

Preface

This volume contains the supplementary proceedings of ICCS 2008, the 16th International Conference on Conceptual Structures (ICCS). The focus of the ICCS conference is the representation and analysis of conceptual knowledge. ICCS brings together researchers to explore novel ways that conceptual structures can be used.

Conceptual Structures are motivated by C.S. Peirce's Existential Graphs and were popularized by J. F. Sowa in the 1980's. Over 16 years ICCS has increased its scope to include innovations from a range of theories and related Conceptual Structure practices, among them formal concept analysis and ontologies. Therefore, ICCS presents a family of Conceptual Structure approaches that build on techniques derived from artificial intelligence, knowledge representation, applied mathematics and lattice theory, computational linguistics, conceptual modeling, intelligent systems and knowledge management.

More than 70 papers were submitted to ICCS 2008 for peer review. All papers were assessed by at least three referees one of whom was an Editorial Board member who managed any necessary revisions. In 2008 ICCS adopted a two-tiered publication strategy. The top-ranked 19 papers were published in Springer's LNAI series, P.W. Eklund and O. Haemmerlé (Eds.): ICCS 2008, LNAI 5113, Springer-Verlag Berlin Heidelberg, 2008 . A further 19 papers are published in this supplementary proceedings and distributed as a hardcopy at the conference and as a soft copy on the Web at CEUR-WS.

To qualify to be published in this volume, all supplementary papers had to be recommended by a majority of its reviewers as well as satisfy the relevance, quality and scope criteria enforced by the conference chairs.

We wish to thank the Organizing Committee individually: Nathalie Hernandez, Cathy Comparot, Patrice Buche, Lydie Soler, Sophie Ebersold, Jean-Michel Inglebert, Véronique Debats, Rémi Cavallo, and collectively the Editorial Board and Program Committee members whose input underwrites the scientific quality of the ICCS proceedings.

July, 2008

*Peter Eklund
Olivier Haemmerlé*

Organization

ICCS Executive

General Chair	Ollivier Haemmerlé (Université Toulouse le Mirail)
Program Chair	Peter Eklund (University of Wollongong)
Local Chair	Nathalie Hernandez (Université Toulouse le Mirail)

ICCS Administrative

Finance	Cathy Comparot (Université Toulouse le Mirail)
Web site	Patrice Buche (INRA Met@risk – Paris) Lydie Soler (INRA Met@risk – Paris)
Network and Computers	Jean-Michel Inglebert (Université Toulouse le Mirail)
Logistics	Véronique Debats (IRIT – Toulouse)
Design	Rémi Cavallo (Paris)

ICCS Editorial Board

Galia Angelova (Bulgaria)
Frithjof Dau (Germany)
Aldo de Moor (Netherlands)
Harry Delugach (USA)
Bernhard Ganter (Germany)
Pascal Hitzler (Germany)
Mary Keeler (USA)
Sergei Kuznetsov (Russian Federation)
Guy Mineau (Canada)
Bernard Moulin (Canada)
Marie-Laure Mugnier (France)
Heather D. Pfeiffer (USA)
Simon Polovina (UK)
Uta Priss (UK)
Henrik Schärfe (Denmark)
John F. Sowa (USA)
Rudolf Wille (Germany)
Karl-Erich Wolff (Germany)
Peter Øhrstrøm (Denmark)

ICCS Program Committee

Radim Belohlavek (USA)
Tru Cao (Vietnam)
Dan Corbett (USA)
Madalina Croitoru (UK)
Juliette Dibie-Barthélemy (France)
Pavlin Dobrev (Bulgaria)
David Genest (France)
Udo Hebisch (Germany)
Joachim Hereth Correia (Germany)
Richard Hill (UK)
Adil Kabbaj (Morocco)
Yannis Kalfoglou (UK)
Markus Kroetzsch (Germany)
Leonhard Kwuida (Switzerland)
Sim Kim Lau (Australia)
Robert Levinson (USA)
Michel Liquière (France)
Philippe Martin (France)
Engelbert Mephu Nguifo (France)
Jorgen Fischer Nilsson (Denmark)
Sergei Obiedkov (Russian Federation)
John Old (UK)
Anne-Marie Rassinoux (Switzerland)
Gary Richmond (USA)
Sebastian Rudolph (Germany)
Eric Salvat (France)
Rallou Thomopoulos (France)
William Tepfenhart (USA)
Thomas Tilley (Thailand)
G.Q. Zhang (USA)

Additional Referees

Sebastian Bader	Michel Chein	Amanda Ryan
Peter Becker	Vincent Dubois	Bastian Wormuth
Patrice Buche	Maxime Morneau	

