The Institution of Engineers, Singapore

The Energy Technical Committee and Chemical And Process Engineering Technical Committee

Proudly present

Technical Talk on Advanced Process Control and Energy Efficiency

Date	: Thursday 26 March 2020
Time	: 6.00 PM to 9.00 PM *Registration start at 6.00 PM sharp).*
Venue	: IES Seminar Room 1 & 2 (Level 2) 70 Bukit Tinggi Road, S(289758)
Fees	: IES/SCEM Members = $32.10/- per pax Non-members = $64.20/- per pax ***Fees includes prevailing GST , buffet dinner***
CPD/PDU	: **2 PDU for PEB PE (Approved)** **2 PDU for IES C.Eng (Approved for all Engineering branches/disciplines listed in** http://charteredengineers.sg/branches/). **2 PDU for IES SCEM (Approved)**

Synopsis of the Talks

Advanced Control Implementation on Distillation Columns for Energy Saving

Yokogawa Advanced Process Control (APC) is a multivariable predictive control solution that has been jointly developed by Shell Global Solution and Yokogawa. Yokogawa Singapore has implemented more than 705 APC applications in refinery, petrochemical, chemical and utility plants. Yokogawa helped customers to achieve significant benefit from process stabilization, energy saving (steam, F/G, F/O), production yield increment and quality improvement. The key features of Yokogawa APC solution includes:

- Nonlinear control capability
- Cross-Unit optimization
- Real-time optimization
- Scalable implementation

Profile of the Speaker

Dr Wang Cheng
Business Development Manager - Consulting
Yokogawa Engineering Asia

Dr Wang Cheng is an industry automation professional, experienced Principal Engineer in process automation, advanced process control and data analytics, proficient with simulation, energy management and supply chain management business. Armed with over 27 years global working experience in SEA, Europe and Northeast Asia, Dr Wang believes trust partnership with clients is the essential factor that leads to the success in digital age.

Application of Digital Twins for Improved Monitoring and Control of Advanced Process Control & Energy Monitoring System for Equipment Efficiency Improvements

Performance monitoring of APC applications is an important foundation that ensures the delivered benefits of APC are visible at all levels of the organization. Tangible APC benefits usually coming from 3 aspects; namely throughput increment, yield improvement, and energy consumption reduction. Since APC system is directly related to energy consumption and equipment efficiency, we need a tool that enables collaboration across operations, process engineering, APC teams and management to understand what is limiting APC from driving the unit to its best potential as well as

provides expert guidance to maintain performance. As industry moving to IIOT 4.0 direction, a single cloud based application of digital twin for monitoring the APC, energy monitoring, and equipment efficiency are something industry is looking forward.

Profile of the Speaker

Mr Hans Tan
SEA Business Consulting Leader
Honeywell Advanced Solutions

Hans is currently the Honeywell SEA Advanced Solutions (AS) Business Consulting Leader. He is responsible to plan, strategize and grow the Honeywell Connected Plant (HCP) business in SEA & Taiwan.

Prior joining Honeywell, Hans was the Principal Business Consultant for SEA simulation business in Invensys. His primary responsibility is to strategize and lead the growth of simulation and optimization business of SimSci in SEA.

Hans graduated with a B.S. (Chemical Engineering) from Louisiana State University, USA. He has 1 8 years of experience in hydrocarbon industry with specialization in process control consultation, steady state and dynamic process simulation, advanced process control (APC) and real time energy management & optimization throughout the world.

Hans started his career in General Electric at Baton Rouge, USA as an Application / APC Engineer which experience delivered numbers of project across USA and Europe. He then returned to SEA in year 2003 and started working in Yokogawa Singapore (YEA) as APAC business development cum project management role on both APC and operator training simulator (OTS) solutions.

Hans joined Shell Global Solutions as Process Control Consultant in Jan 2007. Throughout his 4 years tenure in Shell, he successfully tuned more than 5000 loops on various Shell plants (SRCPD, Seraya, & Bukom) across the SEA region. He also worked with Shell Europe's team to develop and commissioned the 1 st APC controller in Turkey Izmit Refinery. A total of 3 APC controllers were commissioned on crude distillation unit (CDU), fluidized catalytic cracking unit (FCCU), and hydro cracking unit (HCU). Another major achievement of Hans in this tenure in Shell was lead and successfully deployed the Shell controller monitoring & diagnosis tool across all Shell's downstream plant in APAC which is instrumental for benchmarking, safety and energy reliability improvement.

Programme	
1800 – 1900 hrs	**Registration and Dinner**
1900 – 1945 hrs	**Advanced Control Implementation on Distillation Columns for Energy Saving** By Dr Wang Cheng, Business Development Manager – Consulting, Yokogawa Engineering Asia
1945 – 2030 hrs	**Application of digital twins for improved monitoring and control of Advanced Process Control & Energy Monitoring System for equipment efficiency improvements** By Mr Hans Tan, SEA Business Consulting Leader, Honeywell Advanced Solutions
2030- 2100 hrs	***Questions and Answers*** ***Presentation of Token of Appreciation***

TERMS & CONDITIONS

Registration

- Online registration at https://bit.ly/2srO7Lt
- **Registration will be on a first-come-first-served basis as seats/places are limited and will only be accepted upon the receipt of full payment or otherwise indicated**.
- Please notify us in writing of any change in your registration 7-working days before the commencement date.
- **We only accept online registration with full payment or otherwise indicated**.

Registration Closing Date/ Time & Payment

- Registration closing date/ time: before 1700 hours, 18 March 2020 (Thursday)
- Cheque or Cashier's Order should be crossed A/C payee only, Payee: **IES** and post to:
  The Institution of Engineers, Singapore
  70 Bukit Tinggi Road
  Singapore 289758
  Attention: Mr Yue Kok Sun
  (At the back of your Cheque, please indicate your Name and **APCEE20**)

Confirmation of Registration

- Confirmation of registration will be forwarded to your registered/ recorded email address upon receipt of full payment prior to the commencement date.

Withdrawals/ Refunds of Fees

- Notice of withdrawal must be given in writing to IES, policy on refund of fee is as follows:
- Within 7-working days before the commencement date: No refund.
- Full payment is still applicable if you are not able to turn up for the Seminar.
- Replacement is allowed but restricted to once only with written notice, it must be received by IES 7-working days before the commencement of the Seminar. However, when an IES member is replaced by a non-member, the participant has to pay the difference in the relevant fees.
- FULL refund if IES receives your written notice of withdrawal at 14-working days before the commencement of the Seminar.
- For e-payment, a 4.5% (online transactional service charges) will be borne by the Registrant.
- No refund otherwise.
- No show of participant would not be accepted as reason for withdrawal/refund.

Cancellation/ Postponement

- Changes in Venue, Dates, Time and Speakers for the Seminar can occur due to unforeseen circumstances. IES and/ or the Organiser(s) reserves the full rights to cancel or postpone the Seminar under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact persons of any cancellation or postponement.
- Fees will be refunded in FULL if any Event is cancelled by IES and/ or the Organiser(s).
- Alternate Payment via AXS Kiosks
- Please download https://www.ies.org.sg/axs/AXSprocedure.pdf for more information.
- Please select/ input/ key in: -
  Course/ Event ID **APCEE20**
- Please keep, retain and furnish your proof of payment(s), receipt(s) or e-receipt(s), if any, during registration.

Contact Person

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Fees are inclusive of GST with buffet dinner

Should you require any "Vegetarian Bento Set', please indicate under the remarks column

For IES /SCEM Members @ S$32.10/- (include GST) per pax, please provide your Membership Number(s), register online and transact payment via your VISA/ MasterCard or other appropriate modes, if any.

For Non-members @ S$64.20/- (include GST) per pax, please register online and transact payment via your VISA/ MasterCard or other appropriate modes, if any.

Certificate of Attendance will NOT be issued, however, an email proofing your attendance will be forwarded to your recorded/ registered email address normally within 14 to 21 working days after the Seminar.

Accreditation of CPD PDU for Professional Engineers Board Singapore (PEB) Professional Engineer/ Attendee; your Name and Reg. PE Registration Number will be electronically filed with or manually submitted to PEB, normally within 14 to 21-working days after the Seminar.

Accreditation of CPD PDU for IES Chartered Engineer/ Attendee; your Name and Reg. C.Eng Registration Number will be electronically filed with or manually submitted to IES C.Eng Professional Registry, normally within 14 to 21-working days after the Seminar. *CPD PDU for IES C.Eng will be duly accredited/ awarded correspondingly/ similarly to those approved/ confirmed by PEB*.

Accreditation of CPD PDU for IES Singapore Certified Energy Manager/ Attendee; your Name and Reg. SCEM Registration Number will be electronically filed with or manually submitted to IES SCEM Professional Registry, normally within 14 to 21-working days after the Seminar.