RCN-SEES-SHBE: Predictive Modeling Network for Sustainable Human - Building Ecosystems International Workshop Series

Call for Abstracts: International Workshop on Putting Sustainability into Convergence: Connecting Data, People, and Systems, Singapore, January 28-29, 2019

The NSF-funded Research Coordination Network (RCN) in Science, Engineering and Education for Sustainability (SEES) announces its second international workshop on *Putting Sustainability into Convergence: Connecting Data, People, and Systems* with a special focus on social science, engineering and computer science integration. Long-term sustainability requires technology advancements, resilient infrastructure, adequate policy, and behavioral change. The main objective of a sustainable and resilient infrastructure is where a multitude of resources can be dynamically shared and individual behavior be incentivized to better meet community needs. While focusing on underserved groups, the intention is to improve overall quality of life and well-being by providing adequate access to infrastructure and services. Inspired by the NSF vision, this international workshop proposes convergence research that is built upon trans-, inter-, and multi-disciplinary concepts including two main characteristics: Challenges and opportunities from deep scientific questions and critical societal needs, and intensive integration across disciplines.

Participants are invited to submit an abstract of no more than 500 words to address numerous societal challenges through interdisciplinary research and collaboration through a wide range of sustainability topics and innovative and integrated methodologies. We encourage social scientists, engineers, computer scientists, architects, policy makers, and industry members to address the following topics, but not limited to:

- **Socio-technological integration**: Tackling the challenge of jointly addressing both sides of the social-technological frontier in residential and commercial buildings, renewable energy adoption, and policy implications. Topics could include energy demand and practices, renewable energy adoption, resilience connecting social factors and technology, politics, governance, and management of urban infrastructure, and buildings. Both theoretical and empirical research are welcome.
- **Energy justice and sustainability**: Discovering the challenges in energy affordability, accessibility and promoting adoption of new energy technologies among underserved communities and all populations. The insights in the challenges of integrating engineering, technology design and research with underserved communities are particularly needed.
- **Big data research and challenges**: Investigating innovative methodologies for developing large-scale databases and associated analytic tools that are critical for addressing societal and sustainability issues, technology adoption, resilient infrastructures, economic growth and policy development. Demonstrating innovative methodology to connect data, people and systems is essential including the feedback loop connecting between social science, engineering and computer science research. Examples could be the adoption of a social behavioral survey on household energy consumption to model energy patterns, power demand and load and customer segmentation to improve design of demand response design, energy policy, and grid technology adoption, as well as power grid system resilience and smart home management systems.

Workshop Venue: Kent Ridge Guild House, National University of Singapore (NUS), Singapore

Accommodation: The Park Hotel Alexandra: https://www.parkhotelgroup.com/en/alexandra and Park Avenue- Rochester: http://parkavenueintl.com/parkavenuerochester/

(Booking Deadline: TBD) Check http://www.shbe.org/singapore-workshop.html for updates.

For important workshop dates and information about the Workshop committee members, please see the next page.

Important Dates

RCN-SEES-SHBE Intl. Workshop **January 28-29, 2019**
Abstract Submission Deadline **November 1st, 2018**
Registration Open **October 1st** until **December 31st, 2018**
Registration Fee: US$125

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

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