a mission impossible! In order to do it, we chose a time-sharing approach using one 16bit SoC to control all 16 motors while the traditional robotic approach was using a star network approach with a 32/64bit host SoC plus one controller chip per motor. Finally we met the target and came out with iCybie robotic dog that was priced 1/5 of the Sony'a model and 150kpcs were sold.
The lesson I learned – Learning is fun. Be innovative!

Case 2

In 2003-2004, in response to the success of iPod, my company went into partnership with Texas Instruments (top 2 semiconductor company worldwide) to develop a platform reference design for Portable HDD Digital Music/Media Player for global market. The project was named Raga with color TFT LCD and supported MP3 record/playback, JPEG player for photo sand video player of MPEG4 files. Target to provide a reference design solution for the global manufacturers with up-to-day features and headroom to lead the market and down the road. In order to provide similar functions supported by iTune, through Texas Instruments, we received the support from Microsoft to use the DRM Play-for-sure technology. But the result was not as we (and Texas Instruments) expected! And we were forced to leave the market in the end of 2006!

The lesson I learned – There is much to learn if we want to be a winner in the technology industry!

Engineering Life Challenges

After graduation, I did not succeed to find a post on the new digital electronics sector as my first job. I took up a post of assistant engineer of a radio manufacturer instead. Understanding that my study in HKU was inadequate for new technology of digital electronics / microprocessor system, I started to explore these areas by self-learning with the D2 6800 Microprocessor kit from Motorola. And working with several HKU alumni, we built a computer system based on the popular mini-computer PDP11 CPU core. With this experience, I got a new job with the title of Microprocessor Engineer in early 1978. Since then I can focus my energy an microprocessor-based technology.
My advice: Never give up! And we must equip ourselves with problem solving skill and self-learning capability.

After working for four years, I was promoted to the post of Electronic Engineering Manager under the General Manager who was a mechanical engineer by training and his advice to me was that I should give up working on detailed design work and focused on improving my management skill and started to learn how to be a good business man. In order to keep working on technology, I decided to setup my own technology company to focus on applied R&D. Founded in 1981, the company was named Micom Tech Limited which stands for microcomputer technology.
My advice: Choose the job you like and enjoy your work every day!

In 1997-2000, we had been very successful on smart toys development with sales of 18 million pcs of GigaPets, 35 million pcs of Furby toys and 10 million pcs PooChi series of toys. And I was approached by a number of companies asking me to release the designs for making clones. The financial offer was very "generous"! Of course, as a professional engineer, my answer could only be a NO.
My advice: Professional integrity is of highest importance!

Ir Louis SZETO Ka Sing

Higher Certificate in Mechanical and Marine Engineering,
EC Part II Examination, RPE (MCL, MNA), FHKIE, FHKIMT
C.Eng., FIMechE, FIMarEST, FEI

Disciplines: Mechanical, Marine & Naval Architecture, Energy

My skills and knowledge are quite broad that covering Electrical and Mechanical, Marine and Naval Architecture, Energy, Petroleum and Gases, Transport and Environment. Design and Projects Management, Repairing and Maintenance Management, Safety Management in HAZOP Study, Risk Matrix and Job Hazard Analysis, Internal Combustion Engines Issues Diagnosis and Fire Fighting System.

Amongst all, I like to share one of my career achievement was successfully to overcome the LPG Submersible Pumps frequent seizures (Min 4 months and Max 9 months) that affecting the daily operation to Company, Customers on Product Curtailment and Ocean Tanker Receiving. More seriously was all 4 Mounded Tanks Submersible pump failure in the same time with limited back up due to one booster pump out of two was also failed to operate that result the unloading difficulty to bulk tanker for customers delivery and product receiving from Ocean Tanker that incurred demurrage charges.

Involved in Shell Tsing Yi Installation Design and Built and Commissioning from 1986 to 1990. Applied LPG Mounded Tank Revalidation and re-commissioning by introducing environmental and energy saving innovative methodology with Shell Global recognition and award in 2004

Motto

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"

Case 1

With the experience gained from ALL Submersible Pumps and one of the Booster Pump in LPG Terminal, I did a comprehensive HAZOP study in order to ascertain NO re-occurrence of such nightmare by introducing the System Back Washing to ensure no blockage of the submersible filter of the pump's top bearing, also had a daily monitoring the loading current of the 3 phases to ensure no over current of >130 Ampere of each phase. I also introduced the reuse of bearings after re-conditioning method that prolonged the lives of the pump for operation extended to another 15 months where Maker recommendation is lifting out the pump for repairing after 18 months in services. As the Pump's bearings are patterned by Makers and the costs are very higher on purchasing, hence, I studied the bearings material and features for the possible alternative replacement. Successfully achieved with costs reduction and the substituted bearings that inserted last over 24 months.

