



RCN-SEES: Predictive Modeling Network for Sustainable Human-Building Ecosystems (SHBE)

Workshop Theme: Human Behavior & Building Energy Model Integration and validation (Theme V)

Date: April 2-3, 2015

Venue: Lawrence Berkeley National Laboratories, Berkeley, California

Location: Building 90

Agenda

| Thursday, April 2, 2015 | |
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| 8:00 am – 9:00 am | Registration and Breakfast (Room 3122) |
| 9:00 am – 9:30 am | Welcome – Yong X. Tao, University of North Texas, Denton, TX, USA (Room 3122) Overview - Khee Poh Lam, Carnegie Mellon University, Pittsburgh, PA, USA |
| 9:30 am – 9:50 am | Wei Yan, Texas A&M University, College Station, TX, USA (Room 3122) |
| 9:50 am – 10:10 am | Andrew Cross, University of Las Vegas, Las Vegas, NV, USA (Room 3122) |
| 10:10 am – 10:30 am | Bing Dong, University of Texas, San Antonio, TX, USA (Room 3122) |
| 10:30 am – 10:40 am | Coffee Break |
| 10:40 am – 11:00 am | Mona Azarbayjani, University of North Carolina, Charlotte, NC, USA (Room 3122) |
| 11:00 am – 11:20 am | Boris Kingma, Maastricht University, Netherlands (Room 3122) |
| 11:20 am – 11:40 am | Vinu Subashini Rajus, Simon Fraser University, British Columbia, CA (Room 3122) |
| 11:40 am – 12:00 pm | Sean Hsieh, University of Las Vegas, Las Vegas, NV, USA (Room 3122) |
| 12:00 pm – 12:20 pm | Chenlu Zhang, Carnegie Mellon University, Pittsburgh, PA, USA (Room 3122) |
| 12:20 pm – 12:40 pm | Tianzhen Hong, Lawrence Berkeley National Laboratory, Berkeley, CA, USA (Room 3122) |
| 12:40 pm – 1:40 pm | Lunch |
| 1:40 pm – 2:00 pm | Yong X. Tao, University of North Texas, Denton, TX, USA (Room 3122) |
| 2:00 pm – 2:20 pm | Tracey Rizzuto, Louisiana State University, Baton Rouge, LA, USA (Room 3122) |
| 2:20 pm – 2:40 pm | Julia K. Day, Kansas State University, Manhattan, KS, USA (Room 3122) |
| 2:40 pm – 3:00 pm | Jing Ge, Cornell University, Ithaca, NY, USA (Room 3122) |
| 3:00 pm – 3:30 pm | Coffee break |
| 3:30 pm – 5:00 pm | Breakout session (Room 3122 & 4133) |
| 6:00 pm – 8:00 pm | Dinner |

| Friday, April 3, 2015 | |
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| 8:00 am – 9:00 am | Continental Breakfast (Room 4133) |
| 9:00 am – 10:00 am | Round Table Discussion (Room 4133) |
| 10:00 am – 10:15 am | Coffee Break |
| 10:15 am – 11:45 am | Summary and conclusion (Room 4133) |
| 11:45 am – 12:45 pm | Lunch |
| 12:45 pm – 2:30 pm | Steering Committee Meeting (Room 4133) (optional but open to non-committee attendees) |

| No. | Abstract Title | Author | University |
|-----|---|--|--|
| 1. | BIM-based Multi-Objective Optimization for Sustainable Building Design | Wei Yan | Texas A&M University, College Station, TX, USA |
| 2. | Lessons Learned from the Application of Data-Driven Models to Residential Building Modeling | Andrew Cross | University of Nevada, Las Vegas, NV, USA |
| 3. | A New Approach to Validate and Standardize Occupancy Presence Modeling and Prediction in Residential Buildings | Bing Dong | University of Texas, San Antonio, TX, USA |
| 4. | Advancing Occupant Centered Performance Simulation Metrics: Linking Commercial Environmental Quality to Health, Behavior and Productivity | M.Azarbayjani, D.Brentrup, R.Cox | University of North Carolina, Charlotte, NC, USA |
| 5. | Female Thermal Preference: A Biophysical Analysis of Metabolism and Tissue Insulation | Boris Kingma, Wouter van Marken Lichtenbelt | Maastricht University, Netherlands |
| 6. | Lightweight look-ahead Options: An Eco-Dialect Between the Buildings; its Inhabitants and Designers | Vinu Subashini Rajus, Robert Woodbury | Simon Fraser University, British Columbia, Canada |
| 7. | Intelligent Agent Demand and Response System for Desert Southwest Residential Homes – Implication toward Automated Intelligent Summer Peak Energy Shifting Strategy | Sean Hsieh, Joon Lee, Andrew Cross, Robert Boehm | University of Nevada, Las Vegas, NV, USA |
| 8. | Behavior Oriented Metrics for Plug Load Energy Savings in Office Environment | Chenlu Zhang | Carnegie Mellon University, Pittsburgh, PA, USA |
| 9. | A behavior modeling tool for co-simulation | Tianzhen Hong | Lawrence Berkeley National Laboratories, Berkeley, CA, USA |
| 10. | Overview of a Data Structure for Sustainable Human-Building Ecosystems | Yong X.Tao | University of North Texas, Denton, TX, USA |
| 11. | Behavior Measurement in Immersive Virtual Environment (IVE): Striving for Prediction and Accuracy | Tracey Rizzuto | Louisiana State University, Baton Rouge, LA, USA |
| 12. | Barriers to high-performance behaviors in high-performance buildings: a case study | Julia K. Day | Kansas State University, Manhattan, KS USA |
| 13. | Time of Use (TOU) pricing and its impact on residential peak and demand in Jiangsu Province, China | Jing Ge | Cornell University, Ithaca, NY, USA |