

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

Kansas City, MO

Sunday (06/23) KCCC, 2202

Agenda

1. Self-introduction
2. Brief review of the program tracks for Kansas City, MO
3. Program ideas for the future conference

Programs presented at Houston (sequence by time)

Sponsoring Committee	Program Time	Session Chair	Session Title	Co-Sponsoring Committee
7.5 Smart Building Systems	Seminar 9 Sunday, 11:00 AM -12:30 PM, KCCC, 2101	Joe Zhou	Automated Fault Detection and Diagnostics Software for Cx, RCx and MBCx	7.9 Building Commissioning
7.5 Smart Building Systems	Seminar 30 Monday, 9:45 AM - 10:45 AM	Jin Wen	Evaluating Automated Fault Detection and Diagnostics Tools for Commissioning New and Existing Buildings	7.9 Building Commissioning
7.5 Smart Building Systems	Seminar 39 Tuesday, 8:00 AM - 09:30 AM	Eric Yang	Model-Predictive Control for HVAC System Optimization	7.6 Building Energy Performance
7.5 Smart Building Systems	Seminar 54 Tuesday 11:00 AM -12:30 PM	Scott Hackel	Optimal Chilled Water Plant Design and Operation: What a "Smart Valve" Can Do for You	1.4 Control Theory and Application; 7.9 Building Commissioning
6.7 Solar Energy Utilization	Seminar 59 Wednesday, 8:00 AM - 09:30 AM	Janice Means	Energy Systems Integration and Smart Grid-Ready Buildings: All You Need to Know to Be a Good Grid Citizen	7.5 Smart Building Systems, 2.5, 2.8

Program tracks and timelines for Orlando, FL

1. HVAC&R Fundamentals and Applications: 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 Chair: Maggie Moninski maggie.moninski@gmail.com

2. Systems and Equipment: HVAC&R Systems and Equipment are constantly evolving to address the changing requirements of the built environment. Papers and programs in this track will focus on the development of new systems and equipment, improvements to existing systems and equipment and the proper application and operation of systems and equipment.

Track Chair: Sonya Pouncy sonya.pouncy@gmail.com

3. Refrigeration and Refrigerants: Refrigeration is a critical element of modern life, from preserving food and medicine to maintaining comfort. With significant changes on the horizon for refrigerant regulations, along with new applications for refrigeration systems being frequently applied, there is more need than ever to understand both the fundamental and advanced concepts and issues related to refrigeration. Papers and programs in this track will focus on refrigerants, refrigerant regulation, refrigeration cycles and refrigeration applications. **Track Chair:** Stephen Idem sidem@tntech.edu

4. Cutting Edge Approaches: This track focuses on novel approaches to HVAC&R systems and buildings due to changing energy, economic, and environmental concerns. Papers and programs will focus on emerging approaches such as the critical Water-Energy nexus, natural/emerging refrigerants and other cutting edge approaches pertaining to HVAC&R systems and buildings.

Track Chair: Marianna Vallejo marianna.vallejo@jacobs.com

5. High Efficiency Design and Operation: Submissions are requested regarding high efficiency design and operation of commercial and residential buildings, including specialty building types.

Track Chair: Ryan MacGillivray ryan.macgillivray@dwel.com

6. Big Data and Smart Controls: This track examines the use of big data, advanced algorithms, occupancy-based control strategies, data mining and other analytical techniques to economically automate buildings. Given the intersection with the larger world of IT, cybersecurity is also a topic of interest in this track. **Track Chair:** Leticia De Oliveira Neves leneves@gmail.com

7. Ventilation, IAQ and Air Distribution Systems: This track solicits submissions pertaining to the design, operation and study of ventilation and air distribution systems in residential and commercial buildings. The intersection of these systems with respect to indoor air quality and health effects are also of significant interest for this track. **Track Chair:** Robert Cox, bob.cox@jacobs.com

8. Standards, Guidelines and Codes: ASHRAE is a leader in the development of standards and guidelines pertaining to the indoor environment; these standards and guidelines are used to shape codes. This track invites submissions pertaining to standards for buildings, HVAC&R systems and IAQ

Track Chair: Lee Riback, lee.riback@gmail.com

Deadlines:**Friday, August 2, 2019:** Seminar, Workshop, Forum, Debate, and Panel Proposals Due**Friday, October 4, 2019:** Seminar, Workshop, Forum, Debate, and Panel Accept/Reject Notifications**Program ideas for Orlando, FL and the future**

Type	Session Chair / Speakers	Proposed Title	Status	Updates
Seminar	Michael Brambly	Control – Look toward to the future -Smart Grid three series: 1. Control 2. Modeling 3. Application	For Orlando	
Seminar		California Requirement of FDD		
Seminar	Edward Tsui	Best practice of monitoring and instrumentation		Glenn Remington; TC 7.6 and 1.2 will sponsor
Seminar	Kristen Cetin	Forum Discussion - Demand Response Guideline – resubmission (proposal previously rejected) – maybe propose as seminar instead?		
	Joe Zhou	What the smart valve can do		
Seminar	Wen Jin	Transactive Control – speakers from NREL, PNNL		
Seminar	Eric Yang	Battery Control Strategies and its impact to life cycle cost		
Seminar	Carlos/David	Fundamentals of smart building integration		
Seminar	Smart products for residential and commercial buildings	Josh Rhodes, Kristen Cetin, Zheng O'Neill		
Seminar	Smart Grid – Building Envelope Interaction/Dynamic Facades	Jie Cai, Donghun Kim, Paulo Tabares		
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.
Seminar		IOT sensor/calibration		
TBD	Carol Lomonaco	Strong password for BAS		

Seminar Sponsored by TC 1.5	Carol Lomonaco	Cyber security red team	For Kansas City	TC 1.5 seeking for co-sponsoring
TBD	TBD	What data the lawyer would like to know –needs to define scope	In future	
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	Armstrong	Edge computing, Cloud Analytics, and On-Premise Systems – Architectures for Smart Building Systems	For future	
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 2007 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	

NEXT IN-PERSON MEETING: Feb., 2020 – Orlando, FL