TC4.7 Data-Driven Models Subcommittee Monday June 27, 2016, 7:30–9:00 PM
Location: Marriott St. Louis Grand Hotel, Majestic G, 2nd Floor

Agenda:

7:30   Call to order / Introductions / Changes to the agenda

7:40   Discussion of Program (10 minutes)
- Annual Meeting 2016 (St.Louis) Review

- Winter Meeting 2017 (Las Vegas). Seminar proposals due Aug 8.
  Tracks of possible Interest
  Track 1: Fundamentals and Applications
  Track 2: HVAC&R Systems and Equipment
  Track 3: Water-Energy Nexus
  This track will present papers and programs highlighting recent research on this issue as well as technologies and designs intended to reduce the gap between energy and water efficiency.

  Track 4: Commercial and Industrial IAQ
  This track will offer papers and programs to inform building owners and operators on the value of improving IAQ.

  Track 5: Mission Critical Design and Operation
  This track will highlight advances in technologies, controls, design and operation of mission critical facilities to meet their increasing loads while also minimizing their impact on energy/water usage

  Track 6: Effects of Climate Change on HVAC&R
  This track seeks papers and programs that will inform the selection of strategies, designs and approaches that will increase building resilience and facilitate climate adaptation.

  Track 7: Energy Efficient Industrial Buildings
  his track will present papers and programs that will inform how energy efficiency can be achieved without compromising life safety considerations.

  Track 8: Building Operation and Performance
  This track will present papers and programs to update modelers, designers, contractors and owners/operators on how to better match building performance with modeled expectations.

  Seminar Ideas?

  Amamelu Brooks has an interest in organizing and chairing a seminar in Las Vegas. Ralph will work with her to get it set up.

- Annual Meeting Long Beach, Conf paper abstracts due Aug 29, 2016. 5th research summit with focus on occupancy and renewables

8:00:   Work Statements / RTAR's (50 minutes)
- Haberl update on WS 1763 – major changes underway.

- Inverse Modeling Test Scheme / Standard
Ralph followed up with Jessica Granderson who has interest in seminar but not an RTAR or standard development. Ralph did not follow up with David Jump.

8:30:   New Business
Between 8:30 and 9pm: Adjourn

Started at 7: 30 pm
In attendance: Amamelu Brooks, Ron Judkoff, Antony Fontanini, Iain Macdonald, Bass Abushakra, Joseph Carpenter, Ben Payne, Zach Mierzejewski, Henry Amistad, Brian Kastl, Graham Lim, Mark Adams, Joe Huang, Kris Kinney, Paulo Tabares

7: 35 PM Programs Discussion
St. Louis Program
No DDM initiated program items in St. Louis but there were two conference papers submitted to research symposium presented in Conference Paper Session 3 Novel Modeling approaches (there were actually 3 papers listed but one didn't present); Presentations were Development and Testing of Building Energy Model using Non-Linear Autoregression Neural Networks by Nabil Nassif of NC A&T and Gaussian Process Baseline Regression Models in Industrial Facilities by Joseph Carpenter and Zheng O'Neill of U. of Alabama. Joseph gave a short review of the paper at the end of the committee meeting.

Las Vegas and Long Beach
Ralph reported that Jessica Granderson expressed interest in giving a seminar sometime related to IMT Test Scheme related to the project of her and David Jump. Ralph will followup to see about whether to submit to Las Vegas or Long Beach.

Amamelu will coordinate and submit a seminar on a Comparison of Forward and Data Driven Models in Las Vegas. Ralph will work with her to get it set up. Probably to be submitted to Building Operation and Performance session.

Ralph will organize a session for Bass and Mitch to present two or three seminars about the RP1404 project which is looking at the minimum data and best times of year to collect that data for a number of data driven modeling methods. To be submitted to building operation and Performance Session

Bass mentioned a discussion of an Occupancy Modeling session discussed in MTG Occupant Behavior Ralph will follow up with Tianzhen Hong to see if this is something DDM should be involved in.

Henri Amastadi asked if anyone was working on adaptive thresholds and control set points. Basically this is a data driven model control that will adapt the temp setpoints for a system and include anomaly detection to provide adaptation. No one else in the room had heard of such methods being used.

7:50 pm Research

Jeff did not make the meeting – no update. He has major changes related to dealing with missing data and identifying bugs in the existing IM Toolkit.

Ralph reported that Jessica Granderson has no interest in either helping organize a research project related to an IM method of test nor a standard. Ralph will follow up with David Jump.

No one else ambitious enough to take on an RTAR or WS or suggest anything new
8:05: No New Business, meeting adjourned 1 hour early. There was much rejoicing.