



# 2010 IEEE International Symposium on Sustainable Systems and Technology



**May 16-19, 2010 Washington, DC, USA**

The IEEE Computer Society's Technical Committee on Sustainable Systems and Technology (formerly TC on Electronics and the Environment) and the IEEE Society on Social Implications of Technology are pleased to announce the 2010 IEEE International Symposium on Sustainable Systems and Technology. This conference was known between 1993 and 2008 as the IEEE International Symposium on Electronics and the Environment. In 2008, the scope of the conference was broadened to all industries and products while still maintaining a focus on the sustainability of information and communication technology (ICT) services. The new scope further strengthens a premier event on sustainable technology issues.

The program includes sessions covering the spectrum of issues for assessing and managing products and services across their life cycle, and the design, management, and policy implications of sustainable engineered systems and technologies, including design for environment, design for sustainability, materials selection, energy management, end-of-life policy and reuse/recycling, process integration, and institutional and policy implications of services and technology systems. Participants in the symposium are diverse, with representatives from industry, government and academia. All presented papers will have the option to be published in the *Proceedings of the 2010 IEEE International Symposium on Sustainable Systems and Technology*, published by IEEE.

## CALL FOR PAPERS AND POSTERS

The conference will feature keynote speakers, tutorials, paper presentations, panel discussions, and poster presentations. Authors from industry, academia, research laboratories, and consultants are invited to submit papers describing research, applications, tools, and case studies addressing the categories listed below. Approximately 30 minutes will be provided for each paper presentation, including questions and responses. A poster session will be open to all participants including students.

### SOLICITED TOPICS (with suggested subtopics):

#### ICT and Urban Infrastructure Systems

- Smart buildings
- Intelligent transport systems

#### ICT in Business Systems and Efficiency

- Logistics, e-commerce and supply chain management
- Monitoring and control systems in manufacturing

#### Emerging Technologies

- Impact of emerging technologies (e.g., nanotechnology)
- Impacts of technological convergence (including nanotech, biotech, ICT systems, and cognitive science)
- Emerging technologies, military operations, and national security

#### Materials and Product Design

- Design for Environment (DFE)/Sustainability (DFS)
- Energy management/efficiency

#### Green Manufacturing

- Innovative processes
- Supply chain management

#### Sustainability Analysis Tools

- Industrial Ecology (IE), Life Cycle Assessment (LCA)
- Network Theory
- Thermodynamics and energy/material analysis

#### Sustainable Engineering Education

- Education modules and case studies
- Innovations and restructuring of curricula for sustainability

#### Policy and Regulation

- Developments and evaluation of existing policies and regulations
- International management of reused goods and e-waste

#### End-of-life Technologies and Systems

- New disassembly and recycling technologies
- Asset management and logistic systems for electronics
- RFID and other identification systems

#### Ethics/Societal Implications

- Impacts of informal recycling in developing countries
- Ethics and Emerging technologies
- Professional responsibilities for sustainability

#### Policy Issues / Implications

- "Green" standards development and implementation
- Incentivizing sustainable behavior and practices

#### Sustainable Energy Generation and Distribution

- Optimization of generation portfolios / Demand and efficiency
- Renewable energy
- Environmental impacts
- Smart grid

#### Earth Systems Engineering and Management

- Geo-engineering
- Design and policy implications of geo-engineering technologies
- Carbon capture technologies for climate change mitigation
- ICT for transformation of the energy system
- Sustainable design / management of urban systems
- ICT and natural cycles (carbon, nitrogen, hydrologic)

**ABSTRACTS ARE DUE November 20, 2009**

**SUBMISSION OF ABSTRACTS:** Prospective authors should submit an extended abstract of 800-1000 words clearly explaining the subject, originality, and relevance to the symposium on or before **November 20, 2009**. Extended abstracts will be peer reviewed. Abstracts must specifically address each of the following categories to be considered:

 Problem addressed    Knowledge of prior work    Project undertaken    Research methods    Conclusions

Abstracts are to be submitted through the START Conference Manager System:

**<https://www.softconf.com/a/issst2010>**

*Abstracts may be submitted for papers and posters on the same topic, but separate abstracts must be submitted for the paper and poster, which will be evaluated individually.*

Please consider forwarding copies of this announcement to colleagues, suppliers, academic partners or others who may be contributors to the program!

**For all symposium information, see the conference website:**

**<http://www.ieee-issst.org/>**

#### Regular Sessions:

Authors will be allowed to submit extended abstracts for papers they intend to present and fully publish in the conference proceedings, or for those who intend only to have an abstract published. Priority in acceptance and scheduling of presentations will go to authors intending to publish full papers, but interesting and high-quality abstracts will also be considered. Authors whose papers are selected for oral presentation will be notified in December. Authors will be entitled to register for the symposium at a reduced rate. One author per paper must register to attend the symposium before or at the time the final paper is submitted. Papers or abstracts without a registered author will not be printed or scheduled for presentation. Authors must follow the style templates provided at <http://www.ieee-issst.org/>. Papers are limited to six pages in length, including illustrations. Final papers are due by **February 20, 2010**.

#### Poster Sessions

Authors who choose to present a poster are required to submit an abstract for publication in the proceedings. The abstract may be up to one page in length and must follow the style template provided at <http://www.ieee-issst.org/>. One author per poster must register to attend the symposium by the time the final abstract is submitted. Final abstracts are due by **February 20, 2010**.

#### Special Sessions

Authors invited to participate in special sessions should submit a full paper up to 6 pages in length. Authors must follow the style template provided at <http://www.ieee-issst.org/>. Final papers and abstracts are due by **February 20, 2010**.

The venue for the symposium is being finalized at this time. Information on registration and hotel reservations will be available by **January 2010** at <http://www.ieee-issst.org/>.

**ATTENTION STUDENTS:** ISSST offers both a paper and poster competition to recognize student contributions to the advancement of environmental practices in sustainable systems and technology. To be eligible, the primary author must be a student on or after January 1, 2010 and present original work either in an accepted 2010 ISSST conference paper or poster. Contest eligibility forms and instructions for submission are available at <http://www.ieee-issst.org/>.

#### **2010 ISSST CONFERENCE COMMITTEE:**

##### **Conference Chair:**

H. Scott Matthews (Carnegie Mellon University)

##### **Program Committee Co-Chairs:**

Arpad Horvath (UC Berkeley), Eric Masanet (LBNL), Clinton Andrews (Rutgers University)