

## Preface to Semantic E-Science Workshop

In the successful series of Semantic Grid and e-Science events we intend to bring together researchers and practitioners around the world from the quickly developing research areas of the Semantic Web, Grid and e-Science. As semantic technologies are being widely accepted in various e-science areas such as life science or bioinformatics, it is necessary and urgent to offer semantically enriched methods, tools, middleware to facilitate semantic modeling, system building, searching, and data analyzing in e-science applications. The aim of this workshop is to ground Semantic e-Science firmly on the needs of the Semantic Web and general science research community. We want to encourage and stimulate discussion about the current state of the art in Semantic e-Science and its future direction.

Currently, ontologies and the Semantic Web attract researchers from all around the world and from various disciplines. There have been many approaches of using ontologies in the e-Science domain, which has been introduced in several past Semantic Grid and e-Science events. However, the role of ontology in the Semantic e-Science research has still not been unambiguously formalized. On the other hand, ontology-based tools for various e-Science branches have been widely developed and already attracted the attention from traditional science research community and provided real cases and experience for applying Semantic Web technologies. We regard it as necessity to set a research agenda at this point in time, in order to steer the development and the research efforts in the most rewarding direction towards our common goal of realizing the Semantic e-Science.

For this workshop, we have received 18 submissions from UK, China, Germany, USA, Korea, Japan, and accepted 7 long papers and 3 short papers. Many of them are high-quality papers from well-known institutes in this area. For example, Kei Cheung and colleagues from Yale medical school presents their recent advances in applying semantic web technologies in neuroscience data integration. Caterina Caracciolo and his colleagues from Food and Agriculture Organization of the UN (FAO) introduce their work on semantic-based interoperability of geopolitical Information within FAO. Jiro Araki and colleagues introduce an approach for classification of resource on knowledge map in biology. Andrew K. Smith and his colleagues present a novel semantic e-science prototype called LinkHub which is a semantic web system for efficiently handling complex graphs of proteomics identifier relationships that facilitates cross-database queries and information retrieval. Peng Wang from Southeast University introduces a novel approach for ontology mappings debugging. Xiaoqin Zheng from Zhejiang University presents their work on applying semantic web technologies in Traditional Chinese Medicine area. We would like to thank all authors for their excellent work which has made this workshop a great event in semantic e-science area.

Finally we would like to thank all members of our program committee, they are:

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