ASHRAE Hong Kong Chapter
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*ASHRAE Distinguished Lecturer Series*

# Technical Seminar on Achieving High Performance Building – from Life Cycle Assessment to Enhanced Operation & Maintenance Best Practices to Retro-Commissioning

Date : 16 May 2019 (Thursday)
Time : 2:30pm – 5:30pm (Registration will start at 2:00pm)
Venue : Room 202E, 2/F Jockey Club Environmental Building, 77 Tat Chee Avenue, Kowloon Tong, Hong Kong

## Background:

In Hong Kong, Heating, Ventilating, Air-conditioning and Refrigeration (HVACR) systems constitute the major energy consumption in commercial buildings. In order to support the local building industry to deliver the genuine energy building performance, ASHRAE HK Chapter has invited one of our ASHRAE Distinguish Lecturers, Mr. OM Taneja, Ph.D., P.E., Fellow ASHRAE and Dr. Paul Sat, Head of Research and Public Education of Hong Kong Green Building Council (HKGBC) to deliver three technical talks. The technical topics cover Life Cycle Assessment (LCC) of energy efficiency projects and how the LCC and other assessments to facilitate decision making on adaptive changes to building systems, enhanced operation and maintenance best practices for high performance buildings and professional knowledge required by the building practitioners, attitude and needs for carrying out retro-commissioning works and how to overcome the barriers when applying retro-commissioning to existing buildings.

This technical seminar is suitable to building practitioners including building owners, building services engineers, operation and maintenance professionals, control experts and any technical engineers who are keen to strive for continuous improvement in building performance.

## Topic 1:
## Analytical, Performance & Prescriptive Codes & Measure for Life Cycle assessment of Sustainability & Energy Efficiency Projects

Across the high performance buildings industry, unrealistic performance goals have come from, among other things, inadequate modeling and benchmarking practices, unreliable monitoring and equipment controls and significant changes in space usage and tenant improvements. This talk discusses the application of analytical, performance & prescriptive codes measures for life cycle assessment of resource efficiency projects which can help in making adaptive changes to buildings systems to suit changing uses, or other internal and external factors that affect performance.

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**Topic 2:**

## Sustainability & Energy Efficiency - Bridging The Gap In Performance From Concept Though Operations

It is not unusual to experience many building cases that the actual energy performance in operation phase is deviated largely from the expected performance in the building design phase. In addition to the various codes, practices and guidelines of energy efficient design are available in the industry to govern the various systems design to a certain energy efficiency standard, the building owners and operators recognize that it is equally important to have a set of good practices on how to operate and maintain the building facilities and measure its performance. Hence, it can help to identify the factors attributing to the gaps of performance and enable the building practitioners to take corresponding corrective actions to fill up the gaps. The talk will include the following:-

- How to manage and operate High Performance Smart Buildings
- An Approach to Facilities Operational Improvement
- Integrated Measurements, Operations & Maintenance Practices for High Performance Buildings
- Integrated Measurements, Operations & Maintenance Practices for High Performance Buildings
- Bridging the Knowledge, Technology and personnel Gap for High Performance Buildings

**Speaker:**

## Om Taneja, Ph.D., P.E., Fellow ASHRAE

Mr. Taneja holds a Bachelor's degree in Mechanical Engineering from Indian Institute of Technology, New Delhi, Master's degree in Control systems and a Ph.D. degree in Systems Sciences and Operations Research from New York University. He is a licensed professional engineer and active in power generation and distribution, sustainability, energy-efficiency, innovative technologies, operations and maintenance issues.. Om has been active in discussing facilities, sustainability and energy-related issues at various professional organizations. He has been an Associate Professor at Kean University of New Jersey, Dean of HVAC/Facilities Management Divisions at Technical Career Institute and periodically takes adjunct teaching assignments in Building Systems. He organized All Day Seminars every year on important sustainability, commissioning, benchmarking & O&M issues in greater New York City area. . Om has presented more than 40 technical and management papers at different national and international conferences.

Dr. Taneja has more than 35 years of diversified experience in the area of design, construction, operations and maintenance of large facilities, including the United Nations Headquarters, General Electric Headquarters, US General Services Administration and a 17 years in the Infrastructure Development for hospitals, court houses and varied commercial, industrial and historical facilities. He was the Chief of Planning, Design & Overseas Properties, at the United Nations Headquarters, New York for 12 years, where he had the responsibility for coordination and management of facilities, security and technology implementation for the United Nations Headquarters and Overseas Properties worldwide. At the United Nations he had the supervisory responsibilities for the Architecture & Engineering Unit, Office Space Planning Unit, environmental and budgetary issues. He also worked as Senior Engineering Manager for long range capital improvements plan for the United Nations Headquarters in New York City, and Refurbishment of the Rockefeller Center for General Electric & National Broadcasting Company. Mr. Taneja has recently been the "Director of Manhattan Service Center" for the United States General Services Administration where

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he managed the Federally owned and leased Properties with diverse and growing portfolio of assets and with emphasis on greening, energy and water efficiency, analytics, technology adoption, alternate work space designs, emergency preparedness and improved operations, and maintenance.

Dr. Taneja was a student Member of ASHRAE starting in 1970 and has been a full time member of ASHRAE since 1976. He was nominated ASHRAE fellow in 2015. He has served on different Chapter and Technical Committees and has been a Member of the Board of Governors of ASHRAE NY Chapter since the year 2002. He was the Program and Student Committee Chairman and President of ASHRAE NY Chapter during 2008-2009. Thereafter, he was the "Regional Vice Chair" for Student Activities for ASHRAE Region 1. He served as a "Distinguished Lecturer" for ASHRAE for FY 2012-2014 and 2016-18 conducting seminars on technology adoption, smart buildings, transformation of facilities management, operations, maintenance and staff development.. In addition to being a Board Member of ASHRAE NY, Mr. Taneja was also a Board Member of the USGBC, New York Chapter which has lot of synergies in partnering with ASHRAE towards Energy Efficiency & Sustainability issues. He has been an active member of ASME, IFMA and USGBC.

**Topic 3:**

## Retro-Commissioning on Central Building Services Installation – Case Sharing on Practices, Process and Barriers

This topic focuses on how to prepare, kick start and conduct retro-commissioning works, including the basic and professional knowledge required by the building practitioners, attitude and needs for carrying out retro-commissioning works and how to overcome the barriers when applying retro-commissioning to existing buildings. After this topic, the participants should be able to carry out basic retro-commissioning works, overcome barriers and participate in relevant professional trainings.

**Speaker:**

## Paul Sat, Ph.D.

Dr. Paul Sat graduated with a BEng (Hons) degree in Building Services Engineering at the Hong Kong Polytechnic University in 1994 and started his career as an assistant engineer with Parsons Brinckerhoff (Asia) Ltd. He joined his Alma Master Department at 1999 as a Research Associate, focused on building energy stimulation and studies and also acquired his PhD degree in 2003 through a part-time research study programme. He joined the Technical Services and Sustainability Department of Swire Properties Ltd. in 2002 and became the Building Services Manager at 2015. In 2016, he joined the Hong Kong Green Building Council as the Head of Research and Public Education. His current interest includes BMS data analysis, building energy assessment, building performance evaluation and knowledge base energy management, retro- and re-commissioning process. Dr Sat is currently an Academic Chair of the Building Services Operation and Maintenance Executive Society (BSOMES) and a BEAM Pro.

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Language: English

Fee: HK$ 300 [Member of ASHRAE Hong Kong]
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://goo.gl/forms/RECvpakrmOlUeANr2. The deadline of application is on 7 May 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 – Om Taneja”, Name of Participant, Name of Company / Organization and Contact Number.

Successful members will be notified by e-mail on or before 10 May 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 10 May 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 1:00 pm on that date, the workshop would be cancelled without further notification.

For enquiry, please contact Mr. Eric Lau at email to ashraehk@gmail.com.

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