

**AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND
AIR CONDITIONING ENGINEERS, INC.**
1791 Tullie Circle, NE / Atlanta, GA 30329
(404) 636-8400

TC/TG/TRG Agenda

TC/TG/TRG NO.:	4.5	TC/TG/TRG TITLE:	Fenestration
DATE OF MEETING:	June 27, 2017	LOCATION:	Renaissance, Suite 334 Long Beach, CA
DATE ISSUED:		RECORDED BY:	

Name	Affiliation	E-Mail	Member (VM, CM, Guest)	Present
<i>Anil Parekh (Secretary)</i>	Natural Resources Canada	<u>Anil.Parekh@NRCan.gc.ca</u>	VM	
<i>John Hogan (Standards)</i>	Consultant	<u>John.hogan@igc.org</u>	VM	
<i>Peter Lyons (Handbook)</i>	Peter Lyons and Associates	<u>peter.lyons@fenestralia.com</u>	VM-NQ	
<i>Charlie Curcija (Vice Chair)</i>	LBNL	<u>ccurcija@lbl.gov</u>	VM	
<i>Thanos Tzempelikos (Chair)</i>	Purdue University	<u>ttzempel@purdue.edu</u>	VM	
<i>Joe Hetzel (Vice Chair)</i>	DASMA	<u>jhetzel@thomasamc.com</u>	VM	
<i>William DuPont (Research)</i>	Sunergy	<u>waupi@msn.com</u>	VM	
<i>Josue Cavazos</i>	EFCO	<u>jcavazos@efcocorp.com</u>	CM	
<i>Michael Collins</i>	University of Waterloo	<u>mcollins@uwaterloo.ca</u>	CM	
<i>Sagar Rao</i>	AEI	<u>sagar.rao@outlook.com</u>	CM	
Dennis Wessel (TAC Liaison)			Guest	
Total voting members: 6 Voting members present:				

SCOPE:

TC 4.5 is concerned with the identification and evaluation of all physical properties of (1) glasses and other glazing materials, (2) shading and shielding materials and devices, and (3) control devices and strategies which influence the radiant, conduction, and convection transfer of both heat and light through fenestration systems. It is also concerned with the development of procedures for calculating and measuring solar heat gain, daylight admission, and heat transfer through fenestration systems.

COMMITTEE AND MEETING INFORMATION

Subcommittee Meetings:

- TC 4.5 Research - Monday (6/26), 2:15 pm-3:15 pm, Seaside 5B LBCC
- TC 4.5 Program - Monday (6/26), 3:15 pm-4:15 pm, Seaside 5B LBCC
- TC 4.5 Handbook – Monday (6/26), 4:15 pm-5:30 pm, Seaside 5B LBCC
- TC 4.5 Calculation Methods - Tuesday (6/27), 2:00 pm-4:00 pm, Suite 334, Renaissance

TC Web Site: <http://tc45.ashraetcs.org>

APPROVE AGENDA

APPROVE MINUTES FROM PREVIOUS MEETING

ANNOUNCEMENTS (TC Chair)

- **Roster changes**
 - Thanos Tzempelikos' term as Chair and VM ends on June 20, 2017. Charlie Curcija will be new TC Chair.
 - William DuPonts' term as research subcommittee chair and VM ends on June 30, 2017
- TC/TG/TRG Chairs announcements

TC LEADERSHIP

Voting members are:

- Thanos Tzempelikos (Chair, Program) – VM until June 2017
- John Hogan – VM until June 2018
- Joe Hetzel (Vice Chair) – VM until June 2020
- Anil Parekh (Secretary) – VM until June 2019
- Charlie Curcija (Vice Chair) – VM until 2018
- Willie Dupont (Research) –VM until June 2017
- Peter Lyons (handbook) –NQ VM until June 2020

LIAISON REPORTS

Technical Activities Committee (TAC)

Standards

Research Administration Council (RAC)

Conferences and Expositions Committee (CEC)

Handbook Committee

Chapter Technology Transfer Committee

ASHRAE Learning Institute (ALI) / Professional Development Committee (PDC) –

Special Publications

SUBCOMMITTEE REPORTS

Calculation Methods (Charlie Curcija)

Handbook (Peter Lyons)

2017 Handbook Chapter and checklist were completed and submitted to ASHRAE by Peter Lyons on Jan. 24, 2017. The checklist approval was conducted by letter ballot. Results: 5 approved; 2 abstain.

Research (William DuPont)

Research Projects:

- a. TC 4.5 RP-1414: "Update of U-factors, Solar Heat Gain Coefficients and Visible Transmittances of Standard Fenestration Units made from Representative Fenestration Frame and Glazing Systems in the Fenestration Chapter of the Handbook of Fundamentals", *Bish Stojanovic/DesignBuilder Software*
- b. TC 4.7 and TC 4.5's RP-1588: "Procedure to Create Hypothetical Layer-by-Layer Fenestration Descriptions When Only the Bulk Properties Such as U-factor and SHGC Have Been Defined", *Joe Huang/White Box Consulting*
- c. TC 4.5 RP-1710: "Effects of Dynamic Shading Devices on Daylighting and Energy Performance of Perimeter Zones", *Kristen Cetin, Iowa State University*

Work Statements:

RTARs:

- a. TC 4.5 RTAR Proposal: "Develop Reference Representative Solar Spectra for Solar Heat Gain Calculations in North America," *William C. duPont/Sunergy Consulting & Chris Gueymard/Solar Consulting Services*
- b. TC 4.5 RTAR Proposal: "Optical and Thermal Performance of Hollow Glass Blocks." *Aziz Laouadi/NRC*

Long range research plan:

- a. "Develop and Validate the Methodology to Calculate the Thermal Performance of Exterior Roller Shutters, Fixed Louvered Exterior Shutters and Interior Roman Shades," *Charlie Curcija/LBNL and William C. duPont/Sunergy Consulting*
- b. Building Integrated Photovoltaics (BIPV). *Chris Gueymard/Solar Consulting Services, Peter Lyons/Peter Lyons & Associates and Anil Parekh/National Resources Canada*
- c. "Develop Revise the Shading Chart, (Keys Chart), in the Fenestration Chapter of the Handbook of Fundamentals," *Michael Collins/University of Waterloo, Thanos Tzempelikos/Purdue University, and Peter Lyons/Peter Lyons & Associates*
- d. Condensation in residential windows and related aspects. Charlie will try to develop a scope.
- e. Shading operation in commercial and residential buildings, manual and motorized.

Conferences and Expositions (Mike Collins)

CHICAGO PROGRAM, January 20-24, 2018

Conference paper abstracts due March/April 2017

Technical papers due April 2017

Seminars/forum proposals due August 2017

TC 4.5 Website (Sagar Rao)

The TC website is up and running. Sagar Rao is the webmaster and has updated the web pages.

OLD BUSINESS

NEW BUSINESS

ADJOURN