**ACES Two-Day Workshop on ETTV Calculations using BIM HVACTool**

Date: 19 & 20 October 2017 (Thu/Fri)
Duration: 9.00 am to 5.30 pm
Venue: 18 Sin Ming Lane #06-01 Midview City Singapore 573960
Fee: $150 per person
CPD: 14 PDUs

**Course Objectives:**

Building envelopes play an important role in determining how energy efficient a building can be. At the end of the course, participants will have a better understanding of the performance aspects of modern facade systems. The course will also cover the concept of ETTV / RETV and discuss strategies to reduce the value.

**Target Audience:**

Assistant Engineers/ Engineers and building professionals required to perform ETTV/RETV analysis.

**Course Lecturer:**

Dr Alex Lee is currently the Executive Director of Asia Tech Associates and the co-founder and developer of BIM HVACTool (Sustainable Building Performance Analysis Tool). He holds a doctorate in Computational Fluid Dynamics and has been a lead trainer, researcher and invited speaker for several sustainability related courses and event.
Programme:

Two-Day Workshop on ETTV Calculations

<table>
<thead>
<tr>
<th>Time</th>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.45 am</td>
<td>Registration</td>
<td>Registration</td>
</tr>
<tr>
<td>9.00 am</td>
<td>Introduction – Building Thermal Envelop</td>
<td>Create Building Material Groups (Part 2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Setting up ETTV Related Properties to Surfaces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dragging Material Properties to Surfaces</td>
</tr>
<tr>
<td>10.30 am</td>
<td>Tea Break</td>
<td>Tea Break</td>
</tr>
<tr>
<td>10:45 am</td>
<td>Basic BIM HVACTool GUI Operation</td>
<td>Create Building Material Groups (Part 2) - Cont’d</td>
</tr>
<tr>
<td>1.00 pm</td>
<td>Lunch</td>
<td>Lunch</td>
</tr>
<tr>
<td>2.00 pm</td>
<td>Starting a New Project</td>
<td>Setting Flux Surfaces</td>
</tr>
<tr>
<td></td>
<td>• Building Description &amp; Plan</td>
<td>Shading Device Setting</td>
</tr>
<tr>
<td></td>
<td>• Importing the 3D Model</td>
<td>ETTV (Std Table LookUp)</td>
</tr>
<tr>
<td></td>
<td>• Model preparation</td>
<td></td>
</tr>
<tr>
<td>3.30 pm</td>
<td>Tea Break</td>
<td>Tea Break</td>
</tr>
<tr>
<td>3.45 pm</td>
<td>Create Building Material Groups (Part 1)</td>
<td>Performance Based SC2</td>
</tr>
<tr>
<td>5.30 pm</td>
<td>End of Workshop</td>
<td>End of Workshop</td>
</tr>
</tbody>
</table>

Note:

1. Participants are required to bring own Note Book / Laptop for the workshop.

2. After the training, the participants will be granted with a demo license (fully working) for 30 days
REGISTRATION FORM
For enquiry, please call ACES Secretariat at Tel: 6659 5023
Kindly sign and submit your completed registration form to registration@aces.org.sg

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Date</th>
<th>Fee</th>
<th>Venue</th>
</tr>
</thead>
</table>
| S18  | Two-Day Workshop on ETTV Calculations        | 19 & 20 Oct 2017 (Thu/Fri), 9.00 am to 5.30 pm | $150/pax | 18 Sin Ming Lane #06-01 Midview City  
Singapore 573960 |

S/N | Name | ACES Membership No. | RE & RTO No. | NRIC No. |
--- | ---- | ------------------- | ------------ |----------|
1.   |      |                    |             |          |
2.   |      |                    |             |          |
3.   |      |                    |             |          |

Company:

Address:
Postal code:

Contact Person:  *Mobile No.:  *Email:

PAYMENT

Enclosed is a Cheque No: __________________________ (Cheque should be crossed and made payable to “Association of Consulting Engineers Singapore” and mailed to “18 Sin Ming Lane #06-01 Midview City, Singapore 573960, Attention: ACES Secretariat”.
[Note: On the back of the cheque, please indicate participant name & event name]

Terms and Conditions
By submitting and signing this application form, the company and individual applicant agree to the following:

a) The company and individual applicant has read and understood the terms of the flyer (if available) and the application form.
b) Payment for the course must be made before the course commencement date.
c) ACES reserves the right to amend any details relating to the course, revise the course fees without prior notice, cancel or postponed the course.
d) Request for withdrawal or replacement must be made in writing. Requests are subject to approval by ACES.
   • Written request for replacement must reach ACES before the course commencement date. There will be no additional charges for suitable replacement.
   • Written request for withdrawal that reaches ACES
      ♦ At least At least 7 working days before course commencement: Full Refund
      ♦ 4 to 6 working days before course commencement: 50% of the course fee Refund
      ♦ 3 working days before and upon course commencement: No Refund

To be completed by Company and Individual Applicant

COMPANY APPLICANT
Name: ____________________________________________
Signature: ________________________________________
Date: ___________________________________________________________________

Company stamp (for company application)

INDIVIDUAL APPLICANT
Name: ____________________________________________
Signature: ________________________________________
Date: ___________________________________________________________________