

**TC 7.5 Smart Building Systems
Program Subcommittee Meeting**

Chicago

Sunday (1/21) 5:30 pm - 6:00 pm Salon 1 Palmer House

Agenda

1. Self-introduction
2. Brief review of the program tracks for Chicago
3. Program ideas for the future conference (Houston, etc)

Programs presented at Chicago

Sponsoring Committee		Program Time	Session Chair	Session Title	Co-Sponsoring Committee
7.5 Building Systems	Smart	Seminar 15 Sunday, 3:15 PM - 04:45 PM	Andreas Athienitis	Model Predictive Control Case Studies in Commercial and Institutional Buildings	
7.5 Building Systems	Smart	Seminar 20 Monday, 8:00 AM - 09:30 AM	Scott Hackel	Performance-Based Procurement: A Focus on Real Performance from Beginning to End	7.6 Building Energy Performance
7.5 Building Systems	Smart	Seminar 24 Monday 9:45 AM - 10:45 AM	Frank Shadpour	Building Automation Solutions to Code Compliance Challenges in Hospitals	1.4 Control Theory and Application, 9.6 Healthcare Facilities

Program tracks and timelines for Houston

- *Track 1: HVAC&R Systems and Equipment*

Track Chair: Frank Schambach

Email: frankschambach@mindspring.com

Selection of equipment and systems is paramount to HVAC&R design. Papers and programs in this track will assist designers, engineers, and operators in the design, selection, and operation of HVAC&R systems and equipment.

- *Track 2: Fundamentals and Applications*

Track Chair: Dennis Alejandro

Email: denzjac@yahoo.com

Fundamentals are the foundation for understanding applications in engineering. Key components of ASHRAE fundamentals include thermodynamics, psychrometrics, fluid and mass flow. This track provides opportunities for papers and presentations of varying levels across a large topic base. Concepts, design elements and shared experiences for theoretical and applied concepts of HVAC&R design are included.

- *Track 3: District Energy and Cogeneration Plants*

Track Chair: Kimberly Pierson

Email: kdpwildcat@gmail.com

As our world resources become more and more sparse there is an industry-wide movement toward efficiency and sustainability. One of the ways in which we can look to minimize our carbon footprint is to combine our resources. District energy systems and cogeneration plants do just that and are quite popular in some locales but have yet to gain traction in other developed cities. We will look at the advantages and limitations, do's and don'ts and best practices of utilizing this type of shared system.

- *Track 4: Safeguarding your HVAC&R System*

Track Chair: Rich Rose

Email: richr@mticontrols.com

From seismic events to power outages and human error, how secure is your HVAC&R System? Mechanical, plumbing, electrical, and control systems all work together to create our living buildings, so it is imperative that designers and operators take into account the reactivity and interaction of these systems in response to natural disasters, human interference and other catastrophic events. Topics in this track include considering your design layout and accessibility, backup systems, supports and bracing, and more.

- *Track 5: Residential - Modern Buildings in Hot and Humid Climates*

Track Chair: Dimitris Charalambopoulos

Email: dimitris@ashrae.gr

Residential dwellings require designers to consider a different scope of building functions, occupant use, and comfort. With increasing utility rates and a movement toward net zero housing, the traditional residential design models are continuously diversifying and evolving. This track will discuss how we can integrate modern residential design and building practices into hot and/or humid climates with specific challenges ranging from indoor comfort to ventilation and mold.

- *Track 6: Professional Skills*

Track Chair: Kevin Marple

Email: kmarple@benzco.com

This track is designed to provide professionals an opportunity to develop in the areas of presentation skills, leadership, teambuilding, understanding various business operations, interpersonal skills, etc. In short, the Professional Skills Track can cover all aspects of business outside of engineering/technical applications and lends itself to interactive session types such as workshops and forums.

