

Call for Workshop Participation

Role of Volunteer Geographic Information in Advancing Science

Workshop Organized in Conjunction with
The Sixth International Conference on Geographic Information Science
14th September, 2010

<http://www.ornl.gov/sci/gist/workshops/index.shtml>

Synopsis: Geographic data, describing objects and events, have been a fundamental component of scientific experiments and more importantly, in model calibration, verification, and validation for physical sciences. Recent evolutions and advancements in geospatial and cyber technologies, combined with a population that is well informed and interested in global issues such as energy and climate, have cultivated an environment in which scientific research can potentially benefit significantly from the enormous volume of data that can be provided by citizens through their offering of volunteered geographic information (VGI). Moreover, the ever increasing membership of cyber social networks such as Facebook, Twitter, and MySpace, are sharing dynamic information about their locations and activities. Integrated in such systems is a vast volume of VGI, that includes observables (such as vegetation, critical infrastructures, hydrography), directly physically measurable (such as temperature, geophysical parameters) data, and even personal perspectives and experiences of citizen participants in the form of images, videos, and text. However, the value of VGI is still largely limited to satisfying the intellectual curiosity of the common public. The critical challenge that faces the research and operational communities is to understand and assess the authenticity, validity, and uncertainty of volunteered geographic information. Determining the most appropriate sources of data, promoting the involvement of those sources, acquiring accurate and useful information, and ultimately connecting these data with scientific research are key issues that need to be addressed in this context. Progress towards rendering VGI as a valuable and usable component for scientific research will require development of appropriate reference frameworks, standards, and models for data and communication coupled with novel analytical approaches that allow uncertainty quantification.

Target Audience: This workshop aims to bring leading researchers from the fields of geographic information science to discuss this important topic and to define and describe a set of preliminary research topics for the community to pursue. We solicit original research contributions that address the key theme of this workshop.

Topics: The major topics of interest to the workshop include but are not limited to:

- Volunteered geographic information
- Geographic data acquisition and dissemination methods
- Uncertainty in geographic information
- Geospatial data and interoperability standards
- Spatiotemporal data mining
- Cyber-GIS for dynamic data integration
- Geographic exploration systems
- Scientific knowledge generation
- Spatial model calibration, verification, and validation
- Geosensor networks

Paper Submission: The workshop is organized around short discussion papers, a couple of keynote presentations by leading researchers, open discussions, and a poster session to accommodate selected submissions. Further organization of the workshop will be detailed in the coming weeks. Short (2 page) discussion papers should present a specific problem in the context of volunteered geographic information. The authors are requested to stress the multidisciplinary character of their approaches and their relevance to the theme of the workshop. We encourage submissions presenting early stages of cutting-edge research and development, as well as submissions from PhD students. Submission of a 2-page CV is also required with the discussion papers.

Deadline for Paper Submission: May 23rd 2010

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