

Meeting Agenda

International Technical Forum

Monday March 30, 2015; **Building 15, Room 253**

8:00 – 9:00	Registration & Reception (with coffee and bagel)	
9:00 – 9:15	Welcome and opening remarks	Richard Diamond: Staff Scientist, Deputy of Research Operations of BTUS Division, Deputy Director of CERC-BEE, LBNL; Tianzhen Hong: Staff Scientist, Deputy Leader of the Simulation Research Group, LBNL
9:15 – 9:35	Overview of BTUS Division	Richard Diamond: Staff Scientist, Deputy of Research Operations of BTUS Division, Deputy Director of CERC-BEE, LBNL
9:35 – 9:55	Overview of CERC-BEE	Nan Zhou: Staff Scientist, Director of CERC-BEE, LBNL
9:55 – 10:10	Coffee break	
10:10 – 10:35	CERC Behavior Research & Annex 66 Overview	Da Yan: Associate Professor, Tsinghua University, China; Tianzhen Hong: Staff Scientist, LBNL
10:35 – 12:00	Envisioning future occupants: A discussion panel for the DOE Buildings of the Future project (Moderator: Jared Langevin; Panelists: Cary Chan, Clinton Andrews, Hui Zhang, Steve Selkowitz)	
12:00-12:30	Discussion: What role might the U.S. government play in supporting occupant behavior research? (Moderators: Jared Langevin and Tianzhen Hong)	
12:30 – 13:15	Lunch	
13:15 – 13:40	Occupant education & energy efficiency: a case study of high-performance buildings	Julia Day: Assistant Professor, Kansas State University
13:40 – 14:05	Behavior simulation of occupants based on Japanese time use survey and application to modeling residential energy demand	Yohei Yamaguchi: Researcher, Osaka University, Japan
14:05 – 14:30	Occupancy and its effect on behavioral patterns and set point requirements	Marcel Schweiker: Scientific staff, KIT, Germany
14:30 – 14:55	Big Data Analytics for Next Generation Energy Management	Naveen Ramakrishnan: Robert Bosch Research and Technology Center, Bosch USA
14:55 – 15:15	Coffee break	
15:15 – 15:40	Modeling people's presence and behavior in buildings: Are we on the right track?	Ardeshir Mahdavi: Professor, Vienna University of Technology, Austria
15:40 – 16:05	Beyond Technology: Enhancing Energy Efficiency Through Social Psychological Approaches	Chien-fei Chen: Research Professor in social/behavioral science, University of Tennessee
16:05 – 16:30	Design-build-operate Energy Information Modeling For Occupant-oriented Predictive Building Control	Khee Poh Lam: Professor, Carnegie Mellon University
16:30 – 16:55	Human factors and familial routines in residential buildings	Joana Abreu: Behavior Scientist, Fraunhofer Center for Sustainable Energy Systems
16:55 – 17:15	Discussion, Wrap-up and Closing remarks	

Annex 66 Meeting

Tuesday March 31, 2015. **Building 15, Room 253**

8:30 – 9:00	Reception (with coffee and bagel)	
9:00 – 9:15	Introduce Agenda of Day 1: Presentations on Activities and Progress	
9:15 – 9:30	1. Introduction to Annex 66	Da Yan: Tsinghua University Tianzhen Hong: LBNL
9:30 – 9:45	2. Definition and framework	Da Yan: Tsinghua University Tianzhen Hong: LBNL
9:45 – 10:00	3.1. Occupant behavior related literature database	Bing Dong: UTSA
10:00 – 10:15	3.2. Investigation of occupant presence data and models	Chuang Wang: Tsinghua University
10:15 – 10:30	4.1. Current data collection techniques	Bing Dong: UTSA
10:30 – 10:45	4.2. Occupancy and occupant behavior data collection protocol	Liam O'Brien: Carleton University
10:45 – 11:00	5.2. Guideline to different modeling approaches for occupant behavior in commercial buildings	Burak Gunay: Carleton University
11:00 – 11:30	Coffee break	
11:30 – 11:45	5.4. Approaches to address occupants' behavior diversity in model development	Liam O'Brien: Carleton University
11:45 – 12:00	6.1. Recommendations for evaluation of building occupants' presence and behavior models: a blueprint	Ardehir Mahdavi: Vienna University of Technology
12:00 – 12:15	6.3. Test of occupant action models	Chuang Wang: Tsinghua University
12:15 – 12:30	Green Building Initiatives and New Meter Online Service	TBD
12:30 – 12:45	7.2. Standard description and protocols of occupant behavior in simulation	Sarah Taylor-Lange: LBNL
12:45 – 13:00	7.3 & 7.4. Occupancy and action software module development, and integration with BPS tools.	Tianzhen Hong: LBNL
13:00 – 14:00	Working Lunch	
14:00 – 14:15	Hostel Environmental Training (Subtask E)	Cary Chan: Swire Properties
14:15 – 14:30	8.3. Documentation of current practices for models in commercial buildings	Liam O'Brien: Carleton University
14:30 – 14:45	8.5. Guideline to practical presentation and deployment of conventional and probabilistic simulation results	Sara Gilani: Carleton University
14:45 – 15:00	9.1 & 10.2. Annex 66 newsletter and EBC articles; Outreach: ASHRAE Handbook and seminars.	Sarah Taylor-Lange, LBNL; Bing Dong: UTSA
15:00 – 15:30	Coffee break	

