

TC 7.5 Smart Building Systems

Program Subcommittee Meeting

Sunday (6/26) 5:30 pm - 6:00 pm 276 (2)

Agenda

1. Self-introduction
2. Review of programs presenting at St. Louis
3. Brief review of program tracks and timeline for Las Vegas
4. Program ideas for Las Vegas and the future

Programs presenting at St. Louis

Sponsoring Committee	Program ID	Session Title	Co-Sponsoring Committee	Session Chair
07.05 Smart Building Systems	Seminar 52	Residential Building Smart Devices & Data: Improving Energy Use Insights & Performance Evaluation		Kristen Cetin
07.05 Smart Building Systems	Seminar 11	Smart Grid in the Heartland --- See What Happens Next		Richard Hackner
07.05 Smart Building Systems	Seminar 37	The Impact of Zero Net Energy Buildings on the Electric Grid		Kristen Cetin
07.05 Smart Building Systems	Seminar 46	Regulatory Process Overview for Smart Grid, Smart Building and Demand Response Programs as Applicable to Building Owners and Utility Tariffs.		Glenn Remington
07.05 Smart Building Systems	Seminar 59	Solar Decathlon 2015, Lessons Learned From The Largest Student-lead Solar Powered Housing Competition		Joshua Rhodes
07.05 Smart Building Systems	Technical Paper 5	Advances in VFD Control and Building Operations and Maintenance		Li Song
01.04 Control Theory and Application	Workshop 4	DDC for Smart Buildings and Smart Grid	07.05 Smart Building Systems	Cynthia Moreno

Program tracks and timeline for Las Vegas

- *Track 1: Fundamentals and Applications*

Track Chair: Chuck Curlin

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Engineering fundamentals are the foundation to understanding modeling, design, construction and operation of HVAC&R applications. This track provides opportunities for papers and presentations on theories, models, designs and shared experiences for both theoretical and applied concepts.

- *Track 2: HVAC&R Systems and Equipment*

Track Chair: Michael Collarin

Email: Michael.Collarin@parsons.com

Selection of equipment and design of systems is critical for effective HVAC&R operation, and for achieving building operators' goals. The papers and programs in this track will assist designers and building operators in the use of traditional, non-traditional and hybrid equipment and systems; with an emphasis on high performance, sustainable and LEED-certified buildings.

- *Track 3: Water-Energy Nexus*

Track Chair: Gary C. Debes

Email: gcdebes@verizon.net

The interdependencies between our water and energy systems are clear and are becoming more prominent as development requires the use of more resources while over-use and climate change make some resources scarcer. On the macro level, water is used in all phases of energy production and electricity generation (including renewables); and energy is required to extract, convey and deliver water, and to treat wastewaters prior to their return to the environment. On the micro level, the water-energy nexus is a major consideration for the HVAC&R community in determining equipment and system selection and design as well as building operation. This track will present papers and programs highlighting recent research on this issue as well as technologies and designs intended to reduce the gap between energy and water efficiency.

- *Track 4: Commercial and Industrial IAQ*

Track Chair: Kevin Marple

Email: kmarple@benzco.com

Indoor Air Quality is a vital consideration in the built environment. As people spend increasingly more time in industrial and commercial facilities, IAQ is closely linked to occupant comfort, satisfaction, productivity and health. This track will offer papers and programs to inform building owners and operators on the value of improving IAQ.

- *Track 5: Mission Critical Design and Operation*

Track Chair: Carrie Anne Crawford

Email: carriecrawford@eeace.com

As societies become more dependent on mission critical facilities, the design and operation of these facilities has undergone rapid change. This track will present papers and programs which will highlight advances in technologies, controls, design and operation of mission critical facilities to meet their increasing loads while also minimizing their impact on energy/water usage.

- *Track 6: Effects of Climate Change on HVAC&R*

Track Chair: Rocky Alazazi

Email: mralazazi@yahoo.com

Climate change will have an increasing effect on the design and operation of the built environment. How does the HVAC&R community design for buildings today that are intended to be highly functional and efficient well into a future where today's standards, codes and practices may not be sufficient to meet tomorrow's climatic conditions? This track seeks papers and programs that will inform the selection of strategies, designs and approaches that will increase building resilience and facilitate climate adaptation.

- *Track 7: Energy Efficient Industrial Buildings*

Track Chair: Corey Metzger

Email: corey.metzger@resourcece.com

Industrial facilities often have different HVAC&R requirements than do commercial and institutional facilities. Oftentimes these are a result of the processes that occur within industrial facilities as well as the life safety issues these processes create. This track will present papers and programs that will inform how energy efficiency can be achieved without compromising life safety considerations.

- *Track 8: Building Operation and Performance*

Track Chair: Cynthia Moreno

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Modeling has become an essential factor in the design of all aspects of many buildings. Often the operational results of the building do not match the modeled outcome that the owner/operator expected. This can lead to much "finger pointing" or worse. This track will present papers and programs to update modelers, designers, contractors and owners/operators on how to better match building performance with modeled expectations.

Conference Program Chair: Leon Shapiro

Email: [Leon Shapiro](mailto:Leon.Shapiro)

Staff Support

For information on the technical program, special events, special sessions and general conference inquiries

Tiffany D. Cox

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March 14, 2016	Conference Paper abstracts due
April 18, 2016	Technical Papers Due
April 4, 2016	Conference Paper Abstract Accept/Reject Notifications
June 6, 2016	Website Opens for Seminar, Forum and Workshop Proposals
July 6, 2016	Final Conference Papers Submitted for Review (Includes Bio, Learning Objectives and Methods of Assessment)
August 8, 2016	Seminar, Forum and Workshop Proposals Due
September 7, 2016	Seminar, Forum, Workshop Accept/Reject Notifications

Program ideas for Las Vegas and the future

Type	Session Chair / Speakers	Proposed Title	Status
Seminar	Bill Healy	Sensing Technology for Smart Homes	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
Seminar	Nick Gayeski / Speakers from Armstrong	Smart Transducers with Embedded Diagnostics	For future
Seminar	Carlos Haiad	The role of cloud-based communication on smart meter technology.	For future
Seminar, co-sponsor TC 7.9	Song Li & Carol Lomonaco	How BAS can Enhance Existing Building Commissioning	For future
Seminar	Peter Armstrong	What to Do with Optimal Control? Peter Armstrong will chair and provide a speaker. Li can provide one also.	For future
Seminar	Andreas Athienitis	Model accuracy impact study on model predictive control	For Las Vegas
Seminar	Xin (Sherry) Hu	Data Driven Energy Auditing, Measurement and Verification	For future
Seminar	Kristin Heinemeier /	Fault Detection and Retro-	Session chair was not at

	Kristin & Jon Douglas, someone from TC 7.9?	commissioning: Where is the Line and Does it Matter?	the TC meetings. For future
Workshop	Kristin Heinemeier	Lab Methods for verifying that FDD tools for RTUs really work: Will Standard 207 really work?	Session chair was not at the TC meetings. For future
Seminar	Glenn Remington	Case Studies: Using FDD for smarter facility operations / Lessons Learned from FDD implementation	For future
Seminar	David Holmberg/ Carol Lomonaco?	Green Button / Open ADR	Program has been submitted multiple times but not accepted. For future