



# ACES WEBINAR 2021

## 29 & 30 Apr 2021

### INNOVATIONS, CHALLENGES AND REGULATORY DEVELOPMENT



## Mode of Delivery: Zoom Webinar

Register in advance for this webinar:

[https://us02web.zoom.us/webinar/register/WN\\_202CtBpNT0SBPsiB32NigA](https://us02web.zoom.us/webinar/register/WN_202CtBpNT0SBPsiB32NigA)

After registering and payment being made, you will receive a confirmation email containing information about joining the webinar.

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**CPD: 14 PDU / 14 STU (M&E) / 6 STU (Structural) approved**

Note to all participants: CPD points will be awarded based on the actual duration of the session that you have attended.

Day 1	Day 2	Fee per Person
29 Apr 2021 (Thu) 9.00 am to 6.00 pm	30 Apr 2021 (Fri) 9.00 am to 6.00 pm	ACES Member \$80 RE/RTO/ CIJC Members \$120 Non-Member \$150

## INTRODUCTION

As Consultants, we are facing daily challenges of regulatory changes, keeping in pace with technology advancement, continual effort to improve efficiency in our works and ensuring core competency is always maintained as well as continual progression in learning from engineering challenges faced in the industry.

ACES as a representative of practitioners is always looking for ways to keep our members well informed of the industry practices, advancements and changes via these seminars to meet the challenges above.

## OBJECTIVES

Our target audience are Professional Engineers & Practitioners (QPDs QPSs), Engineers, RE/RTOs and Builders in the industry. The focus of this seminar is to provide a platform for sharing of innovative experience in line with productivity; share challenges in underground / infrastructure projects; and updates of regulatory requirements.

In order to achieve this objective for the better of the industry, there will be speakers from Government Agencies, Consultants and Contractors to share the insights and experiences with the audiences.

## PROGRAM OUTLINES

### DAY 1: 29 Apr 2021 (Thu)

C&S Session 1			CONTENT	SPEAKERS
9.00 am			Welcome Address by ACES Vice President	Er. Chuck Kho (ACES)
9.05 to 9.55 am	50 mins	1.	Challenges in Regulatory Compliance	Er. Lung Hian Hao (BCA)
9.55 to 10.45 am	50 mins	2.	Innovative Solutions for Keppel Viaduct Widening	Er. Chew Boon Fei (YWL)
10.45 to 11.00 am			Short Break	
11.00 to 11.50 pm	50 mins	3.	Application of Vertical Sinking Machine Method for Shaft Construction	Mr. Chen Ying Kang (STEC)
11.50 to 12.40 pm	50 mins	4.	Innovative engineering solutions in Hong Kong-Zhuhai-Macau crossing	Mr. Tong YuQiang (CCCC)
12.40 to 1.00 pm	20 mins		Q&A	Moderator: Er. Yong Fen Leong (ACES)
1.00 pm			Lunch break	

MEP Session 1			CONTENT	SPEAKERS
2.00 pm			Welcome Address by ACES President	Er. Teo Yann (ACES)
2.05 to 2.55 pm	50 mins	1.	Key highlights of the Singapore Green Building Masterplan and overview of the Green Mark 2021 framework	BCA - Mr Ang Kian Seng, Group Director for Environmental Sustainability
2.55 to 3.45 pm	50 mins	2.	Sustainability and resiliency – A paradigm shift in ACMV system design and operation	Prof. Chandra Sekhar (NUS)
3.45 to 4.00 pm			Short break	
4.00 to 4.50 pm	50 mins	3.	Delivering MEP Consultancy Services for Public Healthcare Projects + Q&A	Er. Joseph Toh Siaw Hui (MOHH)
4.50 to 5.40 pm	50 mins	4.	Environmental Sustainability through Efficient M&E Design	Mr Lee Ang Seng (SGBC/Beca) Ms. Irene Yong (Beca)
5.40 to 6.00 pm	20 mins		Q&A	Moderator: Er. Choong Choon Guan (ACES)
6.00 pm			End of Day 1	

**DAY 2: 30 Apr 2021 (Fri)**

<b>C&amp;S Session 2</b>			<b>CONTENT</b>	<b>SPEAKERS</b>
9.00 to 9.50 am	50 mins	5.	Adopting a Risk-Based approach to Building Impact Assessment	Dr. Goh Kok Hun (LTA)
9.50 to 10.40 am	50 mins	6.	Top-Down Construction and Installation of Plunged-In CHS Kingposts	Er. Roby Gunawan (Woh Hup)
10.40 to 10.55 am			Short Break	
10.55 to 11.45 pm	50 mins	7.	Applications of Ground Improvement in Managing Geotechnical Risks	Dr Leong Kam Weng (Keller)
11.45 to 12.35 pm	50 mins	8.	Challenges and Innovative Engineering Solutions in Paya Lebar Quarter	Er. Rudi Lioe (Arup)
12.35 to 12.55 pm	20 mins		Q&A	Moderator: Er. Gwee Siong Mong (ACES)
12.55 pm			Closing Remarks by ACES Vice President	Er. Chuck Kho (ACES)
1.00 pm			Lunch Break	

<b>MEP Session 2</b>			<b>CONTENT</b>	<b>SPEAKERS</b>
2.00 to 2.50 pm	50 mins	5.	Domestic hot water heaters' usage and its Climate Impacts on Singapore	Prof. Lee Siew Eang (Honorary Fellow, NUS)
		6.	Introduction and live demonstration of smart IoT appliances for low carbon and sustained living of today's residential homes	Mr. Soh Guan Hong (City Gas)
2.50 to 3.40 pm	50 mins	7.	Improved efficiency and operation with intelligent VLT drives	Mr. Peder S. Spek (Danfoss)
3.40 to 3.55 pm			Short break	
3.55 to 4.45 pm	50 mins	8.	Building Data and "the Cloud"	Mr. Simon Mahoney (Easy I/O)
4.45 to 5.35 pm	50 mins	9.	eMobility and Schneider Electric – Driving towards a 100% electric mobility to a net-zero destination	Adrian DUQUE / LAU Jia Hui (Schneider Electric)
5.35 to 5.55 pm	20 mins		Q&A	Moderator: Er. Yeow Mei Leng (ACES)
5.55 pm			Closing Remarks by ACES President	Er. Teo Yann (ACES)
6.00 pm			End of Day 2	

## C&S: THE SPEAKERS AND THEIR SYNOPSES

### 1. Challenges in Regulatory Compliance

#### Synopsis

Brief update on areas of regulatory concerns and learning points from a case study.

#### Speaker: Er. Lung Hian Hao (BCA)

Er. Lung Hian Hao graduated with a Degree in Engineering (Civil) from Nanyang Technological Institute, Singapore in 1987 and subsequently also obtained a Master of Science (Civil Engineering) from the National University of Singapore in 2001. He is a registered professional engineer with more than 30 years of experience involving design, construction and regulatory work.

He is currently a Director in the Building Engineering Group, Building and Construction Authority (BCA). His portfolio in BCA includes formulating policies on building safety and overseeing the regulatory framework that ensures building works in Singapore are designed and constructed safely and in compliance with the structural safety requirements of the building regulations.



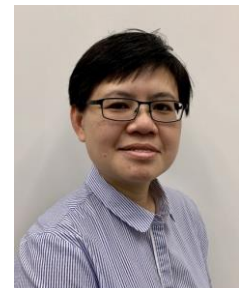
### 2. Innovative Solutions for Keppel Viaduct Widening

#### Synopsis

The 2.2km Keppel Viaduct in downtown, with Keppel Road running underneath it is the first tow-tier road system in Singapore. The Keppel Viaduct was completed in 1985 and it connects the MCE in the east with AYE in the west. To release the traffic congestion, the existing Keppel Viaduct was upgraded to the stipulated LTA design criteria and design codes and widened from dual 3 to dual 4 lanes with the reconstruction of exit ramps from 1 lane to 2 lanes. The widening of the Keppel Viaduct was achieved by closing the gap between the existing east and westbound carriageway and extending the structural deck on both sides. With careful evaluation of the existing site constraints and structural capacity in the Keppel Viaduct, several innovative engineering approaches were introduced in the project resulting in the safe and quality engineering works.

