



SYMPOSIUM ON BUILDING SCIENCE AND THE PHYSICS OF BUILDING ENCLOSURE PERFORMANCE – PART 1

Sponsored by ASTM Committees E06 on Performance of Buildings and Committee D08 on Roofing and Waterproofing

October 21-22, 2018
Washington Hilton
Washington, DC, USA

Symposium Chairs:	Dan Lemieux	Jennifer Keegan
	Wiss, Janney, Elstner Associates	GAF
	Fairfax, VA	Parsippany, NJ

ABOUT THE SYMPOSIUM

The symposium will provide a forum for the exchange of ideas on current research regarding building science and the physics of building enclosure and whole building performance, with an emphasis on transitions between the horizontal and the vertical and the critical points of intersection; testing and assessment of heat, air, and moisture transfer; energy use, and the environment

SUNDAY, OCTOBER 21, 2018

8:00 AM

Opening Remarks

8:15 AM

Keynote Speaker

SESSION 1: ENERGY USE AND CONSERVATION

9:00 AM

Energy Codes and Standards: Do They Reflect Best Practice in Building Enclosure Performance?

Tat Fu, Simpson Gumpertz & Heger

9:35 AM

History, Continued Changes and Impact of Increased Performance Values Required of Exterior Building Enclosures by ASHRAE 90.1

Paul Johnson, Smith Group

10:05 AM BREAK

10:20 AM

Physics of HVAC Interaction with Enclosure Systems and People

Paul Totten, WSP

10:55 AM

Balancing Building Enclosure Performance and the Conservation of Modern Materials

Kyle Normandin, Wiss, Janney, Elstner Associates, Inc.

11:30 AM

The Hirshhorn Museum: Predicted Energy Use Improvements for a Mid-20th Century Brutalist Landmark

Niklas Vigener, Simpson Gumpertz & Heger

12:00 PM

Panel Discussion

12:30 PM LUNCH (On Your Own)

SESSION 2: ANALYSIS AND MODELING

1:30 PM

Integrating CFD Simulations and Condensation Risk Assessment: Project-Specific Analyses to Better Inform Design of Buildings

Scott Bondi, Simpson Gumpertz & Heger

2:05 PM

Role of Initial Moisture Content on Hygrothermal Models and Envelope Performance

Carly Wagner, WDP & Associates

2:35 PM BREAK

2:50 PM

Hygrothermal Performance Evaluation of Drainage Components and Sheathing Membranes when Subjected to Climate Load

Michael Lacasse, National Research Council Canada

3:25 PM

Osmosis and the Blistering of Liquid Applied Waterproofing Membranes

Elyse Henderson, RDH Building Science

4:00 PM

Panel Discussion

4:30 PM ADJOURN FOR THE DAY

5:00 PM RECEPTION

MONDAY, OCTOBER 22, 2018

8:00 AM

Opening Remarks

SESSION 3: SOLUTIONS AND A PATH FORWARD

8:15 AM

Design Criteria and Solutions to Common Issues in Building Envelope Design

Adam Rizor, CDC, Inc.

8:50 AM

Unintended Consequences: A Review of Critical Details, Serviceability and Durability of Modern High-Performance Facades (Keegan, Ridgway, Intertek) Leverage Best Practices To Avoid These Issues

Jennifer Keegan, GAF and Matt Ridgway, Intertek

9:25 AM BREAK

9:55 AM

TBD

10:45 AM

Two Federal Agencies and a Contractor: Enclosure Commissioning of a Design-Build Project

Andrea DelGiudice, Wiss, Janney, Elstner Associates, Inc.

11:15 AM

Panel Discussion

11:45 AM

Closing Remarks

12:00 PM SYMPOSIUM ADJOURNS UNTIL DECEMBER