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Summer Camp XXVII

Twenty-Seventh Westford Symposium on Building Science

August 4, 2025 to August 6, 2025

I would like to invite you to the twenty-seventh Westford Symposium on Building Science. In continuing with past tradition, “building science summer camp” features intensive discussions on building science in both a formal and informal setting. Westford XXVII – features numerous presenters/facilitators. Also in keeping with tradition the lead presenter/facilitator for each of the subject areas is one of the foremost practitioners in the subject area.

Course Dates

Monday, August 4 through Wednesday, August 6, 2025.

Course Outline

Presentations begin each day at 8:30 am

Lunch will be provided each day between 12 noon and 1:00 pm

Presentations will end Monday and Tuesday at aro

Symposium will close Wednesday at 3:00 pm



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Monday (August 4th, 2025)

8:30 AM – 8:45 AM

Introduction / Welcome

Approximately 500 attendees will be in the ball room in close proximity for 3 days. The opening discussion will relate to ventilation rates, filtration, air cleaning and personal protection approaches for the attendees. The hotel ventilation rate will be set at its maximum. New filters will have been installed. Note that it is acceptable to wear a mask. Also note that mask wearing is not compulsory. For those that wish to remain in their hotel rooms they will be able to remotely connect to the zoom link where the speakers can be heard live and the power points can be watched. The evening events at the “clubhouse” are all outdoors...except inside the “barn” where masks are acceptable but not compulsory.

8:45 AM – 10:00 AM

John Straube

“Low Carbon Buildings”

John Straube is a Professor in the Department of Civil and Environmental Engineering at the University of Waterloo, Ontario, Canada. John will present on carbon in buildings: embodied and operational carbon, the life-cycle, and how energy production, consumption and distribution influences these... with the important complexities of resilience and sustainability thrown in. John collects tractors and loves sheep dogs....legends can do this.

MORNING BREAK 10:00 AM TO 10:30 AM

10:30 AM – 12:00 Noon

William Bahnfleth

“Indoor Air Quality...How Much Ventilation Do We Really Need”

William Bahnfleth is the past president of ASHRAE. Even more impressive he is a Professor of Architectural Engineering at Penn State. He chaired the ASHRAE Epidemic Task Force. Ventilation rates are going up, epidemiology is raising questions, source control is happening, and folks are still wearing masks. What is coming? Bill is known for his 100-mile bike rides and his love of cats.



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LUNCH 12:00 NOON TO 1:00 PM

1:00 PM – 1:45 PM

Mark Modera

“AeroBarrier”

Mark Modera is a professor at UC Davis and is the inventor of AeroBarrier. Mark will talk about technology developments for duct and enclosure sealing. Mark is better known as a beach volleyball player and getting speeding tickets riding motorcycles.

1:45 PM – 2:30 PM

Dave Bohac and Mike Lubliner

“Using AeroBarrier in Existing Single and Multifamily Homes”

Dave Bohac is the research director at the Minnesota Center for Energy and Environment. Mike Lubliner is a senior energy advisor at Oak Ridge Energy Laboratory. Dave and Mike will share their work using AeroBarrier on existing single and multifamily dwellings. Their research is focused on low-income weatherization. Dave is a pickle ball player and Mike is a pickle ball wannabe.

AFTERNOON BREAK 2:30 PM TO 3:00 PM

3:00 PM – 4:00 PM

James Petersen

“HVAC solutions for Multi-family Housing”

James Petersen is a mechanical engineer with over 40 years of experience. James embraces a whole building approach that dramatically reduces heating and cooling loads and then matches them with HVAC systems that are small, simple, durable and easy to service. James loves working in the woods when he is not a legendary MEP/FP. He is an accomplished tree feller and gets a kick out of operating his excavator.



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4:00 PM – 5:00 PM

Tim Mattox

“Fire Stopping, Compartmentalization and Sound Transmission”

Tim Mattox is a mechanical engineer from Oklahoma State University and has spent 30 years developing fire test standards. Tim worked to establish UL Systems Categories combining air and water performance with fire spread resistance for exterior walls. Tim points out the priorities are safe evacuation and inhibiting smoke freely traveling throughout a building. Effective firestopping also mitigates sound transmission. Tim is a lab rat who connects with the real world..

