

# Towards a Smarter, Greener and Healthier Built Environment

3 PDUs for PE & CEng (Approved and confirmed)

#### **SYNOPSIS**

The global economy has been disrupted with the multiple challenges of Covid-19 pandemic, rising energy cost and climate crisis with no end in sight. These intertwining challenges have driven government organisations and corporations to relook into environmental hygiene, energy efficiency and workforce productivity. In Singapore, urban heat island effect increases the building's energy consumption whereby the building sector accounts for ~31% of the country's electricity consumption, of which 60% and 10% of the electricity is used for cooling and ventilation, respectively. Hence, Heating, Ventilating, and Air-conditioning (HVAC) system plays a pivotal role on environmental hygiene and energy efficiency. With smart facilities management solutions, on demand maintenance services and energy management can lower operating cost significantly with higher productivity.

This webinar will share some of the Indoor Air Quality (IAQ) management initiatives in Singapore and ways to implement various air cleaning technologies effectively. The latest test requirements and on-site qualification approaches on these air cleaning technologies will also be shared. Case studies will be provided how smart technologies can enable optimal utilisation without compromising comfort and performance.







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#### **SPEAKERS**



**Topic: Indoor Air Quality Management Dr Yang Junjing** 

Senior Scientist and Head of Built Environment Section, Environmental Health Institute National Environment Agency

**Dr Yang Junjing** is a Senior Scientist and the Head of Built Environment Section at Environmental Health Institute of National Environment Agency. Dr. Yang has rich experiences in Ventilation, Indoor Air Quality, and Sustainability, and has been working closely with MOH and BCA to improve ventilation and indoor air quality in Singapore. She has been an invited speaker and guest lecturer in these areas for past years. Dr Yang has more than 48 publications and is currently the voting member of ASHRAE Environment Health Committee, SGPC10 and SSPC185.3, consultant member of ASHRAE 62.1, and is currently the President of ASHRAE Singapore Chapter.

### Topic: Improving Indoor Air Quality Through The Smart and Safe Uses of Ultraviolet Technologies Dr Ronnie Teo

Technical Consultant, Purple Light Pte Ltd

**Dr Ronnie Teo** is a technical consultant for Purple Light. Dr Teo was a manager at Singapore Institute of Manufacturing Technology (SIMTech) under the Agency for Science, Technology and Research (A\*STAR). His research interests are ultraviolet germicidal irradiation (UVGI), lighting, thermal management, and reliability. Dr Teo is in the technical committee for lighting (TC34) and semiconductor (TC47) working groups in the Singapore Standard Council. He is also technical assessor in the Accreditation Scheme for Laboratories under Singapore Accredition Council.





Topic: UV Lamp Product Qualification
Mr Derrick Sim

Principle Engineer, TÜV SÜD PSB Pte Ltd

*Mr Derrick Sim* is currently a Principal Engineer at TÜV SÜD PSB in the electrical and electronics department. He is TÜV SÜD appointed Technical Certifier for lighting, Energy and Photovoltaic and has supported several public institutions on lamp product qualifications. He is also a SAC-SINGLAS approved signatory for lighting/LED products, lamps, isolating transformers and photovoltaic products.

Topic: Uplifting Your Chiller Plant System Using Artificial Intelligence/Machine Learning Mr Rahul Dev

Head of the Service Department (BMS)

DaiKin Air-conditioning Pte Ltd

**Mr Rahul Dev** is a graduate in Industrial Electronics Engineer. He holds a Msc (Computer Control & Automation) from Nanyang Technological University Singapore and a MBA from University of Bradford, UK.

He is currently the Head of the Service Department (BMS) in Daikin Air-conditioning and has extensive experience in building technologies specializing in BMS, ICT, security, ELV, energy management and air-conditioning systems. He has 15 years of experience in the design, installation, engineering, and maintenance of large-scale contracts for intelligent building systems.

Mr Rahul has conducted numerous trainings on Building Management System and SMART technology. He trains adult learners in Building and Industrial Automation and Facility Management courses in different institution as well.



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