

CALL FOR PAPERS

ICCS'13: **Conceptual Structures for Knowledge Representation for STEM Research and Education**
10th - 12th January, Mumbai, India

The 20th International Conference on Conceptual Structures (ICCS 2013) is the latest in a series of annual conferences that have been held in Europe, Asia, Australia, and North America since 1993. The focus of these conferences has been the representation and analysis of conceptual knowledge for research and business applications. ICCS brings together researchers in information technology, arts, humanities and social science to explore novel ways that conceptual structures can be employed in information systems.

Arising originally out of the work of IBM in Conceptual Graphs, over the years ICCS has broadened its scope to include a wider range of theories and practices, among them Formal Concept Analysis, Description Logics, the Semantic Web, the Pragmatic Web, Ontologies, Multi-agent Systems, Concept Mapping, and more. Accordingly conceptual structures represent a family of approaches that builds on the successes of artificial intelligence, business intelligence, computational linguistics, conceptual modeling, information and web technologies, user modeling, and knowledge management.

ICCS 2013's theme is "**Conceptual Structures for Knowledge Representation for STEM Research and Education**". Science, technology, engineering and mathematics (STEM) have, in recent decades, emerged as lively new research areas. More and more data is being captured in these areas (particularly through the Web) and how to represent this data for useful research, searching and education is a real challenge. This data now represents our business, economic, arts, social, and scientific endeavors to such an extent that we require smart applications that can discover the hitherto hidden knowledge and how to represent that this mass of data. By bringing together the way computers work with the way humans think, conceptual structures align the productivity of computer processing with the ingenuity of individuals and organizations in addressing this highly mathematical data. The representation of this data can be used for both research area and for collecting data for improved teaching techniques in these areas.

Papers for ICCS 2013 are invited but are not limited to the following topics:

- * conceptual structures (theory, applications, and experience with case studies) for STEM data;
- * STEM data interplay with human or organizational experience and language, semantics and pragmatics;
- * concept analysis and contextual logic within STEM data;
- * capturing concepts through smart data and information processing;
- * modeling, representation, and visualization of concepts;
- * conceptual knowledge acquisition of STEM data; and
- * the theory and applications of formal ontologies for STEM data.

Comparisons of methods and representations on the basis of reasoning ability, expressiveness, ease of use, and computational performance are welcome. Integration of methodologies, user interfaces, semantic web technologies, business intelligence, multi-agent systems, knowledge use, reuse, and integration, and business productivity tools are all of high interest.

Authors are invited to submit papers describing both theoretical and practical research. Papers accepted or under review by other conferences or journals are not acceptable as submissions to ICCS. The language of the conference will be English.

Submission Details

Long papers are limited to 14 pages in Springer LNAI format. Short papers are limited to 6 pages in Springer LNAI format. We recommend the use of LaTeX2e for the final version. Visit <http://www.springer.de/comp/lncs> for more details. Papers can be submitted through the EasyChair submission system: <http://www.easychair.org/conferences/?conf=iccs2013>

Deadlines

- * **August 1, 2012:** a one page abstract submitted via conference website.
NB: Abstracts should clearly state the purpose, results and conclusions of the work to be described in the final paper.
- * **August 14, 2012:** full paper in PDF format submitted via the conference website.
- * **October 1, 2012:** notification of acceptance of papers.
- * **October 15, 2012:** camera ready copies.

Final acceptance will be based on the full-length paper, which if accepted, must be presented at the conference. Papers accepted for publication will appear in the Lecture Notes in Artificial Intelligence Series by Springer-Verlag (see <http://www.springeronline.com/lncs>), and the best papers will appear in a special issue of the [IJCSSA](#) journal after the conference. A precondition for publication is that the final version is in full compliance with Springer's format.

For the conference there will be a PhD paper competition. To enter the PhD competition, the first author on the paper must be a current PhD student and not directly connected with the conference (program committee, EB, etc.). To be selected as the best PhD paper, the PhD student must come present the paper at the conference. The winning student will get free registration and a cash price.

Conference Chairs

General Chair:

G. Nagarjuna
Homi Bhabha Centre for Science Education,
Tata Institute of Fundamental Research, India.
nagarjun@gnknowledge.org

Program Chairs:

Jonas Poelmans
Faculty of Business and Economics, KULeuven, Belgium
jonas.poelmans@econ.kuleuven.be

Heather D. Pfeiffer
Research Faculty, New Mexico State University, USA
hdp@cs.nmsu.edu

Workshop chair:

Dmitrii I. Ignatov
Higher School of Economics, Moscow, Russia
dmitrii.ignatov@gmail.com