Tuesday (August 5th, 2025)

8:30 AM – 10:00 AM

Eva King

“Diagnosing Unhealthy Indoor Environments”

Eva King is the founder and principal scientist at Aura EnviroServices. Keswick, VA. She has a Ph.D. in immunoepidemiology from the University of Oxford, UK. Her work focuses on diagnosing indoor environmental problems in homes and workplaces. She has appeared on ABC Nightline

MORNING BREAK 10:00 AM TO 10:30 AM

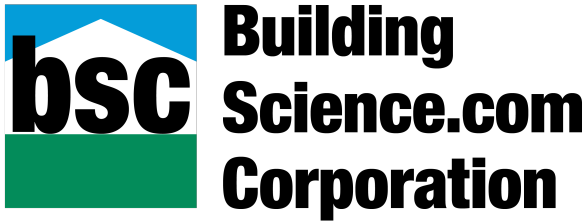
10:30 AM – 12:00 Noon

Marc Rosenbaum

“Daylighting”

Marc Rosenbaum, P.E., received a BS and MS from the Massachusetts Institute of Technology. He is the Founder and Principal of Energysmiths and built his first superinsulated house in 1978. Marc will discuss daylighting....” the illumination of indoor spaces by natural light...”. OK, can’t resist this...Marc will shine a light on the subject...

LUNCH 12:00 NOON TO 1:00 PM



1:00 PM – 2:30 PM

Henri Fennell

“SIPS...it’s About the joints and more”

Henri is a building enclosure specialist and an architect with over 40 years of experience. He has done countless remediation, building failure and historic renovation projects including the Guggenheim Museum....and...wait for it...a net-zero energy research structure in Antarctica. When he talks about penguins it is not about the hockey team.

AFTERNOON BREAK 2:30 PM TO 3:00 PM

3:00 PM – 4:00 PM

Claudia Miller and Carl Grimes

“Floods, Fires and Indoor Health Aftermath”

Claudia Miller, MD, MS started as an industrial hygienist is now Professor Emerita in Allergy/Immunology and Environmental Health at the University of Texas. Carl Grimes is Managing Director of Hayward Healthy Home. Together they authored the “Environmental House Calls” case study paper that combined indoor air measurements with environmental exposure and sensitivity limits and occupant experiences of building conditions before and after an exposure event, before and after environmental conditions, and over time.

4:00 PM – 5:00 PM

Chris Schumacher

“Mass Timber Wet”

Chris Schumacher is a senior building science consultant at RDH and a Adjunct Professor at the University of Waterloo. Chris is going to talk about his experience dealing with moisture management in over 50 mass timber buildings...specifically how assemblies get wet during construction and how they can they be dried. Chris apparently thinks he can still ski.

Wednesday (August 6th, 2025)



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8:30 AM – 10:00 AM

Ed Fronapfel

“Building Assembly Fire Resistance”

Ed Fronapfel is with SBSA in Golden, CO and is a structural engineer who burns things to see how they work. This is a big deal. He has several decades of experience in forensic engineering analysis. Fire resistance of building assemblies is...bad pun...now on the front burner.

MORNING BREAK 10:00 AM TO 10:30 AM

10:30 AM – 12:00 Noon

Andy Shapiro and Jacob Racusin

“Embodied CO₂e”

Andy Shapiro has a barefoot engineering degree from Brown University and is President for Life of Energy Balance, Inc. Jacob Racusin is an embodied carbon researcher with Builders for Climate Action and New Frameworks and is a killer sax player. They will dive into operational and embodied CO₂e and their effects on the atmosphere over time for a pair of dormitory/apartment buildings in Vermont that were designed and constructed to be “net zero ready”. Design and material strategies, successes, failures, and lessons learned will be presented.

LUNCH 12:00 NOON TO 1:00 PM



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Closing Presentation:

1:00 PM – 2:00 PM

Sophie Mercier

“Can We Learn From Our Past?”

Sophie Mercier is a building envelope specialist and co-founder of Evoke Buildings, a Vancouver based Building Science and Energy consulting firm. She is going to ponder: With our eyes on the prize of ultimate sustainability, carbon emission reduction, are we too often focusing on the tree rather than the forest. We always think we can do it better than our predecessors, but sometimes we forget what they did, why and how they did it.