

Minutes of IBPSA-USA Emerging Simulation Technology Research Subcommittee

Time: 3pm - 4pm EDT 6/16/2016

Participants:

Nathaniel Jones (MIT) (chair)
An-Lei Huang (TRC)
Joshua New (ORNL)
Zheng O'Neill (Alabama)
Jibonananda Sanyal (ORNL)
Tea Zakula (Zagreb)
Wangda Zuo (Miami)

Location: GoToMeeting

Notes:

Upcoming Events

The subcommittee's ASHRAE seminar "Low-Cost High-Performance Building Simulation. Is that too good to be true?" sponsored by ASHRAE TC 4.7 will be held at 8AM Tuesday June 28. The seminar will be moderated by Wangda Zuo with speakers David Bosworth, Nathaniel Jones, and Neal Krus. Additionally, Wangda Zuo will moderate another seminar on CFD simulation, and Joshua New will moderate sessions on data sources for urban-scale energy simulation and present work on large-scale computing. More information is in the ASHRAE Annual Conference [technical program](#).

Some subcommittee members will be presenting work at SimBuild 2016. These works include:

- W. Tian, W. Zuo, M. Wetter. "Fast indoor airflow simulation using in situ adaptive tabulation and fast fluid dynamics"
- D. He, S. Huang, W. Zuo, R. Kaiser. "A virtual testbed for net zero energy communities"
- S. Huang, W. Zuo, M.D. Sohn. "A Bayesian network model for predicting the cooling load of educational facilities"
- Jibonananda Sanyal, James J Nutaro, David Fugate, Teja Kuruganti, and Mohammed Olama. "Supervisory control for peak reduction in commercial buildings while maintaining comfort"

Ideas for future activities include involvement in hackathons and maker spaces.

State of Domain Knowledge

In response to the earlier [focus group](#), the subcommittee needs to research the current state of practice and the availability of current resources that address the identified shortcomings. The subcommittee will conduct a literature review of survey information and, additionally, draft a questionnaire to fill in gaps in information. Some resources for this literature review include:

- 2012 Building Simulation Market Assessment from the University of Idaho Integrated Design Lab
- New, Joshua R. (2015). "[Autotune Calibration and Uncertainty Quantification](#)." Presented at the International Building Performance Simulation Association (IBPSA-USA) Summer Meeting, 37 slides. Atlanta, GA, June 28, 2015.
- [Knowledge gap survey from Arpan Bakshi](#)

Actions:

- Subcommittee members will suggest resources to address focus group recommendations through [this shared document](#).
- Subcommittee members will suggest questions for a questionnaire to assess the state of domain knowledge in practice through [this shared document](#).
- Subcommittee members will suggest future events that the subcommittee may publicize or participate in.

Next meeting:

To be determined by poll.