

TC 1.13 – Optimization
2018/06/24, Houston
1:00p-3:00p, Room 335C, Hilton

Opened meeting at 1:09pm.

Attendees: Kyle Gluesenkamp, S.A. Sherif, Khalid Saleh, Zhiwei Huang, Dave Yashar, Farhad Omar, Satyam Bendipudi, Donghun Kim, Vikrant Aute, Casey Briscoe (Ingersoll Rand), Amanda Pertzborn (NIST), Omar Abdelaziz.

Minutes approval from Long Beach and Chicago meetings: We need to correct S.A. Sherif's name and clean up the minutes. Long Beach minutes approved 4/0/0, chair voting for Long Beach. Chicago minutes approved 3/0/1, chair voting.

Chair notes:

1. Nominations for Hightower award and Service to ASHRAE research awards due September 1 to SH and RE
2. Some TC members have started to submit comments to Standards and Codes on ASHRAE letterhead, which implies authority. This should not be done.
3. We need to update membership (see later in the program).
4. New MTG.EBO (effective building operations) on training and tools to support the operation of buildings to enhance the indoor environment and use energy effectively.
5. ASHRAE is looking for suggestions to celebrate its history for its 125th anniversary. Contact Chris Preyor, cpreyor@ashrae.org
6. TCs can publish technical bulletins on their websites, which do not result from technical meetings and is a brief 1-2 page statement on a special interest topic. These need to be peer reviewed by at least 3 people before being posted on the TC website.
7. Houston statistics:
 - a. 127 conference paper abstracts submitted, 105 approved, 67 presented in 20 sessions
 - b. 21 technical papers received, 14 presented, 4 sessions
 - c. 100 seminars submitted, 72 presented
 - d. 9 workshops submitted, 7 presented
 - e. 11 forums submitted, 4 presented
 - f. 2 debates submitted, 1 presented
8. 2019 ASHRAE Winter conference, January 12-16
 - a. Conference papers are due July 9
 - b. Seminar, Forum, Debate, Panel, Workshop proposals are due August 3
 - c. Program notifications due September 14
 - d. Tracks include: Systems and Equipment; HVAC&R Fundamentals and Applications; Refrigeration; Construction, Operation, and Maintenance of High Performance Systems; Common System Issues and Misapplications; Convergence of Comfort, IAQ, and Energy Efficiency; Building Integrated Renewables and Natural Systems; The Engineer's Role in Architecture
9. 2019 ASHRAE Annual conference, Kansas City, MO
 - a. Conference paper abstracts due August 21

- b. Conference papers due November 30
 - c. Tracks include: Systems & Equipment in the Built Environment; Fundamentals and Applications; Optimization in HVAC&R; Commissioning New & Existing Buildings; Occupant Health and Safety; Modeling Throughout the Building Life Cycle; Professional Development; Research Summit; Radiant Heating & Cooling Mini-Track
10. Extended abstracts will be accepted for the Research Summit in Atlanta. A template may be provided. The deadline for these extended abstracts will be in early January 2019. Research summit will be held in conjunction with STBE.

Program Notes:

1. There is interest in a forum on optimization: what are the barriers? This might be a good program for Kansas City since there will be a track on Optimization in HVAC+R. In general, there may be a number of different potential programs relating to optimization: What does optimization mean in HVAC? CFD optimization, systems optimization, controls optimization, introductory workshop, optimization tools, modeling for optimization, future of optimization. We should arrange one or two phone calls between now and January to coordinate program development. People should work with other TCs to put together some programs.
2. Proposed seminar title "Optimization for Alternative Refrigerants": Chris Laughman can chair, Omar A. could present a talk on condenser optimization, Satyam B. could present on system optimization, Dave Yashar will talk to Peter Domanski on refrigerant optimization, perhaps Pega Hrnjak could talk about charge optimization. Could look for co-sponsorship from TC 8.4 and MTG.LowGWP.
3. Proposed workshop title "Unlocking optimization for HVAC+R": Present different aspects of applications and possibilities. David Yashar could chair it and Vikrant Aute and Chris Laughman could present. After the initial presentations, Dave Yashar would then present 1-2 slides of what questions to discuss and what we hope to get out of the workshop.
4. There is also a proposal for Chris Laughman, Vikrant Aute, Omar Abdelaziz to submit papers for a conference paper session for Kansas City. Farhad Omar, Zhiwei Huang (optimization over multiple system sizes), and Donghun Kim (distributed optimization) are also potentially interested.
5. Proposal for the two titled programs was approved 4/0/0 2:26.

Membership:

1. Kyle Gluesenkamp will be the secretary. Need to change Kyle Gluesenkamp, Satyam B., Zhiwei H., Khalid S., and Farhad O. to CM now. We can then change other members to voting members in Atlanta. Chris should ask Amir about doing 2 conversions at once. Need to talk to Amir about adding Vikrant as the 7th voting member starting July 1. Chris will email Tara and Amir, and then notify committee about that update.

Handbook:

1. Need to coordinate the outline over the next few months. Send outline to full committee for approval between conferences so that the committee can start working on it.

Research:

1. Might be difficult to sponsor our own research. Might be better as a co-sponsor. Future application of AI? TC 1.5 has a committee for AI - perhaps we should connect with them. Perhaps research into a guideline - provide information into a problem formulation. How is this different than a handbook? Start working on handbook, and then consider this possibility if it doesn't overlap.

Meeting concluded at 2:50p, 4/0/0 chair voting.