#### Speaker: Er. Chew Boon Fei (YWL)

Chew Boon Fei is an Associate Director with YWL Engineering Pte Ltd. She graduated from the National University of Singapore with BEng and MSc in Civil Engineering. She has more than 20 years of civil and structural engineering design experience in both building and infrastructure projects. In the last decade, she has focused primarily on bridge projects located in Singapore and Hong Kong SAR. Some of the key projects include Sentosa Boardwalk, Keppel Viaduct Widening, ECO Link Bridge, Hong Kong – Zhuhai-Macao Bridge Hong Kong Link Road and Sky Bridge in the Hong Kong Airport.



### 3. Application of Vertical Sinking Machine Method for Shaft Construction

#### Synopsis

Almost all tunnelling projects require shafts, either as launch and reception shafts for the tunnelling process or for inspection, ventilation and rescue purposes. There is also a trend towards infrastructure installations at ever-deeper depths and with this comes the need for more advanced and efficient method for shaft construction. This presentation focus on the application of Vertical Sinking Machine method including the requirements, challenges and benefit that comes with this method of construction.

#### Speaker: Mr. Chen Ying Kang (STEC)

Chen Yingkang is the Senior Tunnel Manager for Shanghai Tunnel Engineering Co (Singapore) Pte Ltd. He has more than 19 years of experience and has worked on projects in China and Singapore. He is currently Senior Tunnel Manager for \$472 million PUB Deep Tunnel Sewerage System project T-11. Prior to this, he was involved in the successful completion of 4 nos of LTA projects with a total completed tunnel length of 23 km.

Yingkang has extensive experience in the construction of metro and sewer tunnels using EPB and SPB machines. His VSM experience is from his current PUB DTSS T11 project whereby 3 nos of deep shafts have been successfully been completed.



### 4. Innovative engineering solutions in Hong Kong-Zhuhai-Macau crossing

#### Speaker: Mr. Tong YuQiang (CCCC)

### 5. Adopting a Risk-Based approach to Building Impact Assessment

#### Synopsis

Activities associated with underground construction causes ground movements that may affect buildings within their zone of influence. The presentation discusses various considerations in assessing impact on buildings arising from underground construction, and how a risk-based approach can be adopted, in terms of the impact assessment framework, in terms of incorporating existing building condition, and in terms of building monitoring.

#### Speaker: Dr. Goh Kok Hun (LTA)

Goh Kok Hun is currently Director Civil Design & Land, in the Land Transport Authority of Singapore. He has about 20 years of geotechnical engineering experience, and has been involved in the design aspects of several road and rail infrastructure projects in Singapore, including the Fort Canning and the Woodsville road tunnels and more recently the North-South Corridor road and Cross Island Line rail projects. His doctoral study was on the "Response of ground and buildings to deep excavations and tunnelling" and he has also conducted specific studies in other aspects of geotechnical engineering design. He is registered as a professional engineer in civil engineering as well as a specialist professional engineer in geotechnical engineering in Singapore, and also a chartered professional engineer.



## 6. Top-Down Construction and Installation of Plunged-In CHS Kingposts

### Synopsis

Top-Down construction is a common method of construction in Singapore. One of the requirements for the construction is to support temporarily the ERSS slab during excavation down to reach formation level which commonly achieved by installing kingposts as the slab/strut support.

Installation of the kingposts in the job site will pose certain challenges and must be planned properly.

Speaker will discuss more on this subject

### Speaker: Er. Roby Gunawan (Woh Hup)

Roby has all-round design experience in civil engineering field from subcontractor, consultancy firm and main contractor. For the last 9 years, he is part of technical team in main contractor firms doing construction of Downtown Line 3 stations and Underground Kim Chuan Depot Extension. He is a registered Professional Engineer in Singapore



## 7. Applications of Ground Improvement in Managing Geotechnical Risks

### Synopsis

With rapid urbanization in major cities in the region, many infrastructure and industrial projects are developed on areas with very poor soil (e.g. estuarine or swamp) or on challenging geology (e.g. Karstic Formation). Such areas pose many geotechnical risks such as settlement, bearing capacity or stability concerns. Ground improvement techniques can be used to resolve these challenges. This seminar will give an overview of Ground Improvement technique. Case studies will be presented to illustrate the applications of various Ground Improvement techniques in overcoming geotechnical risks for Industrial projects in Singapore & Malaysia.

