

ASHRAE TC 7.5 Smart Building Systems
2016 Annual Conference, St. Louis MO

Agenda of Building Operations Dynamics Subcommittee Meeting

Date: Monday, June 27, 2016
Time: 4:300-5:15 p.m.
Location: 223(2)

1. Roll Call and Introductions
2. Program Proposals

| Program | Title | Lead | Newest update |
|---------|--|--------------------|---|
| Done | Building operation dynamics-high mass buildings | Andreas Athienitis | Orlando---Technical Session 7, Wednesday 8:00am: Advancement in energy modeling |
| Done | Modeling and simulation of occupancy behavior in buildings | Bing Dong | Orlando---Wednesday 8:00am Seminar 58 (chair: Bing Dong; 4 speakers): Considering occupancy behavior in design and operation of residential buildings |
| Done | Impact of operable windows on building performance | Liping Wang | Orlando---Monday 9:45am (Chair: Liping; Speakers: Liping and Ran Liu) |
| 1 | What to do with optimal control? | Peter Armstrong | Orlando---Was not submitted for Orlando. Peter still wants to work on it. |
| 2 | Scenes from the Solar Decathlon - DOE student competition projects | Joshua D. Rhodes | Orlando---Submitted, but was not accepted. Joshua will improve it for St. Louis |
| 3 | 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. |

3. Research

| Research | Title | Lead | Newest updates |
|----------|---|----------------|---|
| RTAR | Learning occupancy presence in residential buildings through electrical meter data | Bing Dong | Orlando---Rejected |
| RTAR | Updating reference guide for dynamic models of HVAC equipment | Heejin Cho | I have discussed with Heejin about the revisions of the RTAR. He will send me his revised RTAR on 6/22 and get it circulated before the St. Louis meeting. |
| WS | Development and Validation of Dynamic Models for the Evaluation of Chilled-Water System Control Strategies in the ASHRAE Handbook | Wangda Zuo | WS is returned with comments. Orlando---Wangda came to the TC subcommittee members and explained what were revised in the subcommittee meeting. |
| Leads | How building thermal dynamics influence grid operations in a short time step? | Raised by Jin. | Orlando---Need a champion for this subject. Edison funded several thermal mass projects to LBNL. Glen Remington will have more discussion to clarify the concepts in St. Louis. |

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| RTAR? | If you had “perfect information” on occupants comfort preferences and their location within a conditioned space then how would you optimize control and how much value would you be able to realize | Rich Hackner? Li Song? | To be discussed in St. Louis |
|-------|---|---------------------------|------------------------------|

4. Handbook: TBD (I start serving handbook committee from this summer).
 The section of Supervisor Controls in the handbook is supported by the BOD.
 As an additional to online handbooks: Teaching tools (such as Youtube videos) to introduce complex thermal load dynamics for undergraduate students.
5. Other topics
6. Adjournment