



Special Issue:

Geospatial Sensor Web - Concepts, Technologies and Applications

Sensors and earth observation networks deliver a broad range of data about the environment and the state of the earth. To facilitate the access to these sensors and the collected data, the idea of the Sensor Web is an important technological foundation in an increasing number of applications and domains. Typical domains that benefit from the application of Sensor Web technology are for example hydrology, oceanography, environmental monitoring (e.g. air quality measurements, noise monitoring), meteorology, and seismology. In addition, many Sensor Web applications exist in the field of citizen science to handle observations made by humans.

There are several challenges that are in the focus of current Sensor Web research. These comprise for example interoperability (e.g. OGC Sensor Web Enablement standards), best practice recommendations how to build Sensor Web systems in different domains, the processing and analysis of sensor observation data, event detection, and semantics of sensor data. Furthermore, technologies and concepts such as the Internet of Things, Citizen Science, and Linked Data offer new opportunities to enhance existing Sensor Web infrastructures with new types of data and functionality.

This special issue aims to provide a comprehensive overview of Sensor Web applications as well as advancements of Sensor Web technology. This overview includes emerging ideas and research results, but practical evaluations and case studies are also of interest. The topics covered by this special issue include but are not limited to:

- Sensor Web architectures
- Sensor Web implementations
- Application examples of Sensor Web technologies
- Standardization and interoperability
- Domain specific Sensor Web profiles
- Access control to Sensor Web resources
- Sensor data analysis

- Quality of observations and measurements
- Sensor Web for citizen science applications
- Event detection and processing in sensor data streams
- Visualization tools for the Sensor Web
- Semantic Sensor Web and vocabularies for Sensor Web applications
- Linked Data in the Sensor Web
- Geospatial Internet of Things
- Sensor and observation metadata
- Discovery and catalogs in the Sensor Web
- GIS and Sensor Web
- Plug and play mechanisms for Sensor Webs

Guest Editors:

Dr. Simon Jirka, 52°North GmbH, Germany (jirka@52north.org)

Dr. Christoph Stasch, 52°North GmbH, Germany

Deadline for requesting publication fee waiver: November 1st, 2016 (Requests should be made via email to guest editor)

Deadline for submission of full papers: November 30, 2016

Special Issue publication date: Early 2017

Articles accepted for publication in this special issue could receive a publication fee waiver. To obtain this, authors are asked to send an email to guest editor (jirka@52north.org) with the title and abstract of their article before November 1st. Requests made after this deadline could not be considered to receive fee waiver, and authors would be asked to pay the standard article processing charges defined by Springer. Authors are kindly asked to make sure to contact the guest editor and send in their request in time.

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