### Speaker: Leong Kam Weng (Keller), BEng (Civil), PhD

Dr. Leong graduated with Bachelor of Engineering (First Class Honour) in Civil Engineering from University of Malaya, Malaysia. He obtained his PhD from the National University of Singapore. He has more than 20 years of experience in Geotechnical Engineering. He has been active in the design and execution of Ground Improvement projects in South East Asia (ASEAN) for Keller like Neste Biodiesel Plants in Singapore and KVMRT project in Malaysia. He is currently the Director of Keller Foundations (S.E. Asia) Pte Ltd, overseeing the business development of the Ground Improvement business in ASEAN. He is a member of the Geotechnical Society of Singapore (GeoSS) since 2008, served as committee member since 2012 and Vice President for 2014-15. He was the President of GeoSS for 2016-17. He received the Outstanding Geotechnical Engineer award in 2018 from GeoSS in recognition of his contributions to the geotechnical society and industry in Singapore.



## 8. Challenges and Innovative Engineering Solutions in Paya Lebar Quarter

### Synopsis

Paya Lebar Quarter, PLQ in short, is a regional hub that forms the core of the rejuvenated Paya Lebar central area. The development is bounded by existing two MRT stations (an elevated EWL station and an underground CCL station) and cut across by existing large diameter public sewer networks, 12m wide Geylang River and many other underground services. This constraint offered opportunities and challenges to the design and construction of this development. The opening of PLQ marked a milestone completion of a new regional hub at the core of the rejuvenated Paya Lebar central – the closest regional hub that capitalised on the good accessibility and location of Paya Lebar at the edge of the city centre. This realises a part of Singapore's vision to decentralise the central business district and bring jobs and amenities closer to home.

The successful and timely delivery of PLQ was a result of the close collaboration of the design team, client, contractors, and several authorities to meticulously minimise impact to existing structures, improve pedestrian connectivity, and transform the site into a hive of social and commercial activity. With these distinctive retail, commercial, residential components have come together to meet the needs of communities and businesses – marking a new chapter in the history and development of Paya Lebar.

### Speaker: Er. Rudi Lioe (Arup)

Rudi is Arup project manager leading Arup large multidisciplinary team in successfully delivering the design of Paya Lebar Quarter. With close to 20 years' experience in design and construction of building projects in Singapore and Indonesia, Rudi is currently an Associate Principal in Arup.

Rudi is a Singapore registered Professional Engineer as well as UK Chartered Engineer and Chartered Member of Institution of Structural Engineers (IStructE). Some of his other prominent projects include Fusionopolis Phase 2A, GSK Asia House, and 261m tall Grade A office tower in Jakarta. He was also deeply involved in the design and construction of complex Marina Bay Sands Integrated Resort.



## MEP: THE SPEAKERS AND THEIR SYNOPSES

### 1. Key highlights of the Singapore Green Building Masterplan and overview of the Green Mark 2021 framework

#### Synopsis

The Singapore Green Building Masterplan (SGBMP) is one of the key initiatives which was recently launched under the wider Singapore Green Plan 2030 to further accelerate the transformation of the BE sector as part of our national sustainability efforts. Under the SGBMP, we aim to achieve the following targets:

- 80% of Singapore's buildings (by GFA) to be green by 2030
- 80% of new developments (by GFA) to be Super Low Energy buildings from 2030
- 80% improvement in energy efficiency (compared to 2005 levels) for best-in-class buildings by 2030

As part of the SGBMP, we have also developed the new Green Mark (GM) 2021 framework. The key sustainability indicators have been refreshed and enhanced to push buildings to be healthier, smarter, and more resilient to climate change.

