

Role of Information Sciences and Engineering in Sustainability (RISES)

A NSF/CCC Workshop on IT and the Sustainability Enterprise

February 3 and 4, 2011

Overview

This workshop, **Role of Information Sciences and Engineering in Sustainability (RISES)**, is sponsored by the [National Science Foundation](#) and the [Computing Community Consortium](#). It is scheduled to be held at the [Hyatt Regency Capitol Hill](#) on February 3 and 4, 2011.

The goals of the workshop are to:

- Explore and define fundamental research challenges and applications of the information sciences and engineering in sustainability, including energy and transportation;
- Provide opportunities for relevant academic and industrial researchers (including computer and information scientists, systems engineers, social and behavioral scientists, etc.), practitioners (e.g., power systems engineers, electricity suppliers, etc.), and government officials to identify mutual interests, as they relate to both near- and long-term challenges and solutions; and
- Identify a range of approaches for driving fundamental research, accelerating the translation of research outcomes into products and services affecting the "smart grid" and the broader sustainability enterprise, and incentives for widespread adoption/use of these products/services.

It is important to note that this workshop will **not** focus on:

- Technologies where current research and/or development are well under way, e.g., power management in data centers.
- Routine applications of IT to further sustainability.
- Extensions of current IT practice that are broadly applicable, e.g., improving simulation techniques used in computer-aided design, or machine learning to detect trends in economics or behavior.
- Routine support for eScience (but scientific studies of sustainability may present some *unique* problems of interest).

In summary, the aim of the workshop is to identify new research opportunities in the information sciences and engineering that address sustainability objectives. Many of these are likely to be interdisciplinary, requiring collaboration with researchers in the many areas of science and technology that will contribute to a sustainable world.

Structure

The workshop will have four half-day sessions. Each of the first three sessions will have two plenary talks followed by small-group breakout discussions to define particular research challenges, the needs of stakeholders in energy and sustainability, etc. Each of these sessions will culminate with short reports from the breakout groups. The workshop will conclude with a session in which the participants will synthesize the research opportunities defined in the earlier sessions and frame a call-to-action for the future.

Participants

The participants are being selected to represent a wide variety of interests and expertise -- i.e., to truly cover the sustainability landscape. It is anticipated that, in addition to interacting at the workshop with fellow participants coming from other disciplines and backgrounds, the participants will take the results of the workshop back to their communities to foster increased interest in innovative uses of computing and information science and engineering for sustainability.

More details about how you can participate will be made available soon. In the meantime, if you are interested in attending or have recommendations of possible attendees, please [e-mail](#) us.

Draft Agenda

Thursday, February 3, 2011:

Registration + Continental Breakfast

7:00am - 8:15am

Registration and continental breakfast will be in the Hall of Battles (ballroom level).

Opening remarks/welcome by organizers

8:15am - 8:45am

Regency C (ballroom level)

Session I: Energy & Transportation

8:45am - 12:30pm

Regency C (ballroom level)

8:45am - 9:20am	Tim Killeen
9:20am - 9:55am	Bill Rouse: "Enabling and Motivating Consumers to Manage Their Energy Consumption"
9:55am - 10:30am	Michael Meyer: "Transportation Systems and Information Technology: Pushing the Boundaries for Sustainable Outcomes"
10:30am - 10:35am	Charge to breakout groups
10:35am - 10:45am	Break/assemble in various rooms
10:45am - 11:45am	Breakout discussions (various rooms)
11:45am - 11:55am	Break/reassemble in general session room
11:55am - 12:30pm	Reports from breakout groups

Lunch

12:20pm - 1:30pm

Served in the Hall of Battles (ballroom level).

Session II: Electric Grid

1:30pm - 5:15pm

Regency C (ballroom level)

1:30pm - 2:15pm	Government panel (Henry Kelly , DoE; Eric Toone , ARPA-E; George Arnold , NIST)
2:15pm - 3:15pm	Industry panel (Artie Kressner , Con Edison; Eric Horvitz , Microsoft Research; Eve Schooler , Intel Labs)
3:15pm - 3:20pm	Charge to breakout groups
3:20pm - 3:30pm	Break/assemble in various rooms
3:30pm - 4:30pm	Breakout discussions (various rooms)
4:30pm - 4:40pm	Break/reassemble in general session room
4:40pm - 5:15pm	Reports from breakout groups

Break

5:15pm - 6:00pm

Reception

6:00pm - 7:30pm

Thornton (11th floor)

Friday, February 4, 2010

Registration and Continental Breakfast

07:15am - 8:30am

Registration and continental breakfast will be in the Hall of Battles (ballroom level).

Session III: Global Themes

8:30am - 12:20pm

Regency C (ballroom level)

8:30am - 9:05am	Carla Gomes
9:05am - 9:40am	Bill Tomlinson: "IT and (Un)sustainable Cultures"
9:40am - 9:45am	Charge to breakout groups
9:45am - 9:55am	Break/assemble in various rooms
9:55am - 11:10am	Breakout discussions (various rooms)
11:10am - 11:20am	Break/reassemble in general session room
11:20am - 12:00pm	Reports from breakout groups

Lunch

12:00pm - 1:00pm

Served in the Hall of Battles (ballroom level).

Session IV: Putting It All Together

1:00pm - 3:00pm

Regency C (ballroom level)

1:30pm - 3:00pm	Open discussion & synthesis
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Plenary Speakers

(click name for link to bio)

[Tim Killeen](#), National Science Foundation

[Bill Tomlinson](#), University of California-Irvine

[Michael Meyer](#), Georgia Institute of Technology

[Bill Rouse](#), Georgia Institute of Technology

[Carla Gomes](#), Cornell University

Organizing Committee

(click name for link to bio)

[Bob Sproull](#), Oracle, co-chair

[Randy Bryant](#), Carnegie Mellon University, co-chair

[Doug Fisher](#), Vanderbilt University

[Carla Gomes](#), Cornell University

[Bill Rouse](#), Georgia Institute of Technology

[Prashant Shenoy](#), University of Massachusetts-Amherst

[David Waltz](#), Columbia University

Logistics

Date: February 3-4, 2011

Location: Hyatt Regency Washington on Capitol Hill, Washington DC

[Room Reservation Link](#)

Please note that our room block is now sold out. If you would like to make a reservation, please e-mail [barbarafreel (at) yahoo.com] with your name and contact information.

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