

ASHRAE TC 7.5 Smart Building Systems
2018 Annual Conference, Houston, TX

Meeting Minutes of Building Operations Dynamics Subcommittee Meeting

The Building Operations Dynamics Subcommittee of TC 7.5 is concerned with the dynamic characteristics and interactions of comfort conditions, the active components of HVAC systems, the passive components of HVAC systems, control systems and operation strategies and the building. The committee is concerned with the methods of building system operation which minimize energy used through the consideration of dynamics and interactions. It is also concerned with methods which consider dynamic and interactive characteristics in the design or comfort conditioning systems.

Date: Monday, June 25th, 2018
Time: 4:30-5:20 p.m.
Location: TBO

1. Roll Call and Introductions
2. Research

Research	Title	Lead	Newest updates
RP-1661	RP- 1661: Development and Validation of Dynamic Models for the Evaluation of Chilled-Water System Control Strategies in the ASHRAE Handbook		University of Miami is selected as the contractor. TC 7.5 PMS member: Li Song
WS	WS- 1809: Updating reference guide for dynamic models of HVAC equipment	Heejin Cho	Updates after St. Louis meeting: RTAT is recommended by RAC. Now Heejin is working on the WS. He plans to have it ready for review in Long Beach. Updates after LV: Heejin is working on the WS; need a status update. Update at Long Beach: Heejin will send the WS by Chicago Meeting. Update at Chicago: Heejin sent a preliminary draft. Note: This WS has to be submitted by August, 2018 Houston: Zheng is following up with Heejin
RTAR?	If you had “perfect information” on occupant’s comfort preferences and their location within a conditioned space then how would you optimize control and how much value would you be able to realized	Rich Hackner? Li Song?	St. Louise update: An RTAR is prepared by Li and will be discussed in the committee meeting for comments. Rich will lead on WS if the RTAR is accepted. Need inputs to improve the RTAR. Two volunteers: James Sweeney and Gary Shamshoian. Updates after St. Louis meeting: James provided many inputs in details and the RTAT is revised accordingly. It is ready for

			committee discussion in LV. Update after LV: March 1 st is the deadline. Withdraw? Update at Long Beach: Park Update at Chicago: moved to ET subcommittee
RTAR	Explore and Quantify Behavior-Driven Building Energy	Zheng O'Neill Bing Dong	This is a new RTAR from MTG:OBB. Look for the co-sponsorship from TC7.5 Update at Chicago Rejected by RAC. Houston: removed from the list
RTAR?	How IoT impacts operators	Carlo Liping Wang	New at Long Beach Update at Chicago: Park
RTAR?	Link the productivity with occupancy based control	Ivo Martinac	New at Long Beach Update at Chicago: Park
RTAR?	Smart management of moisture and energy consumption in residential houses, smart ventilation, optimal location for dryer, heat pump water heater, etc.	Andrew Windham; Kristen Cetin	New at Long Beach Update at Chicago: Park
RTAR?	Design guideline to consider unmeasured disturbance for an implementable MPC	Donghun Kim, David Blum	New at Long Beach Update at Chicago: Donghun provided a RTAR draft Houston:
New ideas?			

3. Program Proposals

Program	Title	Lead	Newest update
1	What to do with optimal control?	Peter Armstrong	Peter was lack of one of the speakers. Updates after St. Louis meeting: Abstract was submitted – Updates after LV: It will be submitted for Winter 2018 Updates at Long Beach: Peter is not here. Chicago: suggest to collaborate with the Optimization Track for TC 1.13 Houston: TC 1.13 is having a seminar for optimal controls in Houston (Sunday morning, 9:45am Seminar 8)
2	Model accuracy impact study on model predictive control	Andreas Athienitis	Orlando---It is already a well-funded project. Andreas will provide a seminar for the work he has done in the area. For Las Vegas. Updates after St. Louis meeting: It was not accepted for LV. Update after LV: Control tracks for long beach and joe suggested to communicate

			with track chair in order to improve the chance. Update at Long Beach: Andreas is not here. David Blum is willing to contribute. Accepted for Chicago meeting Well attended in Chicago Houston: Remove from this list
3	Smart products for residential and commercial	Josh and Kristen	Update after LV: Suggested to talk with residential TC and net zero building committee and a link from Zeng was shared. Update at Long Beach: Kristen wanted to push this to Houston. No discussion in Chicago Houston: need to check with Kristen
4	Training plan for facilities		Update after LV: TC7.3 and commissioning - provide somehow continuous information; Jin recommends forming a MTG. Update at Long Beach: Park
5	Seminar state of art of demand response & frequency regulations (different time scale)		Carlos – chair Srinivas – speaker + another speaker Jie Cai – speaker Proposed for Houston
New ideas			

Have some discussions on there is a need of a guideline for Demand response

4. Handbook: Jin Wen and Zheng O'Neill reviewed the new chapter material and provided their edits to Vern Smith.
5. Other topics:
6. Adjournment: