

SEMINAR AND TECHNICAL VISIT



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"PASSIVE DISPLACEMENT COOLING AT NTU"

Organized by CoolestSG and NTU

Passive displacement cooling (PDC) system is a state-of-the-art air-conditioning concept using natural convection to deliver conditioned air to cool heat producing objects such as occupants and computers, without mechanical fans. NTU is implementing this system progressively within the campus in new and retrofitting projects.

PDC itself is not a new technology, as it relies on simple natural convection to bring conditioned air to the heat sources within the space to be cooled. The room air is first cooled by cooling coils placed at high level. As it cools, it becomes heavier, sinks down the cavity wall and discharges at the bottom. The cold air then moves horizontally just above the floor to the heat sources, which then heat up the air and cause it to rise. The newly warmed spacing air is then drawn to the cooling coils and the cycle repeats itself.

Date: 17th January 2020, Friday

Time: 1230 - 1630

Venue: Learning Hub North (LHN) "The Arc" TR+04,
63 Nanyang Drive Singapore 636922

Registration Fee:

- Free For CoolestSG Industry members and its invited guests, government agencies and research partners (max 10 researchers)
- Others: SGD80

Register at: <https://www.eventbrite.sg/e/passive-displacement-cooling-at-ntu-tickets-84830276641> - By 10th January 2020

PDU Points: 2

12:30	Registration & Networking Lunch at Learning Hub North "The Arc"
13:30	Welcome Note & Introduction to Seminar Agenda, CoolestSG and Speaker
13:35	Presentation on NTU's experience in adopting Passive Displacement Cooling (PDC) System by Er. Tong Kok Kwang (KK Tong)
14:15	Questions & Answers
14:30	Break
14:45	Tour of Passive Displacement Cooling Installations at NTU
15:15	Discussion
16:30	End of event

ABOUT THE SPEAKER AND THE OFFICE OF DEVELOPMENT & FACILITIES MANAGEMENT

Er. Tong Kok Kwang (KK Tong) currently serves as Project Director and Principal Mechanical Engineer at the Office of Development & Facilities Management. He is a Singapore Professional Engineer and former Director of the consulting firm Beca Carter. He was awarded Green Facilities Manager of the year in Singapore in 2017 by BCA and SGBC. He has been instrumental in winning more than 50 Green Mark Platinum awards in NTU. Other top sustainability awards are the first and highest Green Mark Platinum^{STAR} Champion.

The Office of Development & Facilities Management (ODFM), Nanyang Technological University, adopts environmental friendly practices for construction and building operations. Effective environmental friendly programmes have been implemented. Targets have been set to minimise energy, water usage and as well as reducing waste. ODFM aims to procure resources in an ecologically sound, socially just, and economically viable manner. The sustainability performance of key suppliers and contractors is monitored regularly. ODFM's procurement policy governs campus operations as well as refurbishment and construction of new facilities. ODFM's project teams are staffed by Professional Engineers (PE), Registered Architects (RA), Green Mark Managers (GMM), Green Mark Professionals (GMP) and Singapore Certified Energy Managers (SCEM).



**LEARNING HUB NORTH (LHN) " THE ARC" TR+04,
63 NANYANG DRIVE SINGAPORE 636922**

BY PUBLIC TRANSPORTATION:

1. Take 179 / 179A from Boon Lay bus interchange and alight at Lee Wee Nam Library, you can see The Arc as well when the bus is approaching the bus stop.
2. Just walk along the shelter (less than one minute) and you will arrive at The Arc.

IF YOU ARE DRIVING:

Parking is available at your own cost.
The nearest parking is Carpark A.