Case 2

Under normal practice, LPG tank under revalidation should first empty the liquid and compressed the vapor to other assigned tank, then introduce water to purge the balance vapor until reaching the tank's upper level. Disconnect and blank the cargo and issue lines as well as the PRV. Continuous introduce of water under the remaining air in tank is completely purge out. Then carry out hydraulic test for Registered Competent Person 1 and EMSD inspection. Re-commissioning the tank by introducing compressed air for leak test after connecting back the cargo and issue lines and PRV. Where in the past, the normal practice was introduce water into tank and then purge out with compressed air for leak test, then insert nitrogen to purge out the air with monitoring the oxygen content by meter before introduce vapor LPG to equalized the pressure before filling in liquid LPG. With the innovative methodology, achieved water charges saving for 15,000 m3, and saved the time on purging out water of 7 days, and not to mention the benefit of plant air released to atmosphere and vacuum process being applied with time and costs saving.

Engineering Life Challenges

Engineering is a word that covering a big family trees of multi Disciplinary with multi tasks, skills and knowledge. In my dictionary, there is no boundary and/or skills limit amongst. No matter you are studying or later specialists in Mechanical, Electrical, Marine or Building Services or Etc. When we selected studying and working in the Engineering Family, we are proud of ourselves as Engineer has innovative and creative mindset.

However, we should bear in mind 2 phases are – "A Person looking for A job or A Job looking for A Person". In a real life, we always phase smooth and hard time on studying and/or career. Let me sharing with you ALL that I experienced on "A Persons looking for A Jobs:- Once you faced with a difficult issues and challenge, if you enjoy your studying and career, no matter how hard that you faced, you would think deeply in order to identify the facts of the issues and determine the aid/methods to solving it. Even you cannot overcome the issues, you would stand firm to inquire and consult your seniors or reviewing the past cases studying result until the issue being solved. Vice Versa, A Job looking for A Person, you cannot stand firm to fact and solve issues and challenge as you are not so interest with your selected subject to study or work.

Engineering is one of the major contribution and factor worldwide to construct and support the Society. Our living and products manufacturing shouldn't lack of Engineering. With such, the continuity and sustainability relay on the successors of the youths. Let me sharing the case as an example to you ALL, where this also a success in real engineering challenge is:-

I was the Vice Chairman and China Sub-Committee Chairman of the Institution of Mechanical Engineers, Hong Kong Branch. My target was (1) to let the young engineers to be our successor in Mainland China in the future and (2) bring up the English writing and speaking level of the Mainland China University Students. I started to introduce the young engineers to the seniors and professors by giving them opportunity to present papers in Putonghau and present gift in the seminars, so that their face are well known by the Seniors and Students. Moreover, I communicating with students in bilingual writing at the beginning 3 months and the Students Mainland China agreed in return with English writing after 3 months and my response was in Chinese. I am proud of the success of Young Engineers and Students in both Hong Kong and Mainland China. This shows that there is no difficulty in the world if you act correctly.

Ir CHOW Tang Fai

Bachelor of Science (Engineering)
Master of Business Administration

Discipline: Electrical

Being an electrical engineer, I have worked in the power utility sector in Hong Kong and overseas for over 30 years, holding various positions in power system operations, projects, marketing and customer services. I am currently the Chief Operating Officer of CLP Power managing the generation, transmission, distribution and information technology businesses.

I am an advocate of eco-friendliness and live by this value throughout my career. Here are some examples: establishing the green substation protocol in early 2000's, pioneering the development of smart grid and advanced metering infrastructure (AMI), popularising electric cooking which is cleaner and more energy efficient.

Motto

Where there is a problem, there exists a solution.
有問題就有答案

Case 1

In 2000, CLP encountered difficulties to provide 132kV supply in time to Sham Tseng and Ma Wan. The most natural and direct supply connection was land cables along Castle Peak Road from an existing 132kV substation in Tsuen Wan to Sham Tseng and then submarine cables across Ma Wan Channel to Ma Wan. However, road opening on the busy Castle Peak Road was not possible until a few years later when it was widened. As an interim alternative, a clever scheme was devised to loop supply through existing cables to Lantau and extend it to Ma Wan and Sham Tseng by submarine cables across Kap Shui Mun and Ma Wan Channel.

Laying submarine cables on the seabed of the two channels was highly risky and disruptive due to irregular topography, strong currents, heavy shipping traffic, disturbance to the seabed and damage from the dragging of ships' anchors. Horizontal Directional Drilling (HDD) through the seabed, which was uncommon at the time, was ultimately adopted. The combined length of the two crossings (2,100m) made this project the world's largest in hard rock. When completed, this undersea cable network not only supplied the growing electricity demand of Sham Tseng and Ma Wan, but eventually formed part of the supply network backbone for Lantau several years later after 132kV land cables was laid in conjunction with Castle Peak Road widening thus connecting the submarine cable crossing to a substation in Tsuen Wan.

Lesson to learn: It's important to get away from all the typical conventions in order to foster creativity

Case 2

During my time as a middle manager, I was once assigned the responsibility to negotiate a commercial settlement. Because of the high value of that settlement, it has to be reported to a Steering Committee (SC) for approval. The Committee was chaired by my Director, with other members comprising the Commercial Director and senior managers from various departments. The proposal that I presented was challenged strongly by my Director as it was different from the idea already in his mind. He was echoed by some of the SC members. Despite the unfavorable position, I defended rigorously. The debate was confrontational, to the extent that my Director was annoyed and terminated the meeting.

I reflected thoroughly, compared my proposal to that of my Director and convinced myself that mine was to best interest of the Company. I discussed with the Commercial Director and got his buy-in. So I decided to have another go at the SC. Again, the discussion was heated but with the Commercial Director's support, my proposal was eventually accepted.

After the meeting, my Director called me in and congratulated my perseverance. However, he made a comment that I should have communicated my thoughts earlier to him.

Lesson to learn: Don't give up easily even under the pressure of your boss. Defend decisions with confidence and takes personal responsibility. However, not every boss has a great heart and broad mind. So engagement of your boss is always important and you need to take time to analyse what's the best way to engage him.

Engineering Life Challenges

In a world where resources are drained quickly and climate change consequences are becoming more apparent and destructive, sustainable development is the biggest challenge for mankind. As engineers, we have an important mission to protect the place we live in by means of sustainable design and construction. We need to strike an optimal balance amongst the environment, economy and society. With these in mind and embracing the environmental and social responsibility values of the Company that I work for, resource conservation, environmental performance, social inclusion and ethical standard have become my personal values in managing projects. To uphold these values and at the same time complete projects with high certainty of cost and time are challenging and exciting. It is challenging because CLP, as a public utility that is committed to powering Hong Kong responsibly and heavily scrutinised regulatorily, has set very high standard and compliance requirements. This makes very little room for cost, scope and specification variations. It is exciting because tight constraints can usually stimulate new thoughts. My experience over the years was that if you believe you can do it and are determined to do it, it can always be done.

"Where there is a problem, there exists a solution"

Ir HO Chi Shing

BSc(Eng), LLB(MMU), MBA(HK), CPE, PCLL,
PGD (Software Engineering)
FCIBSE, MHKIE, PE(California), Barrister-at-law

Disciplines: Electrical, Building Services,
Environmental

The Chief Building Services Engineer of the HK Housing Authority responsible for, at different stages, the design, construction, operation, maintenance and improvement of building services equipment; and management of public housing estates.

Currently the General Manager of BEAM Society Ltd., overseeing the management and operation of the organization.

Motto

Be at ease in all encounters, give of yourself, as conditions permit.
隨遇而安，隨緣奉獻。

Case 1

Outsourcing of the operation, management and maintenance of over 200,000 public housing units, against the desire and wish of the majority of staff of Housing, and in the face of extremely tight timeline. Tasks completed as scheduled.

