

*ASHRAE Distinguished Lecturer Series*

**Technical Seminar on Building Commissioning and Retro-Commissioning**  
**with Practical Application + Experience Sharing**

Date : 10 October 2019 (Thursday)

Time : 6:30pm – 9:30pm (Registration will start at 6:00pm)

Venue : Room 202E, 2/F Jockey Club Environmental Building, 77 Tat Chee Avenue, Kowloon Tong, Hong Kong

**Background:**

In recent years, commissioning for both new constructions and existing buildings play important roles for system optimization with a goal of energy savings especially for HVAC&R systems. This technical seminar focuses on the explanation of HVAC&R commissioning basics and highlighting our ASHRAE Standards and Guidelines regarding the Commissioning Process for New/Existing Building and Systems/Assemblies. In addition, the speakers will also share their experiences on actual building commissioning / retro-commissioning for energy saving initiatives.

***Topic 1:***

**Building Commissioning in the Built Environment - Principles, Process, Procedures, and the Future** (*GBCI Approved | 1 CE Hour | 0920014335; AIA Approved|ILU/HSW| MONTGOMERY01*)

This talk is about HVAC&R commissioning basics and highlighting our ASHRAE Standard 300 series, 202, Guideline 0 and 0.2, and sample commissioning project applications and photos, depending on time. It teaches about what Commissioning is and what it is not. Some sample subjects can include:

- HVAC/R-General
- Smoke control and NFPA 909
- Radiant heating and cooling using DOAS
- Clean rooms; OR's; Procedure and Isolation rooms.
- Pharmaceutical Manufacturing and Production; Drug Mixing areas.
- Air tightness testing; Case study examples using Blower doors and site AHU's
- Energy Monitoring Systems; Btu and Kw
- Total Building Commissioning
- Enclosure/Envelope commissioning and associated method of testing
- Thermal/Ice Storage Chilled Water Systems
- Existing buildings in hot-humid climates

It explains the industry importance of commissioning and the why we use it, how it works, and speaks about its many features and benefits. It is important to note that 202 is a process document and can be adapted to be used in many other commissioning disciplines. As a current voting member of the Standard 300 group, and practicing CxA/CxP and ASHRAE Certified CPMP, it outlines better and best practices in commissioning activities, using ASHRAE

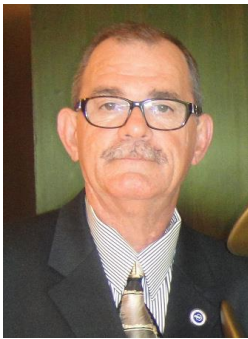
Supporting organizations:



commissioning related Guidelines. Each chapter of the new ASHRAE standard is explained. As the past chair, it explains the activities of the Presidential Ad Hoc Building Performance Alliance Committee on Commissioning, where we are working with all of the Industry giants (ASHRAE, ICC, USGBC, AIA, NIBS, SMACNA, AABC/ACG, NEBB, BCA, TABB, CAMEE, NEMIC, BOMA, etc.) to establish high level strategic directions for “Commissioning”, and its use and proliferation throughout our Industry, in collaboration with our Industry partners.

*Speaker:*

**Ross D. Montgomery, P.E., FASHRAE**



ASHRAE past Society Vice-President, Technology Council Chairman, DRC and DAL, past RVC, and chapter/section President. He has worked in ASHRAE activities for 35+ years, and has served on over 45 committees, councils and boards for ASHRAE. He has authored several Journal articles on Building EQ (ASHRAE Building Rating program), HVAC controls, and Commissioning, and co-authored the ASHRAE book “Fundamentals of HVAC Control Systems”. Professionally, he works as Owner/President of QST, Inc., in the Building Commissioning, Maintenance/Operations, and Energy Audit/Rating/Assessment business, operating a company based in Florida, but travels anywhere in the world for work.

He also works as the AABC certified balancing engineer (TBE) for Testing, Adjusting, and Balancing of HVAC&R Systems, a primary investigator that provides Energy/IAQ monitoring, testing, research, and reporting as well as providing Environmental Solutions for IAQ problems, and performs legal subject matter expert witness work. He has successfully performed many bEQ ratings.

He graduated from the University of South Florida with a BSME. He has his Professional Engineers License, state Mechanical/Electrical Contractors licenses, as well as his CxA Certifications for Commissioning with AABC/ACG, IAQ, Energy Manager (CEM), Energy Modeling and Assessor (BEMP, BEAP), High Performance Building Design (HBDP), and Green Building Engineer. He is an ASHRAE Fellow and a past recipient of the ASHRAE awards for Government Service, Presidential Certificate of Honor, Exceptional/Distinguished Service, John James International service, Lincoln Bullion membership, and an ASHRAE Technology Award.

*Topic 2:*

**Experience Sharing on Retro-commissioning Projects in Hong Kong**

This presentation shall share some successful cases in retro-commissioning. This sharing shall also include some latest energy saving initiatives from utility company so as to promoting energy efficiency and conservation in Hong Kong.

Supporting organizations:





Hong Kong Chapter

### ASHRAE Hong Kong Chapter

P.O. Box 35612, King's Road Post Office, North Point, Hong Kong

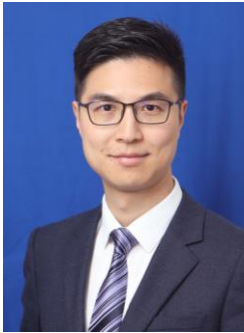
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Speaker:

### Charles Chau, BEng, MSc, MHKIE (ENY), BEAM Pro, MBSOMES, MAEE, CEM, CBCP



Mr Charles Chau is the Senior Account Manager of CLP Power Hong Kong Ltd. He holds a degree in Chemical Engineering and a master degree in Environmental Engineering from The Hong Kong University of Science and Technology. He got the Certified Energy Manager (CEM) and Certified Building Commissioning Professional (CBCP) qualification from AEE, US in 2009 and 2018 respectively. He became a BEAM Professional from the HKGBC in 2011 and Corporate Member in HKIE in Energy Discipline in 2014. He has been working in building services engineering field for 20 years and gained rich experience, specializing in building management system, power & energy management system and other advance energy saving control optimisation solution. He has fulfilled many energy conservation and carbon footprint reduction solutions for prestigious commercial buildings, hotels, hospitals, data centers as well as large shopping complexes in Hong Kong.

Topic 3:

### Retro-Cx with Monitoring Data & Algorithm on HVAC Equipment & Systems: OT + IT

There are tremendous challenges on energy and environmental issue in buildings of China since around 24% of energy is consumed in operating buildings for HVAC, lighting, appliances, etc. Energy efficiency in buildings is well accepted as a key to a low-carbon future but HOW. Concept of green building is also well known and various technology and products labelling with “energy efficiency” are installed in buildings, however, the actual performance and operational system efficiency are not as good as they expected. People realized that with help of ICT, people can run their buildings and systems properly with extremely high efficiency if they can have both DATA and Knowledge on systems. Monitoring-Based Retro-Commissioning (Cx) approach is expected as the KEY. In this presentation, case study and methodology of applying Monitoring-Based Retro-Cx and algorithm in HVAC equipment and systems will be presented.

Speaker:

### Qingpeng Wei, PhD



Dr. Qingpeng Wei received his B.Sc., M.Sc., and Ph.D. degrees in building services engineering from Tsinghua University. As the team leader of study on energy efficiency in commercial buildings, Dr. Wei established an on-line energy monitoring and benchmarking system of commercial buildings through detailed metering. By this monitoring and benchmarking system, current situation, characteristics and saving potentials of energy consumption for HVAC, lighting, office appliances in commercial buildings are clearly disclosed with real time energy consumption data. Therefore, Dr. Wei develops data-driven model and data mining methodology for energy consumption in commercial buildings. With his effort, low-cost retrofitting techniques including Retro-Commissioning, control strategy optimization, FDD, etc. have been implemented in about 500 commercial buildings which obtained more than 30% of energy savings.

Supporting organizations:





## ASHRAE Hong Kong Chapter

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Language: English

Fee: HK\$ 300 [Member of ASHRAE Hong Kong Chapter]  
HK\$ 350 [Member/Staff of Supporting Organizations]  
HK\$ 400 [Standard]

Remark: 3-hour CPD certificate will be provided.

### Registration & Enquiry:

Number of participants is limited and prior registration is required. For registration, please complete Registration Form in the following link: <https://forms.gle/5vAb8S7hH6GKuzfK9>. The deadline of application is on 4 October 2019.

After online registration, please make a crossed cheque payable to "ASHRAE Hong Kong Chapter" and post to our mail box at "P.O. Box 35612, King's Road Post Office, North Point, Hong Kong". At the back of cheque, please kindly state "ASHRAE DL Series – Ross Montgomery", Name of Participant, Name of Company / Organization and Contact Number.

Successful members will be notified by e-mail on or before 5 October 2019, which has to be presented at the registry of the venue entrance for verification. If the applicants have not received the confirmation e-mail on or before 5 October 2019, their applications will be regarded as not successful.

If typhoon signal no. 8 or black rainstorm signal is in force and still hoisted after 5:00 pm on that date, the seminar would be cancelled without further notification.

For enquiry, please contact Mr. Jason Kwok at email to [jason.ashrae@gmail.com](mailto:jason.ashrae@gmail.com).

Supporting organizations:

