



proudly presents

2018

REGION VI

CHAPTER REGIONAL CONFERENCE

Des Moines Marriott Downtown Hotel

Des Moines, Iowa

May 3 – May 5, 2018

A silhouette of a city skyline, likely Des Moines, Iowa, with several tall buildings and a prominent tower. In the foreground, there are palm trees and streetlights. The scene is set against a light blue background.

IOWA CHAPTER - MAY 3RD - MAY 5TH

CONFERENCE SCHEDULE

Thursday, May 3rd					
Time	Registration	Business Meetings	Technical Track	Companion Activities	Bus
9:00 AM					
9:15 AM					
9:30 AM					
9:45 AM					
10:00 AM					
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12:45 PM					
1:00 PM					
1:15 PM					
1:30 PM	Open	Officers/Delegates/ Alternates	ALI Short Course Humidity Control II: Real- World Problems & Solutions	Companion Activity List	Misc Activity Route
1:45 PM					
2:00 PM					
2:15 PM					
2:30 PM					
2:45 PM					
3:00 PM					
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3:30 PM					
3:45 PM					
4:00 PM					
4:15 PM					
4:30 PM					
4:45 PM					
5:00 PM					
5:15 PM					
5:30 PM					
5:45 PM					
6:00 PM		Welcome Party at West End Salvage			
6:15 PM					
6:30 PM					
6:45 PM					
7:00 PM					
7:15 PM					
7:30 PM					
7:45 PM					
8:00 PM					
8:15 PM					
8:30 PM				Welcome Party	
8:45 PM					



CONFERENCE SCHEDULE

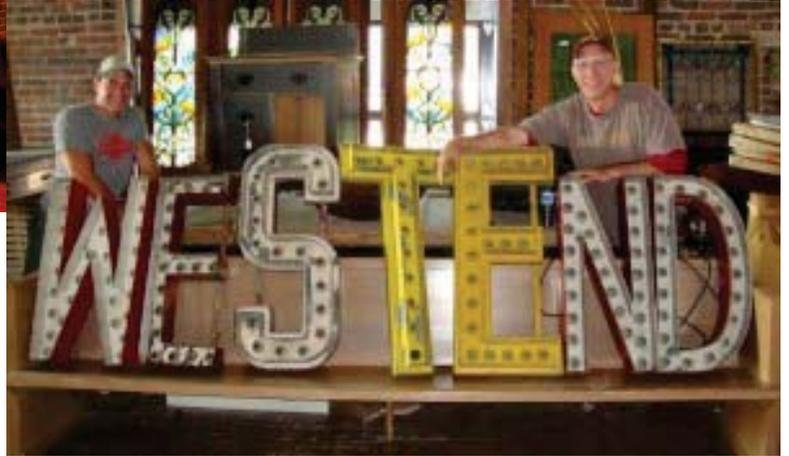
Friday, May 4th											
Time	Registration	Business Meetings	Technical Track A	Technical Track B	Tours	Trade Show	Companion Activities	Bus			
7:00 AM	Open	Officers/Delegates/ Alternates	Breakfast Open								
7:15 AM			Technical Keynote/Plenary and Breakfast								
7:30 AM			Chris Mathis - Why Buildings Matter								
7:45 AM											
8:00 AM											
8:15 AM											
8:30 AM			Tech Session 1A	Tech Session 1B	none				Companion Tour 8:30 - Meet in lobby, depart for Iowa State Capitol 9:00 - State Capitol Tour 11:00-1:00 - Cooking class (We will be eating what we prepare) 1:00-3:00 - Shopping in East Village 3:00 - Head back to hotel or Sculpture Park, depending on interest. If we stop at Sculpture Park, back to hotel by 4:00	Companion Activity	
8:45 AM			Chris Mathis - Energy Efficient Windows and Fenestration	Hoy Bohanon - Applying ASHRAE Standards to Existing Buildings							
9:00 AM			Break								
9:15 AM											
9:30 AM											
9:45 AM											
10:00 AM	Tech Session 2A	Tech Session 2B	none				Companion Tour 8:30 - Meet in lobby, depart for Iowa State Capitol 9:00 - State Capitol Tour 11:00-1:00 - Cooking class (We will be eating what we prepare) 1:00-3:00 - Shopping in East Village 3:00 - Head back to hotel or Sculpture Park, depending on interest. If we stop at Sculpture Park, back to hotel by 4:00	Companion Activity			
10:15 AM	Chris Mathis - How Long Will it Last	Hoy Bohanon - How to Implement DCV and Comply with ASHRAE Standards									
10:30 AM	Break										
10:45 AM											
11:00 AM											
11:15 AM											
11:30 AM	Tech Session 3A	Tech Session 3B	none						Companion Tour 8:30 - Meet in lobby, depart for Iowa State Capitol 9:00 - State Capitol Tour 11:00-1:00 - Cooking class (We will be eating what we prepare) 1:00-3:00 - Shopping in East Village 3:00 - Head back to hotel or Sculpture Park, depending on interest. If we stop at Sculpture Park, back to hotel by 4:00	Companion Activity	
11:45 AM	Chris Mathis - Energy Efficiency in Commercial Bldgs	Hoy Bohanon - Commissioning, Operating, Maintaining Air-to- Air Energy Recovery Systems									
12:00 PM	Break										
12:15 PM											
12:30 PM											
12:45 PM											
1:00 PM	Presidential Luncheon										
1:15 PM											
1:30 PM											
1:45 PM	Open	Open Room for Business Meeting	Tech Session 4A	Tech Session 4B	Tour Market One - Society Award		Companion Tour 8:30 - Meet in lobby, depart for Iowa State Capitol 9:00 - State Capitol Tour 11:00-1:00 - Cooking class (We will be eating what we prepare) 1:00-3:00 - Shopping in East Village 3:00 - Head back to hotel or Sculpture Park, depending on interest. If we stop at Sculpture Park, back to hotel by 4:00	Companion Activity			
2:00 PM			Julia Keen - Ethics in Decision Making - An Exercise in Application	Mick Schwedler - Chilled water systems for YEA: What the Gen Xers and Baby Boomers have done wrong							
2:15 PM			Snacks								
2:30 PM											
2:45 PM											
3:00 PM											
3:15 PM											
3:30 PM			Tech Session 5A	Tech Session 5B	Tour Kum N Go Headquarters					Companion Tour 8:30 - Meet in lobby, depart for Iowa State Capitol 9:00 - State Capitol Tour 11:00-1:00 - Cooking class (We will be eating what we prepare) 1:00-3:00 - Shopping in East Village 3:00 - Head back to hotel or Sculpture Park, depending on interest. If we stop at Sculpture Park, back to hotel by 4:00	Companion Activity
3:45 PM			Julia Keen - Targeting Success - Improve Employee Satisfaction and Profit	Mick Schwedler - Water Side Heat Recovery							
4:00 PM											
4:15 PM											
4:30 PM											
4:45 PM											
5:00 PM	Social - Trade Show										
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CONFERENCE SCHEDULE

Saturday, May 5th								
Time	Registration	Training Sessions	Trade Show	Food	Companion Activities			
7:00 AM								
7:15 AM								
7:30 AM	Open			Continental Breakfast				
7:45 AM								
8:00 AM								
8:15 AM								
8:30 AM								
8:45 AM			Workshops: Chapter Operations? Chapter Finances? GGAC RP Membership CTTC ECC Student Activities Historian YEA (4 sessions at a time with 1.5 hours - 8 total)		Open / Tear Down	Farmers Market		
9:00 AM								
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10:45 AM								
11:00 AM								
11:15 AM								
11:30 AM								
11:45 AM								
12:00 PM	Break							
12:15 PM	CRC Debrief							
12:30 PM								
12:45 PM								
1:00 PM								
1:15 PM								
1:30 PM								
1:45 PM								



WELCOME PARTY



- WHERE:** West End Architectural Salvage
22 9th Street, Des Moines, IA 50309
- WHEN:** Thursday, May 3rd, 6:00 PM to 9:00 PM
- HOW:** Busses running between Marriott and West End Salvage. Less than a 10 minute walk from the Marriott.
- WHAT:** Great atmosphere. Great food. Great music. Great friends. Join us for a great time at West End Architectural Salvage. Check out reclaimed treasures and much more:
The First Floor is home to the coffee shop, area for meetings and events ...The Second Floor is packed with lights, furniture and one-of-a-kind treasures...The Third Floor includes one-of-a-kind finds saved from homes and buildings...The Fourth Floor includes building materials... recycled and ready to use...



IOWA CHAPTER - MAY 3RD - MAY 5TH

COMPANION ACTIVITIES

Thursday, May 3rd

1:30 PM to 5:00 PM—Various Activities (Specifics TBD)

Friday, May 4th

8:30 AM — Meet in Lobby, depart for State Capitol.

9:00 AM — Capitol Tour.

11:00 AM — Cooking Class (We will be eating what we prepare).

1:00 PM — Shopping in East Village.

3:00 PM — Return to Hotel or head to Sculpture Park, depending on interest.

4:00 PM - Return to Hotel if we stop by the Sculpture Park.

Saturday, May 5th

8:30 AM to 12 NOON—Downtown Farmer's Market

There will be group transportation provided for all Companion Activities.



ACCOMMODATIONS AND HOSPITALITY



Des Moines Marriott Downtown

700 Grand Avenue, Des Moines, Iowa 50309



Marriott hotel(s) offering your special group rate:
Des Moines Marriott Downtown for 129.00 USD per night

Last day to book: 4/12/18

[Book your group rate for ASHRAE CRC 2018 - Region VI](#)

Check out our Hospitality Suite - (Room Number and Hours TBD)

IOWA CHAPTER - MAY 3RD - MAY 5TH

KEYNOTE SPEAKER

CHRIS MATHIS



R. Christopher “Chris” Mathis has spent the past 30 years focusing on how buildings and building products perform – from energy efficiency to code compliance to sustainability and long-term performance durability. Chris received his undergraduate degree in Physics from the University of North Carolina at Asheville. He received a Master of Science in Architecture Studies from MIT where his graduate work focused on energy use in buildings. He has served as a Scientist in the Insulation Technology Laboratory at the Owens-Corning Fiberglas Technical Center, was the Director of the Thermal Testing Laboratory for the National Association of Home Builders Research Center, and Director of Marketing for Architectural Testing, Inc., a private laboratory specializing in the performance of buildings and building products, particularly fenestration performance testing.

Chris is an active participant in Standards and Code development at ASHRAE, NFRC, ASTM and the ICC. He was a founding member and served for four years as the first Director of the National Fenestration Rating Council, the non-profit organization that developed the nation’s energy performance rating and labeling system for windows,

doors and skylights.

Chris is a 30-year member of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE). In ASHRAE he has worked on window thermal test standards, national model codes for commercial buildings (ASHRAE 90.1), model codes for residential buildings (ASHRAE 90.2) and is the energy consultant to Standard 189.1 – ASHRAE’s model code for sustainable commercial buildings. He is also the energy consultant to the Chapter Technology Transfer Committee.

Chris has been recognized as an ASHRAE Distinguished Lecturer, conducting seminars on a variety of building science, energy efficiency and sustainability topics across the US and worldwide. Chris has published numerous technical papers at ASHRAE and presented his work at a variety of national and international conferences. His publications include technical papers on: advanced test methods for insulation materials and wall systems; daylighting design and assessment techniques; off-peak cooling techniques for commercial office buildings; new residential and commercial energy codes; and metrics for environmentally preferable products. He has written numerous engineer-, architect-, builder- and consumer-targeted articles and guides on various building and product performance issues. He is the author of *Insulating Guide* - a book for home builders providing insulating best practices for many of the most common home building details. He is the co-author of *Is Your Home Protected from Water Damage? A Homeowner’s Guide to Water Damage Prevention* published by the Insurance Institute for Business and Home Safety.

Chris provides a number of accredited training seminars for architects, engineers, builders, manufacturers, code officials, utility program developers and others addressing these myriad building science and building performance issues – from improved building energy efficiency and comfort to energy and power planning to improved building and energy codes to the challenges of sustainability and green building. He is a frequent keynote speaker at various national conferences and events. Chris is also an on-going student of about 90 million years of sustainability and building science through his activities as a beekeeper. He lives and works near the farm he grew up on in the beautiful mountains of Western North Carolina.

TECHNICAL SESSIONS

ASHRAE LEARNING INSTITUTE (ALI) SHORT COURSE

THURSDAY, MAY 3rd - 1:30 PM to 5:00 PM

Mark Nunnelly - Humidity Control II: Real-World Problems & Solutions



For those who need to learn beyond the basics of humidity control, this course provides the next step. Based on ASHRAE's best-selling Humidity Control Design Guide for Commercial and Institutional Buildings, the course includes an in-depth discussion of moisture load calculations and how humidity control can be added to HVAC designs for seven different types of commercial buildings. The course also covers the effects of different humidity levels on thermal comfort, corrosion, mold growth, and airborne microorganisms—information that helps the owner and designer define the optimal humidity control level for each application. This course puts the attendee on the fast track to understanding the effects of successful humidity control.

OUTLINE

1. Introduction
2. Case histories—schools in Texas and Florida
3. Humidity troubleshooting sequence and procedures
4. Case history—community clinic in Southeast Asia
5. Troubleshooting the HVAC side of the problem
6. Hands-on: Calculate lb/hr removed from a room by dry supply air
7. Summary

TECHNICAL SESSIONS

TECH SESSION 1A

FRIDAY, MAY 4th - 8:30 AM to 9:30 AM

Chris Mathis - Energy Efficient Windows and Fenestration

There are now thousands of new, different window and glazing technologies available to both residential and commercial building professionals. Many of these technologies have dramatic impacts on HVAC sizing, peak loads and thermal comfort. This presentation will provide attendees with valuable information concerning key performance indices necessary in making energy efficient fenestration product decisions. Implications on HVAC sizing, peak loads and human comfort will be addressed. Implications for existing and new buildings will be discussed.



TECH SESSION 1B

FRIDAY, MAY 4th - 8:30 AM to 9:30 AM

Hoy Bohanon - Applying ASHRAE Standards to Existing Buildings

Many ASHRAE Standards are design standards addressing the design of new buildings. Recently ASHRAE published Standard 100-2015 Energy Efficiency in Existing Buildings. Other standards such as Standard 62.1 and Standard 55 also can be applied to existing buildings and are referenced by various sustainability and energy certification programs. What parts of these standards apply to existing buildings and how can facility managers use them to improve their operations? What other ASHRAE Standards, Guidelines, and Publications are available to improve sustainability of our existing building stock?



TECH SESSION 2A

FRIDAY, MAY 4th - 9:45 AM to 10:45 AM

Chris Mathis - How Long Will it Last

This lecture explores some of the roadblocks, pitfalls and opportunities on the road to truly sustainable buildings. It invites the audience to question long held assumptions and habits in building design, engineering and construction, and challenges how we assess numerous building performance attributes. From energy efficiency to durability to life expectancy, we will explore some of the challenges necessary to establish meaningful product and building performance metrics. We will examine how these sustainability objectives fit in with ASHRAE's minimum code standards (90.1 and 90.2), green building standards (189.1 and 189.2) and others.



TECHNICAL SESSIONS

TECH SESSION 2B

FRIDAY, MAY 4th - 9:45 AM to 10:45 AM

Hoy Bohanon - *How to Implement DCV and Comply with ASHRAE Standards*

ASHRAE standards 90.1 and 189P require demand control ventilation in some instances. ASHRAE standard 62.1 allows demand control ventilation but places restrictions on its application. Many existing installations do not comply with the requirements of ASHRAE Standard 62.1. What is required and what strategies and technologies can be used to meet the requirements of the all the standards?



TECH SESSION 3A

FRIDAY, MAY 4th - 11:00 AM to 12:00 PM

Chris Mathis - *Energy Efficiency in Commercial Bldgs*

Advances in commercial building technologies have made possible dramatically greater levels of energy efficiency in commercial buildings than ever before. From new lighting, fenestration and glazing technologies, insulation innovations, air sealing, advanced HVAC systems and new diagnostic tools all create new opportunities for anyone working with 90.1 and the commercial building industry. This presentation will provide attendees with new information about commercial construction technologies for both new and existing buildings. It will also address opportunities and challenges in meeting new energy codes and the many “beyond code” programs such as LEED, Green Globes and other green building programs.