Lessons to share:

- A mission impossible may not be as impossible as it seems.
- Many problems are actually "questions" which do have answers.
- Once you see the problems/questions from different angles, you can also see that there are quite a number of options/solutions.
- Use top down instead of getting too involved in the bottom too early.
- Methodology is the first most important issue to address.
- Divide and Conquer: 治眾如治寡， 分數是也。

Case 2

Switch from engineering professional to lawyering profession at the age of 60.

Lesson to share:

- Identify your goals, identify the path(s); and
- Be firm on your goals and target; but
- Be flexible on your approach and timeline

Engineering Life Challenges

The key word I would like young engineers nowadays to remember is "adaptation".

When I left the university, I was lucky that I face a more stable environment than it is today. I could find a job relatively easier. In fact I got my first job with CLP before I even sat for my final year examination.

I joined engineering practice and I remain an engineer up till now. I knew quite well what I would be doing and where I was going to and the path I was about to take. At my early dys, the world really changed in quite a predictable pace, although the technology does undergo rapid advancement , in particularly during the past 10 to 15 years.

But if you browse through my career life, you would find that I have in fact "diversified" into other fields, such as housing management, policy formulation, and even education, to name just a few. That means I have moved from one sector to the other, until now, I move over to lawyering.

For young engineers of today, they face a very different world and society, which can characterized by the acronym VUCA, which stands for Volatility, Uncertainty, Complexity and Ambiguity. Simply put, the world is changing at a relentless pace like a high speed rocket, dust off those who fail to follow its pace. To survive, you need to adapt. The better you are in your adaptation, the better your career and working life.

Ir MA Lee Tak

BSc(Eng), MSc(Eng)
FHKIE, MICE, MIStructE, FCIWEM, FIHT

Disciplines: Civil, Structural, Geotechnical, Environmental

Ir MA has over 37 years Government public works experience and administered numerous projects including the Central to Mid-level Escalator, Ap Lei Chau Bridge Expansion, Island Eastern Corridor, Hung Hum Bypass, West Rail, Tseung Kwan O Line, Ma On Shan Rail, Central - Wan Chai Bypass, Central Reclamation, Wan Chai Development, Cross Harbour Watermain, Territory-wide Watermain Replacement and Rehabilitation, Tai Po Water Treatment Works Expansion, Tseung Kwan O Desalination Plant and New Territories Wastewater Recycling Scheme. He has developed various highway maintenance and utilities administration systems, implemented creative public engagement processes, promulgated the "Total Water Management Strategy for Hong Kong" and introduced novel energy recovery and water-quality management systems for water supplies. He was awarded Silver Bauhinia Star in 2013.

Motto
Solid knowledge, good dedication and passion, and flourishing imagination help one claiming new heights and exploring new work frontiers for building sustainable systems and projects for the benefits of mankind.

Case 1

The Central Reclamation and Wan Chai Development were highly politically charged mega work projects. The inception, planning, design and construction of the projects spanned through decades and public opinions and expectations in relation to the projects changed considerably with time. This had resulted in immense difficulties for the Government in running through the concerned statutory, administrative and financial approval processes. The huddles were pushed even higher with litigations raised by stakeholders and heated debates in the Legislative Council. To win public support, we launched extensive public engagement exercises with open and transparent project information provided. We set up adversarial consultative forums for flushing out thoughts for consensus building on project vision and implementation arrangements. The experience pointed to the need of regular review of long-term social, environmental and economic core values in the community in guiding its development choices. Regular re-energization and quick-wins are also essential for maintaining public enthusiasm.

Case 2

Climate change and the fast pace development in the Pearl River Delta areas have posed various challenges to the reliability of good quality water supplies in Hong Kong. We promulgated the "Total Water Management Strategy for Hong Kong" in October 2008. The Strategy contains robust water supply and demand measures to ensure the sustainable use of water resources to 2030 and beyond. The Strategy was formulated based on a holistic view, balancing the social, environmental and economic factors and the capabilities of the implementation agencies involved. Clear vision has been set. Technological advancements have been adopted and paradigm shifts promoted whenever possible. The water supply and demand measures in the Strategy are all scalable measures, which allow for phased implementation and staged review in a bid to garner high-level policy support for funding injection. The Strategy so devised has proved to be a living strategy well respected by all concerned.