15:30 – 15:45	9.2. Website management	Sang Hoon Lee: LBNL
15:45 – 16:00	9.3. Annex 66 meetings (ExCo Meetings, Expert Meetings, Calls)	Da Yan: Tsinghua University Tianzhen Hong: LBNL
16:00 – 16:15	Micro-Sensing Research & Development Project	Martha Hao: Defond Group
16:15 – 16:30	Case studies in engineering and industry (Subtask E)	Khee Poh Lam, CMU; Cary Chan, Swire Properties
16:30 – 16:45	Review of the current status and demand for occupant behavior simulation in buildings (Subtask E)	Khee Poh Lam, CMU; Cary Chan, Swire Properties
16:45 – 17:00	(TBD for other related activities)	
17:00 – 17:15	(TBD for other related activities)	
17:15 – 17:30	Summary by the Operating Agents	
17:30 – 18:00	FlexLab Tour (sign up on Monday or Tuesday morning)	
18:30 – 21:00	Dinner Gala at the UC Berkeley Faculty Club (Seaborg Room) (Dress Code is Business Casual)	

Annex 66 Meeting

Wednesday April 1, 2015

8:30 – 8:45	Breakfast and Reception (Building 15, Room 253)	
8:45 – 9:00	Review of Day 2 and Introduce agenda of Day 3 (Building 15, Room 253)	
9:00 – 10:50	Breakout sessions for presentations, discussion of activities, deliverables and work plan of each subtask	
	Subtask A (Building 15, Room 253) <i>Title: On a Categorization Framework for Occupancy Sensing Systems</i> <i>Title: Validation of a two-level occupant movement model</i>	Subtask A Leaders: Andreas Wagner, Bing Dong <i>Presenter: Mikkel Kjærgaard</i> <i>Presenter: Chuang Wang</i>
	Subtask B (Building 6, Room 2202) <i>Title: Understanding Thermal Preference through Biophysics</i>	Subtask B Leaders: Darren Robinson, Henrik Madsen <i>Presenter: Boris Kingma</i>
	Subtask C (Building 2, Room 100B) <i>Title: Development of an occupancy learning algorithm for terminal heating and cooling units</i>	Subtask C Leaders: Ardeshir Mahdavi, Liam O'Brien <i>Presenter: Burak Gunay</i>
	Subtask D (Building 15, Room 253) <i>Title: Behavior modeling tool</i> <i>Title: Selected issues on the development of a comprehensive modelling of occupant behaviour integrated in a BES software, and its applications for energy performance guarantee</i>	Subtask D Leader: Tianzhen Hong <i>Presenter: Tianzhen Hong</i> <i>Presenter: Eric Vorger</i>
	Subtask E (Building 80, Room 234) <i>Title: Smart Building Management vs. Intuitive Human Control: A case study</i> <i>Title: Occupant behavior in building energy simulation: towards a fit-for-purpose modeling strategy</i>	Subtask E Leaders: Khee Poh Lam, Cary Chan <i>Presenter: Zsofia Belafi</i> <i>Presenters: I. I. Gaetani, P. Hoes, J. L. M. Hensen</i>
10:50 – 11:10	Coffee break (Building 15, Room 253)	
11:10 – 13:00	Breakout sessions for presentations, discussion of activities, deliverables and work plan of each subtask	
	Subtask A (Building 15, Room 253)	Subtask A Leaders: Andreas Wagner, Bing Dong
	Subtask B (Building 6, Room 2202) <i>Title: Building Energy Co-Simulations: Assess the strategies of Energy Management System in Active Buildings</i>	Subtask B Leaders: Darren Robinson, Henrik Madsen <i>Presenters: Ayesha Kashif, Stephane Ploix, Julie Dugdale, Khadija Tijani, Benjamin Haas</i>
	Subtask C (Building 2, Room 100B) <i>Title: A generalized model for occupant actions</i>	Subtask C Leaders: Ardeshir Mahdavi, Liam O'Brien

		<i>Presenter: Chuang Wang</i>
	Subtask D (Building 15, Room 253) <i>Title: Introduction to the obXML</i>	Subtask D Leader: Tianzhen Hong <i>Presenter: Sarah Taylor-Lange</i>
	Subtask E (Building 80, Room 234) <i>Title: Classification of occupant behaviour in buildings with regards to energy use and indoor climate</i> <i>Title: Occupant Behavior Case Study</i> <i>Title: Application of occupant behavior in building efficiency evaluation: a case study</i>	Subtask E Leaders: Khee Poh Lam, Cary Chan <i>Presenter: Ad van der Aa, Peter Op 't Veld</i> <i>Presenter: Ji-Hyun Kim</i> <i>Presenter: Xiaohang Feng</i>
13:00 – 14:00	Working Lunch (Building 15, Room 253) (The remainder of the meeting to be in Building 15, Room 253)	
14:00 – 14:20	Summary report of Subtask A	Andreas Wagner, Bing Dong
14:20 – 14:40	Summary report of Subtask B	Darren Robinson, Henrik Madsen
14:40 – 15:00	Summary report of Subtask C	Ardeshir Mahdavi, Liam O'Brien
15:00 – 15:20	Summary report of Subtask D	Tianzhen Hong
15:20 – 15:40	Summary report of Subtask E	Khee Poh Lam, Cary Chan
15:40 – 16:00	Coffee break	
16:00 – 16:30	Other business: 1. Next meeting (Andreas Wagner) 2. National participation letter 3. Publications of papers and conference proceedings 4. Info of workshop 5. Others	Da Yan Tianzhen Hong
16:30 – 16:45	Closing remarks by Operating Agents	
16:45 – 17:00	Close of the 1st Expert Meeting in the Working Phase	