ICT4S
ICT for Sustainability

February 14-16, 2013
ETH Zurich
www.ict4s.org

University of Zurich UZH
Department of Informatics

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Energy Science Center

EMPA
Materials Science & Technology
Technology and Society Lab

Call for Papers: ICT4S 2013

Background and Objectives

'ICT for sustainability' is about utilizing the transformational power of Information and Communication Technologies (ICT) for making our world more sustainable: saving energy and material resources by creating more value from less physical input, increasing quality of life for ever more people without compromising future generations' ability to meet their needs. While the potential of ICTs' contribution to sustainability has been increasingly recognized during the last decades, implementing this potential has proven to be a challenge.

The ICT4S conference aims to bring together leading researchers from the technical, natural and social science disciplines:

• to take stock of the role of ICT in sustainability and to improve the methods of measuring the positive and negative effects of ICT;

• to create an interdisciplinary synopsis, to inspire new approaches to unleash the potential of ICT for sustainability in various fields of application, from production to consumption;

• to improve methodologies of evaluting, developing, and governing the effects of ICT systems on the sustainability of societal and environmental systems.

Invited Speakers

Gian-Luca Bona	Prof., Director General, Empa – Swiss Federal Laboratories for Materials Science and Technology
Pierre-Alain Graf	CEO Swissgrid
Robert Madelin	Director General, European Commission DG INFSO (tentative)
Jennifer Mankoff	Prof., Carnegie Mellon University
Daniel Spreng	Prof. em., ETH Zurich

Topics

Topics include, but are not limited to:

Sustainability through ICT

ICT for energy management and planning	ICT for energy efficiency, smart energy systems, smart grids, smart metering, ICT and renewables
ICT and dematerialization	ICT for material efficiency, ICT-supported life cycle thinking, ICT and product-service systems, smart recycling
Sustainability in Human-Computer Interaction (HCI)	Creating awareness, supporting behavioural changes, empowering the 'green' consumer with information, supporting design for sustainability
Other enabling effects of ICT for sustainability	Other effects of ICT as an enabler of sustainable development may be addressed as well

Sustainability in ICT

Energy flows induced by ICT and how to reduce their impact	Energy use in the life cycle of ICT hardware, energy consumption of data centers, decentralized and renewable power generation for ICT, energy harvesting, energy-aware and energy-autonomous systems
Material flows induced by ICT and how to reduce their impact	Scarce resources used for ICT hardware, electronic waste (e-waste, WEEE), recycling technologies and schemes, environmental and social impacts of ICT-related material flows, future electronics
Green design and green software	Measuring resource consumption at the level of ICT functions and services, implications of software architecture on hardware load, the potential of software to save hardware resources, sustainability in software engineering, resource-aware software, price transparency in the ICT sector

Economic and Political Dimensions

Rebound effects and how to avoid them	ICT-induced efficiency and rebound effects, history of ICT-related rebound effects, theories and models of rebound effects, rebound effects vs. intended growth, political frameworks for avoiding rebound effects
Energy markets	Role of ICT in the deregulation of electricity markets, ICT and dynamic prices, electronic energy markets, enabling political frameworks for smart energy use
Economics of ICT hardware	Supply security of the resources used in ICT, geopolitical aspects of critical metals, economics of e-waste recycling, world commodity markets and ICT

Submissions

Contributions must be submitted electronically via the EasyChair system at https://www.easychair.org/conferences/?conf=ict4s2013.

All submissions will be peer-reviewed by at least two members of the program committee and will be judged on the basis of originality, soundness, contribution to the conference objectives, quality of presentation, and appropriate comparison to related work. Submissions must not have been published or be concurrently considered for publication elsewhere. Contributions must be submitted in PDF format, the full papers and final posters formatted according to the author guidelines which will be published in July 2012 at www.ict4s.org.

Oral presentation submission:

1. Authors are kindly asked to submit an extended abstract of 1000-2500 words (including references) by June 1, 2012. Extended abstracts will be used for pre-selection.
2. After pre-selection, authors are requested to submit a full paper of 6-10 pages for review. Full papers are due September 1, 2012. Accepted papers will be published in the conference proceedings, which will be available at the conference and published online.

3. After the conference, some contributions will be selected for post-conference publication depending on topicality and quality. The authors will be encouraged to extend and update their contribution for publication either in an edited volume or a special issue of a peer-reviewed journal. Details of post-conference publication will be published in July 2012 at www.ict4s.org.

Poster submission:

1. Draft posters have to be submitted via the EasyChair system by **September 1, 2012.**
2. Authors will be notified upon acceptance by **October 1, 2012.**
3. Camera-ready posters must be submitted by **November 1, 2012.** Poster authors may use the conference's free poster printing service or bring their own hardcopy to the conference.

For formatting guidelines, details of proceedings and post-conference publications and the terms and conditions for authors, see **www.ict4s.org**.

Audience

The ICT4S conference will bring together leading researchers in ICT for Sustainability with government and industry leaders. Decision-makers with an interest in using ICT for sustainability, researchers focusing on ICT effects on sustainability and developers of sustainable ICT systems or applications should attend this conference.

Important Dates

June 1, 2012:	Submission of extended abstracts
August 1, 2012:	Notification of preliminary acceptance
September 1, 2012:	Submission of full papers and draft posters
October 1, 2012:	Final acceptance
November 1, 2012:	Submission of camera-ready papers and posters
February 13, 2012:	Pre-conference activities
February 14-16, 2013:	Conference

Organizers

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Thomas F. Rutherford	Prof., Energy Science Center, ETH Zurich, Switzerland
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Elaine M. Huang	Prof., Zurich People and Computing (ZPAC) Lab, Department of Informatics, University of Zurich, Switzerland
Wolfgang Lohmann	Dr., Technology and Society Lab, Empa – Swiss Federal Laboratories for Materials Science and Technology, St.Gallen, Switzerland

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