WORKSHOP SENSING A CHANGING WORLD

May 9-11, 2012

CENTRE FOR GEO-INFORMATION
WAGENINGEN UNIVERSITY, THE NETHERLANDS

Three years ago the first workshop on Sensing a Changing World was held in Wageningen bringing together 80 researchers from 12 countries. (http://www.mdpi.com/journal/sensors/special_issues/sensing-a-changing-world/). Now, tree years later, developments in sensor technology have advanced rapidly. Technological platforms matured, standards are accepted, and various (mobile) sensors become widely available. As a result the number of applications which implement sensors (including human-sensors) and sensor web concepts are increasing, leading to new research challenges. Current developments in sensor technology provide increasing opportunities to analyze human behavior and monitor environmental processes of a changing world. Access to vast amounts of data from mobile (e.g., GPS, mobile phones), in situ (e.g., meteorological, groundwater, seismic) and remote sensing sensors provides scientific researchers with interesting spatial-temporal data sets.

AIM

The main goal of this second edition, which is organized with support of the MODAP project (http://www.modap.org), is to present and explore the current state-of-the-art developments, impacts and research challenges for sensor web technology in the context of environmental monitoring and analyzes.

During the workshop key-note speakers provide an overview state-of-the-art developments, impact and challenges for sensing the world in different application fields: urban, water, environment, transportation, agriculture, tourism etc. We will publish a selection of the presented work in a special issue of a selected journal (to be announced).
The workshop results in an overview of the current state-of-the art developments and identification of future research challenges to improve the application of various sensor concepts and techniques in the environmental sciences domains. The workshop brings together researchers, technology developers and users of different involved disciplines and provides a forum for fruitful discussions.

WORKSHOP TOPICS

Knowledge discovery from sensory data sets.

- Scale issues in processing and application of spatial temporal sensory data.
- Real-time and on-demand representation and visualization of sensor data.
- Information extraction from (informal) sensor network data.
- Integration of sensor webs and dynamical modeling.
- Development of location and movement based services.
- Standardized access to sensor data and the linkage to spatial data infrastructures.
- Application of mobile sensor based applications (transportation, urban, tourism, cellular census, location based services etc.).
- In situ and earth observation sensor applications (groundwater, air-quality, river management, agriculture, extreme events etc.).

PROGRAM

Wednesday (May 9):

12:00-13:00 Registration and Lunch

13:00-13:15 **Welcome**

13:15- 1400 Keynote Uwe Rascher: Shining light on the structural and functional properties of plant canopies –current status and potential to quantify photosynthesis using optical remote sensing and fluorescence approaches

14:00-14:30 Jan Peters: Air quality mapping in urban environments using mobile measurements

14:30-15:00 **Coffee**

15:00-15:30 Simon Jirka: Practical Experiences with Sensor Web Technology

15:30-16:00 Arun Pratihast: Application of mobile devices for community based forest monitoring

16:00-16:30 Bart Elen: The Aeroflex: a bike for mobile air quality measurements

16:30-16:45 **Drinks**

16:30-17:00 Ben de Vries: Monitoring the impact of redd+ implementation in the Unesco Kafa biosphere reserve, Ethiopia

17:00-17:30 Christoph Stasch: Representing Uncertainties in the Sensor Web

17:30-18:00 Bart Elen: The EveryAware SensorBox: a tool for community-based air quality monitoring

19:30 **Dinner**

Thursday (May 10):

09:00-9:45 Keynote: Gennady Andrienko: Visual analytics of movement

09:45-10:15 Thomas Everding: Challenges of Processing Temporal Events in the Sensor Web

10:15-10:45 Lammert Kooistra: Integrating remote-, close range- and in-situ sensing for high-frequency observation of crop status to support precision agriculture

10:45-11:15 **Coffee**

11:15-11:45 Peter Roosjen: A new setup to measure bidirectional reflectance distribution functions

11:45-12:15 Birna van Riemsdijk: Self-Organization of Sensors for Answering Information Needs

12:15-12:45 Sytze de Bruin: Multiphase sensor placement using expected value of information

12:45-13:30 **Lunch**

13:30-14:00 Yucel Saygin: Movement, Datamining, and Privacy

14:00-14:30 Daniel Orellana: Movement of Visitors in the Galapagos

14:30-15:00 Tamme van der Wal: Satellite Navigation for Animal Behaviour Analysis

15:00-15:30 **Coffee**

15:30-16:00 Mattijs Danes: The SmartCampus concept

16:00-16:30 Daniel Nüst: R in the Sensor Web

16:30-17:00 Erik de Rooij: How FEWS incorporates real-time sensor data with dynamic modeling to allow Real Time Control of sewer systems

17:00-17:30 Jan Verbesselt: Near real-time disturbance detection approach for in-situ and earth observation sensor data

17:30-18:00 Rik Hendrix: Multi-scale Service for Monitoring NATURA 2000 Habitats of European community Interest (MS.MONINA)

18:00 **Wrapping-Up and Drinks**

Friday (May 11)

You are cordially invited to join the PhD defences of:

11:00-12:00 PhD Daniella Ballari: Mobile sensor networks for environmental monitoring

16:00-18:00 PhD Daniel Orellana: Exploring Pedestrian Movement Patterns

REGISTRATION, FEES and PAYMENT
Please register trough http://www.grs.wur.nl/UK/Workshops/SCW/Registration_form/
or
email at: Antoinette.Stoffers@wur.nl

The fee will be 200 Euro which includes coffee, lunches, and workshop dinner. *PhD students can apply for an reduced fee of 150 euro*. After registration an invoice will be send to you.

Payment can be done in two ways:

1) Through our (save) credit card transfer system:
credit card transfer system: please go to https://secure.wisl.nl/fnccc/.
Fill in the required fields and add the remark field "scw2012:yourname"

2) By an (international) bank transfer:
Please transfer the registration fee to the following account number:
IBAN nr.: NL83 RABO 0367054612
Swift Code/BIC: RABONL2U
Bank: Rabobank Vallei en Rijn
City: Ede
Country: Netherlands
Note in the transfer: your name and scw2012

VENUE
Wageningen University
Wageningen Campus, GAIA Building, Room 1
Droevendaalsesteeg 3
6708 PB WAGENINGEN, the Netherlands

ACCOMODATION
Several hotels are available in Wageningen and its surroundings. Participants to the workshop need to arrange their own accommodation.
We suggest: Hof van Wageningen: http://www.hofvanwageningen.nl/?language=en. This hotel is located in the Centre of Wageningen (restaurants and pubs) and has good public transport facilities to Wageningen Campus (location of workshop).

For additional hotel options please check the accommodation website:
http://www.grs.wur.nl/UK/Workshops/SCW/Accommodation/

INFORMATION
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Check www.grs.wur.nl/UK/workshops/scw2 for details.

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