

## Registration Details

### Registration Fee:

Members of ASHRAE/SP Staff : S\$100.00  
Other participants : S\$120.00  
Full Time Students : S\$50.00  
Full Time Students (No lunch) : S\$10.00

### PDU ( Professional Engineers Board)

3 PDUs were awarded for the 10th seminar.  
3 CE units for NEBB(USA) were awarded for the 10th seminar.

### Further Information

Please contact Mr V.K Pawa  
Tel: 6772-1567, Fax: 6772-1975  
E-mail: vinod@sp.edu.sg

### Payment ( Cheque Only)

Fee will cover refreshments and a buffet lunch. Payment is requested with registration. All cheques should be made payable to " **ASHRAE Singapore Chapter** " and mailed with your registration form to"

Singapore Polytechnic  
School of Mechanical and  
Manufacturing Engineering  
500 Dover Road  
Singapore 139651

**Attention:** Mr V. K Pawa

### Closing Date

**7th November 2007**

## REGISTRATION FORM

NAME: \_\_\_\_\_ NAME: \_\_\_\_\_

DESIGNATION: \_\_\_\_\_ DESIGNATION: \_\_\_\_\_

ORGANISATION: \_\_\_\_\_ ORGANISATION: \_\_\_\_\_

PEB No: \_\_\_\_\_ PEB No: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TEL No: \_\_\_\_\_ TEL No: \_\_\_\_\_

FAX No: \_\_\_\_\_ FAX No: \_\_\_\_\_

E-MAIL: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

\*Member of ASHRAE/SP staff ( S\$100.00)  Membership No: \_\_\_\_\_

\*Other participants ( S\$120.00)

\*Full Time Students (S\$10.00 /S50.00)#  ( With or without lunch )#

(Student ID card required during registration) \* Please  as appropriate

# Please circle as applicable

### PAYMENT MODE: Cheque Only

Payable to " ASHRAE Singapore Chapter "

AMOUNT: S\$ \_\_\_\_\_

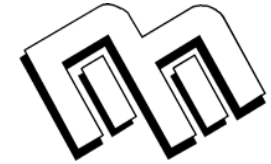
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Singapore Polytechnic



ASHRAE Singapore Chapter



School of Mechanical &  
Manufacturing Engineering

# SP 11th Cleanroom Seminar 2007: Energy Saving Solutions, Environmental Monitoring, Validation and Compliance on Installation In Cleanrooms

Date: 10th November 2007

Time: 9.00 am to 12.30 pm

Venue: Furama City Centre Singapore

( nearest MRT station:China Town )

Ballroom 1 Level 5

60 Eu Tong Sen Street

Singapore 059804

Tel: 6533-3888

## Programme

09:00 - 09:30	Registration and Morning Refreshments
09:30 - 09:40	Welcome Address Opening Address by Director of School of Mechanical and Manufacturing Engineering, Singapore Polytechnic
09:40 - 10:15	<b>Paper 1</b> The Compliant On Installation and Validation Of Air Particle Monitoring In Pharmaceutical Production to 21CFR part 11, By Mr Mark Hallworth, Pharmaceutical Business Manager Particle Measuring System, USA
10:15 -10:50	<b>Paper 2</b> Validation of Pharmaceutical Cleanrooms and HVAC systems, By Mr Sunil Chandiramani Engineering & SHE Director Merck Sharp & Dhome , Singapore
10:50 - 11:10	<b>Recess</b>
11:10 -11:45	<b>Paper 3</b> Environmental Monitoring and Particle Counting in Pharmaceutical Cleanrooms, By Mr Morgan Polen, Vice President of Application Technology Lighthouse Worldwide Solutions, USA
11:45 -12:20	<b>Paper 4</b> <b>Energy Saving Solutions</b> By Mr Danny Charest, Senior Project Manager M+W Zander(S) Pte Ltd, Singapore
12:20 -12:30	Question and Answer Session Presentation of tokens of appreciation
12:30	Lunch

## About The Speakers

**Mark Hallworth** is the Pharmaceutical Manager for Particle Measuring Systems, Boulder, CO, USA. Mark has managed the installation and validation of almost 200 facility-monitoring projects into pharmaceutical production facilities for over 7 years; he has also managed the company transition to 21CFR part 11 compliant software. He currently lectures for pharmaceutical societies throughout Europe and the US on non-viable particulate monitoring, cGMP compliance (both for FDA and EU approval processes) and facility monitoring systems and the implications of validating those systems to GAMP.

He can be reached at [mhallworth@pmeasuring.com](mailto:mhallworth@pmeasuring.com) or Particle Measuring Systems, 5475 Airport Boulevard, Boulder, CO.

**Mr. Sunil Chandiramani** has more than 18 years of Industrial experiences with various MNC companies in the field of pharmaceutical & medical devices manufacturing, such as Glaxo-Smithkline, General Electric (Plastics division) & Becton Dickinson Medical. He has worked in key functions like Validation, Process optimization, Bulk API Pharmaceutical Plant Commissioning & Medical Device Technology transfer, New Product Introduction & driving Continuous Improvements in manufacturing using Lean, & Six Sigma as key tools. He is also a certified Six Sigma Black Belt and is currently working in Pharmaceutical Industry as Engineering Services & Lean Six sigma Director responsible for leading Operations Excellence (Lean six sigma strategy deployment) for a manufacturing plant in Singapore.

**Mr Morgan Polen** is the vice president of application technology for Lighthouse Worldwide Solutions. He has been involved with contamination control since 1984 and been involved with projects ranging from cleanroom design, cleanroom construction, environmental monitoring program development, particle counter design, biological sampler design, ultra pure water system design and construction and currently is responsible for developing contamination monitoring programs for customers worldwide. He has a degree in Electro-Mechanical Technology from Hennepin Technical College in Minnesota, and is an internationally recognized speaker on contamination control and cleanroom monitoring, presenting papers in over 20 countries

**Mr Danny Charest** is employed by M+W Zander as a senior project manager. Prior to joining MWZ, Danny was employed for 17 years by Texas Instruments. He has over 27 years of professional experience in the Design and Construction of Wafer FAB and Clean Room Buildings. He has worked both in New Build Construction sites and Operational Wafer Fabs. He secured a full understanding of the implications and potential risks associated with building or modifying operating FABs whilst employed in the Semi-Conductor Industry. He has worked in a variety of Project Manager roles representing Clients and Contractors. Danny has supported over 50 Semiconductor construction projects in his career, having worked projects in 14 different countries on 4 continents.