

CALL FOR PAPERS

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5th International Conference on Biomedical Ontologies

Houston, TX | Workshops & Tutorials: Oct. 6/7, 2014 | Conference: Oct. 8/9, 2014

The biomedical area has seen an explosive growth in data in the last decade from electronic health records, procedures, imaging, lab tests, genomics, and sensors. More recently the emergence of consumer health devices and the improved understanding of the microbiome has contributed greatly to this growth. While Big Data approaches have been useful to tackle the volume and velocity aspects, variability aka the 'small data' issue is especially challenging in the healthcare and life sciences areas. Ontologies provide the means to tackle this variability challenge with the ability to represent the meaning of the data formally in a computable manner. In addition, a large part of healthcare data is unstructured data. Natural Language Processing (NLP) and data mining techniques are being used for information extraction into a more structured form, a process wherein ontologies provide the knowledge models and the lexicon to extract the information meaningfully.

A large number of biomedical ontologies are now available, and ontology frameworks and ecosystems have also emerged to facilitate interoperability among the models. The *5th International Conference on Biomedical Ontologies (ICBO)* aims to bring together application of ontologies as well as foundational issues in biomedical ontologies. The theme of ICBO 2014 is **Ontologies driving Innovation** - the main emphasis will be on the applied aspects of ontologies and demonstration of innovative ontology-driven solutions for all areas of healthcare and life sciences.

TOPICS

Papers, posters, workshops, tutorials, and software demonstrations are invited on a broad range of topics covering ontology development and use in the healthcare and life sciences areas. These include, but are not limited to, ontology engineering and reuse, ontologies promoting data integration, fluidity and reuse, data visualization, pathway analysis, and especially knowledge discovery.

Areas of special focus:

- ▶ Foundational issues in Biomedical Ontologies
- ▶ Ontology development tools, reuse and interoperability
- ▶ Data Science and Big Data
- ▶ Linked Open Data and Semantic Web services
- ▶ Ontologies for clinical decision support
- ▶ Pharma-biotech and genomics
- ▶ Personalized medicine
- ▶ Translational science
- ▶ Consumer health data
- ▶ Ontologies for life sciences, biodiversity, and evolutionary biology
- ▶ Reasoning with biomedical ontologies
- ▶ Natural language processing, text mining, and information extraction
- ▶ Bridging between ontologies and controlled vocabularies such as ICD-9/10

IMPORTANT DATES

- 4/01/2014 Workshop and tutorial proposal submission deadline
- 4/15/2014 Notification of acceptance of workshops and tutorial proposals
- 5/01/2014 Scientific paper submission deadline
- 7/01/2014 Notification of scientific paper acceptance
- 7/15/2014 Software demo, early career, and workshop paper submission deadline
- 8/15/2014 Notification of demo, early career, and workshop paper acceptance
- 8/15/2014 Poster submission deadline
- 9/01/2014 Notification of acceptance of posters
- 9/15/2014 Deadline for all camera-ready copies for the proceedings
- 10/6/2014 ICBO

SUBMISSIONS

- Scientific paper (up to 6 pages)
- Early career track paper (4 pages)
- Poster abstract (2 pages)
- Software demos (2 pages)
- Workshop and tutorial proposals (2 pages)

FORMAT

- Submissions must be submitted in the [IEEE conference proceedings format](#)
- Submissions will be handled via [Easy Chair](#)

PUBLICATION

All accepted submissions will be included in the conference proceedings and published at CEUR Workshop Proceedings. A selection of high quality paper submissions will be invited for revision and publication in Journal Special Issues.

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