Engineering Life Challenges

Engineering is an ever-evolving field with a myriad of challenges across different domains and disciplines. We are often required to analyze very complex issues, generate multi-faceted solutions and perform complex cross-disciplinary tasks. Solid relevant knowledge and experience, passionate devotion to work, vigilance and out-of-the-box thinking are essential for accomplishing such tasks. We also need to keep ourselves well up-to-date to grasp the opportunities offered by latest technological advancements.

We are primarily professional service providers and advisors to our clients and the community. We must therefore well communicate our works and project delivery processes with our clients and other stakeholders, taking into consideration the difference in background and the diversified views and value judgments that they may have on the concerned issues. Moreover, they often require our assistance to acquire the necessary information and knowledge to crystallize thoughts and formulate views on our proposals. Creative public engagement skills and processes are therefore essential. We will have to share the related information, data, analysis and findings clearly and passionately with our clients and concerned stakeholders for building rapport and gaining support.

We, engineers, usually work as a team. Effective team work depends on good dynamics of the group. Open, tactful and honest communication without hidden agenda or diffusion of responsibility are essential ingredients. We must be well prepared to readily contribute to the team whole-heartedly for achieving shared goals. We must be fully committed to making collective decisions objectively through in-depth deliberations and critical debates. We need also bear in mind that leisure workplace setting and harmonious working relationship are conducive to exchange of views and promoting creativity. We should always be humble and with our feet standing firmly on ground for taking on any role necessary to accomplish the required tasks, whether it is a leadership role or a subordinate role.

HKIE Engineering Exposition 2014

The 'Engineering Exposition – Engineering Life Challenges', held on 10 May 2014 at Causeway Bay Regal Hotel, was jointly organized by HKIE Veneree Club and HKIE Young Members Committee. There were 6 distinguished speakers to share their experiences gained, lessons learned and challenges encountered during their engineering careers. These 6 speakers were Ir Dr James CW Lau, Ir Dr Otto LT Poon, Ir Benny YK Wong, Ir Prof Chan Ching-cheun, Ir Dr Cheng Hon-kwan, Ir Dr George LW Sze. There were some 200 participants, mostly young engineers, sharing of their valuable experienes.

Motto
Be positive, when the opportunity comes along, grab it.

Motto
To commit, to perform, to deliver.

Motto
Don't just follow rules and practices. Go to the fundamentals and understand the basis of these practices.

Motto
6Is: Inspiration, Imagination, Innovation, Integration, Implementation and Investment

Motto
Onward & Upward. Seeking Truth from Facts

Motto
Be honest & trustworthy. Work diligently. Know & help more people. Be flexible.

HKIE Engineering Exposition 2013

The 'Engineering Exposition – From Engineering Career to Life Challenges', held on 11 May 2013 at Novotel Century HK Hotel, was jointly organized by HKIE Veneree Club and HKIE Young Members Committee. There were 12 distinguished speakers and 5 well-recognized CEOs to share their experiences gained, lessons learned and challenges encountered during their engineering careers. These 12 speakers were Ir SW Cheung, Ir YL Choi, Ir CK Lau, Ir Gregory Lo, Ir John Sze, Mr TK Wong, Ir FC Chan, Ir CK Chow, Ir Henry Lam, Ir Wanbil Lee, Ir Ian Robertson and Jolly Wong. The 5 CEO speakers were Ir Derrick Pang, Ir Paul Poon, Ir TC Chew, Ir CT Wan and Ir James Chiu. There were some 200 participants, mostly young engineers. They participated actively in and enjoyed very much the Individual and Group Project Competitions, and built up the networking diligently with the distinguished speakers, CEOs and experienced engineers during the cocktail reception and dinner gathering.

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

Veneree Club 睿賢學社

This is to certify that

_____

attended the

Engineering Exposition 2015

on

30 May 2015

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.

Engineering Exposition 2015 Programme

09:05 – 09:15	**Opening:** HKIE Vice President: Ir Joseph CHOI
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:** EngExpo2015 OC Chairman: Ir S W CHEUNG
12:30 – 14:00	**Lunch**

First Session Speakers:
Ir Dr John LUK
Ir Victor NG
Ir Louis SZETO

Second Session Speakers:
Ir CHOW Tang Fai
Ir HO Chi Shing
Ir MA Lee Tak

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禮樂賢膚

Acknowledgements

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Atkins
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CLP Power Hong Kong Limited
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