

## **ASHRAE DL Seminar on “Active and Passive Beams and Energy Efficient Solutions for Commercial Kitchen Ventilation”**

**Date & Time:** 19 April 2017 (Wednesday) (2:00pm – 5:15pm)

**Venue:** Singapore Polytechnic Graduates' Guild (SPGG), Carnation Room, Level 3

### ► **Active and Passive Beams**

Active beam systems are gaining popularity in the North American market. When used correctly, they can reduce HVAC system energy consumption for cooling and heating when compared to all air systems. Active and passive beams especially effective in renovation projects where cooling capacity of the system needs to be increased without increasing duct sizes. Presentation will describe beams operation principle and focus on special considerations during HVAC system design and commissioning. Application cases for beams operating in constant and variable air volume systems will be described. Presentation will also describe efficient ways of integrating active beams with Dedicated Outdoor Air Systems. Specifics and limitations of using beams in heating mode will also be discussed.

### ► **Energy Efficient Solutions for Commercial Kitchen Ventilation**

Restaurants are among the buildings with the highest energy intensity in commercial sector. They contribute over 500 trillion Btu to the U.S. annual energy consumption. This presentation will give practical recommendations how to reduce energy consumption of a foodservice facility by up to 50% and improve its indoor environmental quality for better employees' and customers' satisfaction. This presentation will describe new designs as well as recommendations how to improve efficiency of existing commercial kitchens. It will also cover requirements of the latest edition of ASHRAE 90.1 Standard in regards to efficient ventilation design of commercial kitchens. Presentation will be useful for owners, operators, energy and design professionals involved in design, construction and operation of foodservice facilities.

### **Speaker Profile**



#### **ANDREY LIVCHAK, PH.D**

**Director of Global R&D, Halton,  
Foodservice SBA  
Scottsville, KY**

Dr. Andrey Livchak has over 30 years of international experience in the HVAC industry. He graduated from Moscow Civil Engineering University in 1983 with honors and M.Sc. degree. In 1989 he received Ph.D. in engineering from the same university. His expertise covers several areas including air distribution, heat recovery, cooling, heating systems, acoustics and commercial kitchen ventilation.

Dr. Livchak started his engineering career in 1983 in Moscow working at the government research laboratory. He joined Halton in 1989 working first in its European division and in 1998 moved to the U.S. to manage Halton R&D center. In his current position as the Director of Global R&D for the Foodservice division, Dr. Livchak is responsible for planning and coordinating research and development of five Halton Research Centers in America, Europe and Asia.

Dr. Livchak is an active ASHRAE member, he works on TC 5.3 (Air Distribution) and SPC-200 Method of Testing Chilled Beams committees, has over 50 publications including more than 20 patents.



Registration Form – **ASHRAE DL Seminar on “Active and Passive Beams and Energy Efficient Solutions for Commercial Kitchen Ventilation”**

**Date:** 19 Apr 2017 (Wednesday)  
**Time:** 2.00pm – 5.15pm  
(Registration starts 1.30pm)

**Fee for early registration by 5 Apr 2017:**  
S\$20 for ASHRAE Singapore Chapter (ASC) members  
Free for ASC Student Members (limited seat)  
S\$60 for ASHRAE/IFMA/IES/SGBC members  
S\$80 per participant (non-members)

**Fee for registration after 5 Apr 2017**  
S\$20 for ASC members  
S\$80 for ASHRAE/IFMA/IES/SGBC members  
S\$100 for non-members  
(1 Tea Break will be provided)

**Venue:**

Singapore Polytechnic Graduates’ Guild  
Carnation Room, Level 3, 1010 Dover Road  
Singapore 139658 (Singapore Poly Gate No. 4)

Register by email to [elta.ascsecretariat@gmail.com](mailto:elta.ascsecretariat@gmail.com) before **12 Apr 2017**, with the required Registration Details below.

Please make the payment by issuing a cheque to **ASHRAE Singapore Chapter, c/o 159 Sin Ming Road, AMTECH Building, Lobby 2 #07-02, Singapore 575625**

**Professional Engineers Board: Qualified for 3 PDUs by PEB  
SCEM-PDU Points: 3 PDUs**

**For enquires on program and registration matters please contact:**  
Dr. Peter Cheng [Email: [peter.cheng@armacell.com](mailto:peter.cheng@armacell.com)], ASC

**Registration Details**

Name of Participant	ASHRAE Membership No.:	ASC Reg No.:	PE Reg No.:
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Organization: <input type="text"/>	Designation: <input type="text"/>		
Mailing Address: <input type="text"/>			
<input type="text"/>			Postal Code <input type="text"/>
Telephone / Mobile No.: <input type="text"/>	Fax no.: <input type="text"/>		
Email: <input type="text"/>			

Signature

Date

## Location



- Located at 1010 Dover Road (SP Gate 4)
- 10 mins walk from Dover MRT
- Bus Services to SPGG:
  - Bus Stop A: SBS 33 & SBS 196
  - Bus Stop B: SBS 96, 151, 183