

Minutes of IBPSA-USA Emerging Simulation Technology Research Subcommittee

Time: 1pm - 2pm EDT 3/28/2017

Participants:

Nathaniel Jones (MIT) (chair)
Mohamed Aly (AUC, RPI)
Sen Huang (Miami)
Demian Kuhlen (Guttman & Blaevoet)
Joshua New (ORNL)
Wangda Zuo (Miami)

Location: GoToMeeting

Notes:

Building Simulation 2017

IBPSA's next international conference, [Building Simulation 2017](#), will be held in San Francisco on August 7-9. Nathaniel Jones is submitting a proposal for a panel discussion session on the topic "Build Your Own Building Simulation Tool," which has passed the preliminary review stage. The subcommittee discussed topics that should be covered in the panel discussion, including:

- Backstory of the panel and the panelists' tools.
- Failings of current tools.
- Availability of open source platforms from which to build tools.
- The relationship between engines, middleware, and tools.
- The role of the Department of Energy.

Possibilities for additional speakers from the DOE and NREL were discussed. Joshua New proposed the inclusion of a mind map of current tools, engines, and resources, which could be derived from the [BEST Directory](#). The subcommittee should be credited at the panel presentation by its chair.

Whitepaper

The subcommittee should develop a document describing the states of the art and practice with regard to emerging simulation technologies. The first step in this is to compile lists of resources and documentation for a literature review. Relevant areas for inclusion are:

- Penetration of simulation tools into industry.
- Development of new workflows that integrate multiple tools and simulation types.
- New platforms such as cloud-based and GPU-based simulation.
- Input data generation workflows.
- Urban scale simulations.
- Coupled simulations including microclimate, transportation, water, food, energy, and the grid.

Actions:

- Nathaniel Jones will submit a presentation proposal on making your own building simulation tools.
- Demian Kuhlen will compile resources on current state of practice.

- Subcommittee members will suggest future events and webinars that the subcommittee may publicize or participate in.

Next meeting:

To be determined by poll.