

GUEST EDITORIAL PREFACE

Conceptual Structures: Tools and Applications

Simon Polovina (ICCS 2007 General Chair)

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The 15th International Conference on Conceptual Structures (ICCS 2007, www.iccs2007.info) was held at Sheffield Hallam University in the UK. ICCS (www.iccs.info) is a series of annual conferences that have been held in Europe, Australia, and North America since 1993. At ICCS 2007, some of the world's best minds in information technology, arts, humanities and social science converged to explore novel ways that information and communications technology (ICT) can augment human intelligence, the longstanding objective of research and development efforts dating back to the pioneers Vannevar Bush and Douglas Engelbart.

The objective driving research and development on "Conceptual Structures" is to harmonise the uniquely human ways of apprehending the world, with the power of

computational information management and reasoning. Arising originally out of John Sowa's work at IBM in Conceptual Graphs, and developed by learned researchers and business organisations such as Boeing and Microsoft, over the years ICCS has broadened its scope to include a wider range of theories and practices. Amongst these are 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 modelling, information and web technologies, user modelling, and knowledge management. Notably, Con-

ceptual Structures are a core component of the recent ISO Common Logic standard (ISO/IEC 24707:2007).

To bring the message of Conceptual Structures to a wider audience, ICCS 2007 hosted a number of workshops ranging across Software Interoperability, Trust and Security, Grid Computing, Bioinformatics, Rough Sets, Ubiquitous and Collaborative Computing, and Semantic Information Retrieval. The workshops would also have echoed elements from the International Conference on Organisational Semiotics (ICOS 2007, www.orgsem.org/2007.htm), which was co-located with ICCS 2007. The papers for the workshops were rigorously reviewed and published in single volume by Springer in 2007. The workshops were kindly sponsored by the European Union Information and Communication Technologies (EU-IST) MATCH and MOSAICA projects. The Industry Day was organised by Boeing Inc.

This special edition of the IJIT represents some of the very best papers from the workshops, and reflects the theme “Conceptual Structures: Tools and Applications in Intelligent Information Technologies” in accordance with IJIT’s own themes. The two papers by Tim French and Ray Hashimi et al. represent key contributions from academe, and there are two papers by industry authors Jeffrey Schiffel of Boeing, Inc. and Jane Mazzagatti of As It Is, Inc. The papers were rigorously reviewed using the same detailed process that is used by ICCS itself i.e. single blind review (where the reviewers are anonymous to the authors) and a second review by the special edition editors, under the overall control of the IJIT editor. Also included is a paper by two of the special edition editors (Simon Polovina and Richard Hill). This contribution was independently reviewed by external academic and industrial reviewers, again under the overall control of the IJIT editor.