TECH SESSION 3B

FRIDAY, MAY 4th - 11:00 AM to 12:00 PM

Hoy Bohanon - *Commissioning, Operating, Maintaining Air-to-Air Energy Recovery Systems*

How does one commission energy savings equipment such as air-to-air energy recovery? What are key performance factors that must be measured? When can you simulate and when must you measure? Devices addressed include air-to-air energy recovery plates and wheels, desiccants, run around loops, and water-side economizers.



TECHNICAL SESSIONS

TECH SESSION 4A

FRIDAY, MAY 4th - 1:45 PM to 2:45 PM

Julia Keen - *Ethics in Decision Making - An Exercise in Application*

In lieu of the traditional lecture style presentation, this is a structured interactive exercise. The participant will be provided a copy of both the ASHRAE and the Professional Engineering Code of Ethics. A methodology for ethical decision making will be introduced. Realistic ethical dilemmas from the practice of building design and construction will be presented. Based on the information provided and using the provided Codes of Ethics the participants will be asked to make their own decision, discuss this with their table, and then be lead through the decision making process as a group. The ethical dilemmas begin as fairly simple black-white analysis and are progressively made more complex during the session.



TECH SESSION 4B

FRIDAY, MAY 4th - 1:45 PM to 2:45 PM

Mick Schwedler - *Chilled water systems for YEA: What the Gen Xers and Baby Boomers have done wrong*

This seminar, originally presented at the 2013 ASHRAE annual conference, covers common chilled water system mistakes; and more importantly how to avoid or mitigate them. Chilled water systems covered include new, retrofit, conversion/addition, and replacement. In addition control options are also discussed.



TECHNICAL SESSIONS

TECH SESSION 5A

FRIDAY, MAY 4th - 3:15 PM to 4:15 PM

Julia Keen - *Targeting Success - Improve Employee Satisfaction and Profit*

As the building design and construction industry looks at the composition of the future workforce it is clear that the demographics of today will need to change to meet future demand for employees. It is projected that this change will include increasing the number of women employed in the building design and construction industry. We have seen an increase in young women enrolling in STEM disciplines at the university level and an improvement in the numbers attaining college degrees but we have not seen the same increase in the percent of women employed in the STEM workforce. This inconsistency can be attributed to poor retention of women once they enter the profession. This presentation will address why women leave the industry and what can be done to help increase retention. This is an important topic for our industry as a whole as well as for employers trying to minimize turnover and maximize productivity and profit.



TECH SESSION 5B

FRIDAY, MAY 4th - 3:15 PM to 4:15 PM

Mick Schwedler - *Water Side Heat Recovery*

This presentation provides information that helps the design engineer properly determine if heat recovery is justified, and aids in properly selecting equipment, determining proper system configuration, and accounting for controls to ensure proper operation.



SPEAKERS

HOY BOHANON

Hoy Bohanon, PE, LEED AP, BEAP is principal in Hoy Bohanon Engineering, PLLC, a firm that focuses on improving the performance of existing mission critical buildings. Mr. Bohanon began his engineering career as a research and design engineer, and then gained experience as a project engineer, facilities engineer, facilities manager, indoor air quality research engineer, environmental engineer, and business owner. He has a master's degree in engineering from North Carolina State University, and a bachelor's degree in mechanical engineering from Georgia Institute of Technology.

Mr. Bohanon has written technical papers and articles on indoor air quality, operations, and maintenance and is a frequent presenter at technical society meetings. He is a recipient of the ASHRAE Distinguished Service Award and is chair of ASHRAE Standard 62.1 committee, Ventilation for Acceptable Indoor Air Quality. He also serves on the bEQ committee. He is chair of the US Technical Advisory Group panel 1 (general principles) and panel 4 (indoor air quality) for ISO TC205 Building Environment Design. He is a co-author of The Indoor Air Quality Guide: Best Practices for Design, Construction and Commissioning and Performance Metric Protocols for Commercial Buildings: Best Practices Guide. He also teaches multiple courses for the ASHRAE Learning Institute addressing ASHRAE 62.1 and IAQ. Mr. Bohanon is also a member of the Professional Engineers of North Carolina, US Green Building Council, and I2SL.