#### Speaker: Mr Ang Kian Seng, BCA

Mr. Ang Kian Seng heads the Environmental Sustainability Group in the Building and Construction Authority of Singapore (BCA). He is also the current 2<sup>nd</sup> Vice President of the Singapore Green Building Council (SGBC). He sits on the Singapore Institute of Technology's Industry Advisory Committee for Sustainable Infrastructure Engineering Programme and the Berkeley Education Alliance for Research Singapore's Scientific Advisory Committee.

His portfolio includes the BCA Green Mark Scheme which certifies buildings on their level of environmental friendliness and energy efficiency. He plays an instrumental role in the formulation and implementation of BCA's Green Buildings Masterplans.

Mr. Ang also works closely with various stakeholders to advance the facilities management (FM) industry, under the Real Estate Industry Transformation Map (REITM). Through the tripartite Facilities Management Implementation Committee (FMIC), Mr Ang oversees the development of various initiatives to uplift the FM industry. He is also an individual member of Singapore International Facility Management Association (SIFMA), which is positioning itself to champion the FM industry transformation. SIFMA is actively involved in implementing key FMIC initiatives such as certification of FM companies and development of the Consortium Ops-Tech Roadmap (COTR) for the FM industry.



### 2. Sustainability and resiliency – A paradigm shift in ACMV system design and operation

#### Synopsis

The ongoing COVID-19 pandemic has created an awareness and the need to be able to adapt the operational features of the ACMV system of buildings in ensuring a safe, healthy and sustainable indoor environment for all. The role of the ACMV system during a pandemic goes beyond the fundamental principles of thermal comfort, IAQ and energy efficiency. Occupant health is of paramount importance and the micro-environmental quality around every individual in a building becomes the primary consideration. This talk will cover some of the energy efficient ACMV systems and advanced room air distribution strategies, enabled by the concept of decoupling “ventilation air” from “supply air” that play an important role in the mitigation of the spread of infectious aerosols. The fundamental requirement of such systems to operate efficiently and effectively over a multitude of operating conditions never envisaged before is now seen as a paradigm shift towards resiliency.



**Speaker:**

**Professor Chandra Sekhar**

Prog Director, MSc (Building Performance and Sustainability)  
Co-Director, Centre for Integrated Building Energy and Sustainability in the Tropics (CiBEST)  
Department of Building, School of Design and Environment,  
National University of Singapore

Prof Sekhar is a tenured Professor and Co-Director (Centre for Integrated Building Energy and Sustainability in the Tropics) in the Department of Building, National University of Singapore. He is also a Founding Director of Enhanced Air Quality Pte Ltd., a NUS Spin-off Company, incorporated in June 2004, arising out of his research in the fields of indoor air quality (IAQ) and energy. His research interests include thermal comfort, ventilation/IAQ, energy efficient HVAC systems and building energy analysis, with more than 275 publications in these fields in international journals and conferences.



He is a co-inventor and holds 3 US and other patents. He is a Fellow of ASHRAE and ISIAQ. He has delivered several Keynote talks in international conferences around the world. He has been an ASHRAE Distinguished Lecturer since 2006 and is regularly invited as a speaker around the world (65 DL presentations to date).

He has been recognised through several awards, including: E.K. Campbell Award of Merit, Environmental Health Award, Exceptional Service Award and Distinguished Service Award from ASHRAE; Uichi Inouyi Memorial Asian International Award from SHASE, Japan; SPRING Singapore Merit Award, ASEAN Energy Award and The Enterprise Challenge (TEC) Award of the Prime Minister's Office. He is currently a Director-At-Large on the ASHRAE Board of Directors. He is active in Standards and Technical committees in ASHRAE and is also actively involved in local standardization activities in Singapore.

**3. Delivering MEP Consultancy Services for Public Healthcare Projects**

**Speaker: Er. Joseph Toh Siaw Hui (MOHH)**

Er Joseph Toh, Head, M&E Engineering, Healthcare Infrastructure Projects, MOH Holdings Pte Ltd, is registered as a professional engineer in the electrical discipline. He is also a licensed electrical engineer registered with the Energy Management Authority of Singapore, and certified as a Building & Construction Authority Certified Green Mark Manager. Er Toh have been leading the MEP team at HIPD (MOHH) since 2014. With over 30 years of experience, he has extensive exposure in areas such as building project management, electrical engineering design and the inspection of works for healthcare, residential, commercial, recreational, industrial and infrastructural development projects. He is currently a Fellow with the Institution of Engineers, Singapore (IES) Council, Past Chairman of the Mechanical and Electrical Technical Committee and representing IES in several external committees; FSSD Waiver, Audit Inquiry Committees, the National Committee for the Electrical Electronic Standards Committee (EESC), and the BCA MEP Pre-Fabricated Modular Guide Committee. He is also on the Professional Proficiency Examination Panel for the Professional Engineers Board, Singapore and was an external examiner at Ngee Ann Polytechnic.



