

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

Call for Abstracts for Workshop on:

Integration of the Human Dimension in Product and Process Modeling in the Creation of Resilient and Sustainable Human-Building Ecosystems (SHBE)

The NSF-funded Research Coordination Network (RCN) in Science, Engineering and Education for Sustainability (SEES) announces its Eighth workshop on its *Theme V: Model Integration and Validation* with a special focus on the “human dimension” of predictive, inductive and informative modeling approaches based on actual or synthetic data pertaining to environmental and occupational characteristics of the built environment to be used for aiding data-driven decision making and control processes in the design and operation of resilient and sustainable built environments.

Participants are invited to submit an abstract of no more than 500 words for engaging discussions and presentations describing their explorations of new modelling methodologies that enable effective integration of interdisciplinary data models employing non-traditional data sets (e.g., human factors ~ presence, behavioral, physiological) across diverse temporal and spatial scales of the built environment from individual buildings to neighborhoods and cities. Research inquiries are also welcome for the topic of model validation approaches through sensing, collecting, processing and conveyance of multi-valent building performance information including human factors.

The following are suggested topics of discussion in this workshop:

- Demonstration of multi-disciplinary case studies focusing on the integration and validation of data and models in the human-building ecosystem level,
- Demonstration of Proof of Concept (POC) case studies from the 2nd Year of the NSF-DIBBS-VIFI project,
- Research methods on data-driven knowledge generation from actual and predicted environmental performance of buildings with their occupants perceived as key components of human-in-the-loop closed feedback building control mechanisms,
- Data-driven research methods addressing inherent needs for sharing and visualization of environmental and occupational data to empower people as inhabitants of the built environment toward more sustainable behaviors while ensuring reductions in energy and resource use for building operations,
- Needs and challenges in the use of predictive-inductive analytical methods applied to large data sets to reveal patterns, relationships and dependencies to perform predictions based on unstructured or semi-structured building data (including subjective votes from occupants’ physical comfort perceptions).

Important dates

RCN-SEES-SHBE Workshop VIII

Abstract Submission Deadline

Registration Deadline

(No Registration Fee)

May 17-18, 2018

April 30, 2018

May 5, 2018

May 17-18, 2018

Thursday – Friday

One and a half days workshop

Accommodation:

Marriott Hotels – Residence Inn

Pittsburgh/University Place

(Booking Deadline: April 23, 2018)

**Submit your RVSP or Registration form
and Abstract via web at: shbe@nova.edu**

Chair: Omer T. Karaguzel, Carnegie Mellon University

Advisory Committee:

Yong X. Tao, Nova Southeastern University

Yimin Zhu, Louisiana State University

Laura Arpan, Florida State University

Mirsad Hadzikadic, Univ. North Carolina, Charlotte

Wei Yan, Texas A&M University

Chien-fei Chen, University of Tennessee, Knoxville

Workshop Venue:

Center for Building Performance
& Diagnostics (CBPD)

Carnegie Mellon University
Pittsburgh, PA

Staff Support: Suraj Talele, stalele@nova.edu



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Workshop Registration Form

Theme V: Model Integration and Validation

Integration of the Human Dimension in Product and Process Modeling
in the Creation of Resilient and Sustainable Human-Building Ecosystems

Thursday, May 17 – Friday, May 18, 2018

Carnegie Mellon University, Pittsburgh, PA

Hotel Accommodation: Marriott Hotels – Residence Inn Pittsburgh Oakland/University Place.
Please use the following link to make online reservations with a discounted rate of 149 USD + taxes per night between May 16 and 18, 2018. Note that last day of booking with this rate is April 23, 2018.

[Book a room in Residence Inn](#)

There is no workshop registration fee to participate; however, registration is required and space is limited. To ensure your participation, please complete and return this form electronically to the registration office by e-mail (at shbe@nova.edu)

Name: _____

Title: _____

Institution/Organization: _____

Address: _____

City/State/Zip Code: _____

Telephone: _____

E-Mail: _____

Dietary Restrictions: _____

EMAIL THIS FORM TO:

shbe@nova.edu

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For additional information on the NSF Research Collaboration Network (RCN) – Predictive Modeling Network for Sustainable Human-Building Ecosystems, please visit www.shbe.org or contact Omer T. Karaguzel via e-mail at okaraguz@andrew.cmu.edu.