JULIA KEEN



Julia Keen is a Professor of Architectural Engineering and Construction Science at Kansas State University holding the Bob and Betty Tointon Engineering endowed chair. She also owns her own consulting company, Keen Designs, PA. Her specific areas of interest include HVAC design, energy codes, high performance design, HVAC education, and the advancement of women in the building design and construction industry.

Julia Keen received her Bachelor's Degree in Architectural Engineering from Kansas State University. Upon graduation, she worked as a Mechanical/Electrical Project Engineer in Waterloo, Iowa. In this capacity she was responsible for the design of building systems from initial planning stages through final project inspection and completion. Julia was involved in new and retrofit projects including hospitals, health clinics, assisted-living and nursing facilities, education facilities, office buildings, retail facilities, dormitories, and churches. In July 2003, Julia accepted a faculty position with K-State in the Architectural Engineering and Construction Science Department. She completed her Master's degree in Architectural Engineering (2005) and her Doctorate (2010) in Education both from K-State. She is a Licensed Mechanical Professional Engineer in Kansas and Iowa and holds two ASHRAE Certifications - High-Performance Building Design Professional (HBDP) and Building Energy Audit Professional (BEAP).

SPEAKERS

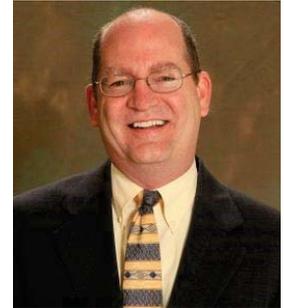
MARK NUNNELLY



Mark Nunnelly is a mechanical engineering graduate of Auburn University, is a registered professional engineer and is a LEED Accredited Professional. He has been involved in the construction, engineering and HVAC industry for over 30 years. Over the last thirteen years, his involvement with projects has primarily pertained to Commissioning, Retro-commissioning, humidity control, and energy management for commercial, institutional and industrial buildings. Mark is certified as a Commissioning Authority (CxA) through the AABC Commissioning Group. He has presented numerous training seminars on Commissioning, Dehumidification Technologies (desiccant and mechanical -based) and their applications, as well as Psychrometrics and designing for proper humidity control. He has been a member of the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) for over 27 years. Mark is a past President for the Birmingham, AL chapter, has recently served as Chairman for the Society's Membership Promotion Committee and on the Environmental Health Committee. Mark is recognized as one of ASHRAE's Distinguished Lecturers and has conducted training seminars internationally and domestically.

MICK SCHWEDLER

Mick has been involved in the development and support of HVAC systems for Trane since 1982. As manager of applications engineering his areas of expertise include system optimization (in which he holds patents) and chilled water system design. His primary activities include assisting designers in proper application of products and systems in buildings, and writing system application manuals and newsletters. In addition, he has presented technical information to thousands of engineers through Trane's Engineers Newsletter Live series, and ASHRAE webcasts. Mick has given technical seminars throughout North America, as well as internationally, and published a number of articles within the industry. Prior to his work with Trane, Mick received his MSME from the University of Wisconsin Solar Energy Laboratory and BSME from Northwestern University.



A current ASHRAE Society Vice-President, and recipient of ASHRAE's Distinguished Service and Standards Achievement Awards, Mick was Chair of SSPC 90.1, responsible for ASHRAE/IESNA 90.1-2010, "Energy Standard for Buildings Except Low-Rise Residential Buildings." He is past chair of TC 1.5 –"Computer Applications," and has served on ASHRAE's Personal Development Committee and Code Interaction Subcommittee. From an environmental perspective, Mick authored portions of the ASHRAE Green Building Guide and has served on technical and educational groups for both the New Buildings Institute and the US Green Building Council.

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A light blue silhouette of a city skyline, including various skyscrapers and buildings, with palm trees in the foreground.

IOWA CHAPTER - MAY 3RD - MAY 5TH

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IOWA CHAPTER - MAY 3RD - MAY 5TH

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