## 4. Environmental Sustainability through Efficient M&E Design

### Synopsis

As Singapore moves to peak its carbon emissions in 2030 with a long-term target to achieve zero emissions in the second half of the century or as soon as viable, the action to tackle climate change must start now. As M&E engineers, how we design our M&E systems in a building plays a large part in reducing carbon emissions as the typical lifecycle of a building is about 60 years. In this session, the speakers will share why environmentally sustainable and efficient design in a building is of paramount importance in M&E design considerations, and discuss with case studies on how innovative solutions can be implemented holistically to optimize the M&E systems in a building, and improve energy efficiency and overall energy performance of the building.

### Speakers:

#### Mr. LEE Ang Seng

Ang Seng is the Chairman and Managing Director of Beca's business operations in Singapore and Myanmar and a member of the Executive Leadership Team with Beca Group. He has been with Beca for the past 27 years and provides strategic leadership to a team of 200 strong engineering practitioners across these countries and the wider South East Asia region. Under his leadership, Beca has been involved in significant completed iconic projects in Singapore, such as Marina One, DUO, Changi Terminal 4, Park Royal @Pickering, Republic Polytechnic campus at Woodlands, and Universal Studios Singapore & Equarius Hotel at Resorts World Sentosa. Ang Seng is a board member of the Singapore Green Building Council (SGBC) since 2019, and is currently the 1<sup>st</sup> Vice President of SGBC board.



#### Ms. Irene YONG

Irene Yong is a Technical Director in Beca and leads a team of engineers who specializes in Environmentally Sustainable Design, Mechanical Engineering Design, Building Condition Assessment and Energy Audits with a portfolio of projects in Singapore and the Asia region. She is a Green Mark Advanced Accredited Professional and Singapore Certified Energy Manager with 20 years' experience in the built environment. Irene's passion in greening the Built Environment has led her to successfully deliver many iconic Green Mark Platinum projects including Marina One, DUO, Punggol Waterway Terraces, River Safari and the first Zero Energy Building in Singapore.



## 5. Domestic hot water heaters' usage and its Climate Impacts on Singapore

### Synopsis

Singapore Green Plan 2030 launched recently provided us with a renew impetus towards "Green living". Economic, social and resource conservation development towards environmental sustainability is an integrated and holistic approach Singapore is aiming to achieve.

Recent NEA study on Household Energy Consumption (2017) revealed that 11% of energy consumed in domestic homes is towards hot water heaters usage. This is a significant usage. It represents a marginal increase in energy usage for hot water.

This presentation provides a detailed report on our recent study on hot water heaters and hot water usage among our 1.38mil. households in Singapore. Comparative study of different hot water heaters' energy factors, carbon emission footprint and climate impacts relating to potential heater's switch among domestic household will be reported. Through this study and its recommendations, we hope to significantly reduce the climate impacts of hot water usage in our domestic homes, while achieving economic and social benefits.

### Speaker: Prof. Lee Siew Eang

Prof. Lee Siew Eang is a Honorary Fellow at the School of Design and Environment, NUS. He is trained as a building scientist with research interests in green building design and performance, building energy performance and benchmarking, and acoustics. He was a founding member and director of the Singapore Green Building Council, 2009 to 2017. Currently, he is a member and hon. secretary of the Board of Director of Global Building Performance Network (GBPN), an UN founded and charity supported research and capacity development institution dedicated to building energy policy development.



## 6. Introduction and live demonstration of smart IoT appliances for low carbon and sustained living of today's residential homes.

### Synopsis

Smart homes are the residences that are equipped with information and computing technology devices that anticipates and responds to the requirement of the home owners in an effective and efficient manner. There is a growing demand in the Singapore market for safe, Secure and Green living environment, especially concerning environmental and safety functionalities. This presentation provides an overview cum live demonstration of the latest smart IoT appliances for sustained living of future smart homes including the latest changes on installation guideline enabling industry stakeholders to adopt new technologies in a cost efficient manner.

### Speaker: Mr. Soh Guan Hong (City Gas)

Soh Guan Hong is a Senior Vice President, Residential Sales Division at City Gas and he joined the company in 2006. Prior to joining City Gas, he spent more than 5 years as Vice President, international business development with a global startup company in the field of satellite tele-communication technology with global footprint of 7 offices and has strong business acumen in the area of international business developments, sales and marketing. Guan Hong started his career as an Application Engineer with an American MNC, Honeywell and in his career spanned over more than 15 years, he held senior managerial roles in various business units within ASEAN offices. In 1996, in recognition of outstanding sales achievement, Guan Hong was presented the President's Club Award, the highest honor bestowed to Sales Professional in Honeywell globally.



## 7. Improved efficiency and operation with intelligent VLT drives

### Synopsis

**Energy efficiency** starts with the basic design of the solution and selection of optimized high performing products and the benefits and savings has been proven in real customer cases.

**Intelligent** are improving our daily life and the performance of our systems. The VLT Drive build-in **Condition Based Monitoring** features indicate the actual performance of the system and indicated changes that could affect the performance and reliability of the system.

**Connectivity and communication** are important elements to secure the users and maintenance persons are notified when operation conditions and service needs are required

### Speaker: Peder S. Spek

Mr. Peder S. Spek is the Global Product Manager at Danfoss Drives A/S for the HVAC/R products FC-102 and FC-103.

He has a degree in Electrical Engineering & Simulation and worked with product development and system solution for various customer applications for the past 27 years. A wide experience in creating solutions that are easy to implement and operate, with a focus on providing information to optimize the solution and cooperation with partners to secure a great system solution.



## 8. Building Data and "the Cloud"

### Synopsis

Building control and monitoring systems are now generating more data than ever before. Understanding and making sense of the data is becoming harder than ever as expert resources are limited.

The solution lies in analytics systems, which are increasingly becoming cloud based.

This talk explores how to get appropriate building data to the "cloud", and options for analysis and display of the data.

### Speaker: Simon Mahoney (Easy I/O)

Simon has been in the BAS industry since the late 1980's. He has worked in the UK, Australia and Singapore and most recently been responsible for the Asia Pacific region for 18 years. He currently works for Johnson Controls as Business Development Manager - EasyIO / Asia Pacific & General Manager Control Products - Pacific

His experience includes engineering, product management, sales/marketing and general management. With Degrees from Brunel University and Nottingham University, Simon is also a part time PhD candidate at the University of Sydney.



## 9. eMobility and Schneider Electric – Driving towards a 100% electric mobility to a net-zero destination

### Synopsis

Schneider Electric has been continuously driving to reach their sustainability goals where eMobility is a significant part of it. In this presentation, Schneider Electric will talk about the eMobility market and the global trends that are driving its uptake. As it also faces multiple challenges, Schneider Electric will also present solutions to address them globally, and locally.

### Speaker:

#### Adrian DUQUE (Schneider Electric)

Adrian Duque is the Asia-Pacific Business Development Manager for eMobility. Currently based in New Zealand where he started Schneider Electric's EV charging solutions business, and where his passion for eMobility grew. Adrian has been with Schneider Electric for almost 17 years now and has held various roles under services, marketing, sales and business development. Adrian graduated with a bachelor's degree in Electronics and Communications Engineering, and has worked in several industries including electronics, semiconductors, instrumentation and electrical.



#### LAU Jia Hui (Schneider Electric)

Jia Hui Lau is the EV Business Development for Singapore and Malaysia. Jia Hui is an IoT enthusiastic with both technical and commercial experience in the field of automation control, e-mobility solution and final distribution. Always creating strong bond and working together with customers to provide and proposed efficient system that are safe and reliable for operation and sustainable for the future.