- *Track 7: Research Summit*

Track Chair: Melanie Derby

Email: derbym@ksu.edu

Active research, and the exchange of those research findings are critical to the development of our HVAC&R industry and environment. The sixth annual research summit invites researchers to share those results; and this year we announce an exciting collaboration with ASHRAE's archival research publication, *Science and Technology for the Built Environment* (STBE). Researchers are invited to present papers, seminars, forums or participate in panel discussions. Authors may also pursue an opportunity to further develop their submissions for later publication in STBE

- *Track 8: HVAC&R Control Freaks*

Track Chair: Gary C. Debes

Email: gcdebes@verizon.net

This track will focus on all things controls (note: please see track 9 "MiniTrack" as well). We invite you to join this exchange addressing one of the most dynamic areas in HVAC&R. Topics may range from design innovations spreading through our industry to the latest in building integration and observation, or even troubleshooting the most common issues occurring in building management systems.

- *Track 9: HVAC&R Analytics*

Track Chair: Vikrant Aute

Email: vikrant@umd.edu

This track will focus on the application of analytics algorithms/tools to automate systems. The tools and data are readily available, but the challenge is in using them in a timely and effective manner to add value to our HVAC&R Systems. By discussing the basics of analytics, methods, case studies and lessons learned we can consider if machine learning is ready to replace conventional controls.

Timelines

Friday, February 9, 2018: Program (Seminar, Forum, Workshop, Debate and Panel) Proposals Due

Monday, March 19, 2018: Seminar, Forum, Workshop Accept/Reject Notifications

Friday, June 1, 2018: All PPTs Due Online

Conference begins (June 23 – 27, 2018)

Program ideas for Huston and the future

Type	Session Chair / Speakers	Proposed Title	Status	Updates
Seminar	Carol Lomonaco / Sherry Hu	The role of cloud-based communication on smart meter technology.		What the procedure to get the data and what people can do with the data. Sherry Hu can be a speaker. To find more speakers.
Debate	Carol Lomonaco	Strong password for BAS		Three speakers identified
Seminar	David Blum/Sherry Hu / Xiwang Li	Foundation of building integration / Smart grid with energy storage and IoT		Try again for Chicago
Seminar Sponsored by TC 7.6	Eric Yang	Existing building performance with occupant behavior based control	For Houston	TC 7.6 seeing for co-sponsoring with 3 speakers confirmed. Dane Christensen from NREL will be the 4 th one.
Forum	Rich Hackner	What data the lawyer would like to know	For Houston	
Seminar	Kristen Cetin	Smart products for residential and	For Houston	Talk with residential TC; net

		commercial		zero building talk and a link from Zeng.
Seminar Sponsored by TC 1.5	Carol Lomonaco	Cyber security consultants what they do	For Houston	TC 1.5 seeking for co-sponsoring
Seminar	David Blum/Da Yan/ Bing Dong	Case studies of occupant integrated control	For Houston	CO-sponsoring committee: MTG.OBB
Seminar	Carlos Haiad & Glenn Remington	Cyber Security on Building Systems	For Future	
Seminar	Peter Armstrong & Li Song	Building optimal / predictive control	For Future	
Seminar,co-sponsor TC 7.9	Li Song & Carol Lomonaco	How BAS can Enhance Existing Building Commissioning	For Future	
Seminar	Srinivas Katipamula	Improving Energy Efficiency of Commercial Buildings thru Data Analytics	For future	
Seminar	Nick Gayeski	Edge computing, Cloud Analytics, and On-Premise Systems – Architectures for Smart Building Systems	For future	Need one more speaker
Seminar	Nick Gayeski / Speakers from Armstrong	Smart Transducers with Embedded Diagnostics	For future	
Seminar	Kristin Heinemeier / Kristin &Jon Douglas, someone from TC 7.9?	Fault Detection and Retro-commissioning: Where is the Line and Does it Matter?	For future	
Workshop	Kristin Heinemeier	Lab Methods for verifying that FDD tools for RTUs really work: Will Standard 207 really work?	For future	

Seminar	Glenn Remington	Case Studies: Using FDD for smarter facility operations / Lessons Learned from FDD implementation	For future	The project has been done for a while
Seminar	Chris Kinney/Michael Munroe/Glenn Remington	FDD and Clouds?	For future	
Seminar	Jin Wen / Zheng O'Neil	Occupancy-based control sensor	For Future	To invite speakers
Seminar	Xiaohui Zhou/ Srinivas Katipamula/Jin Wen	Open source platforms for HVAC, VOLTRON	For future	
Seminar Sponsored by TC 1.5	Carol Lomonaco	Cyber security red team	For Kansas City	TC 1.5 seeking for co-sponsoring