Table of Contents

Using Automatically Generated Students' Clickable Conceptual Models for E-tutoring	1
<i>I. Pascual-Nieto, D. Pérez-Marin, P. Rodríguez, and M. O'Donnell</i>	
Operational Specification for FCA using Z	9
<i>Simon Andrews and Simon Polovina</i>	
Ontology Mapping Using Fuzzy Conceptual Graphs and Rules	17
<i>Patrice Buch, Juliette Dibie-Barthélemy and Liliana Ibanescu</i>	
Conceptual Graphs with Relators and Roles A GFO Coined View onto CGs Relations	25
<i>Alexander Heußner</i>	
Incorporating Probabilistic Knowledge in HealthAgents: a Conceptual Graph Approach	33
<i>Madalina Croitoru, Srinandan Dasmahapatra and Paul Lewis</i>	
Using Concept Lattices as a Visual Assistance for Attribute Selection.....	41
<i>Jean Villerd, Sylvie Ranwez and Michel Crampes</i>	
Modelling a dynamic process in the conceptual graph model: extension needed?.....	49
<i>Jean-Rémi Bourguet, Bernard Cuq, Amadou Ndiaye, and Rallou Thomopoulos</i>	
Representing a Computer Science Research Organization on the ACM Computing Classification System.....	57
<i>Boris Mirkin, Susana Nascimento, and Luis Moniz Pereira</i>	
Spatial information fusion: Coping with uncertainty in conceptual structures	66
<i>Florence Dupin de Saint-Cyr, Robert Jeansoulin and Henri Prade</i>	
Semantic Annotation of Texts with RDF Graph Contexts	75
<i>H. Cherfi, O. Corby, C. Faron-Zucker, K. Khelif and M.T. Nguyen</i>	
On concept lattices and implication bases from reduced contexts	83
<i>Vaclav Snasel, Martin Polovincak, Hussam M. Dahwa, and Zdenek Horak</i>	
An FCA classification of durations of time for textual databases	91
<i>Ulrik Sandborg-Petersen</i>	
An Automated Conceptual Catalogue for the Enterprise	99
<i>Richard Hill and Simon Polovina</i>	

Towards a Conceptual Structure based on Type theory.	107
<i>Richard Dapoigny and Patrick Barlatier</i>	
A Contribution of a Multi-Viewpoints Semiotics to Knowledge Representation Issues.	115
<i>Daniel Galarreta</i>	
Semantic Networks to Support Learning	123
<i>Philippe A. Martin</i>	
ReCollection: a Disposal/Formal Requirement-Based Tool to Support Sustainable Collection Making	131
<i>Francis Rousseaux, Alain Bonardi and Benjamin Roadley</i>	
Finite State Automata and Simple Conceptual Graphs with Binary Conceptual Relations	139
<i>Galia Angelova and Stoyan Mihov</i>	
A Framework for Ontology Evaluation	149
<i>Muhammad Fahad and Muhammad Abdul Qadir</i>	
Information Fusion using Conceptual Graphs: a TV Programs Case Study	158
<i>Claire Laudy and Jean-Gabriel Ganascia</i>	

Using Automatically Generated Students' Clickable Conceptual Models for E-tutoring

I. Pascual-Nieto, D. Pérez-Marin, P. Rodríguez, and M. O'Donnell

No Institute Given

Operational Specification for FCA using Z

Simon Andrews and Simon Polovina

No Institute Given

Ontology Mapping Using Fuzzy Conceptual Graphs and Rules

Patrice Buch, Juliette Dizie-Barthélemy and Liliana Ibanescu

No Institute Given

Conceptual Graphs with Relators and Roles A GFO Coined View onto CGs Relations

Alexander Heußner

No Institute Given

Incorporating Probabilistic Knowledge in HealthAgents: a Conceptual Graph Approach

Madalina Croitoru, Srinandan Dasmahapatra and Paul Lewis

No Institute Given

Using Concept Lattices as a Visual Assistance for Attribute Selection

Jean Villerd, Sylvie Ranwez and Michel Crampes

No Institute Given

Modelling a dynamic process in the conceptual graph model: extension needed?

Jean-Rémi Bourguet, Bernard Cuq, Amadou Ndiaye, and Rallou Thomopoulos

No Institute Given

Representing a Computer Science Research Organization on the ACM Computing Classification System

Boris Mirkin, Susana Nascimento, and Luis Moniz Pereira

No Institute Given

Spatial information fusion: Coping with uncertainty in conceptual structures

Florence Dupin de Saint-Cyr, Robert Jeansoulin and Henri Prade

No Institute Given

Semantic Annotation of Texts with RDF Graph Contexts

H. Cherfi, O. Corby, C. Faron-Zucker, K. Khelif and M.T. Nguyen

No Institute Given

On concept lattices and implication bases from reduced contexts

Vaclav Snasel, Martin Polovincak, Hussam M. Dahwa, and Zdenek Horak

No Institute Given

An FCA classification of durations of time for textual databases

Ulrik Sandborg-Petersen

No Institute Given

An Automated Conceptual Catalogue for the Enterprise

Richard Hill and Simon Polovina

No Institute Given

Towards a Conceptual Structure based on Type theory.

Richard Dapoigny and Patrick Barlatier

No Institute Given

A Contribution of a Multi-Viewpoints Semiotics to Knowledge Representation Issues

Daniel Galarreta

No Institute Given

Semantic Networks to Support Learning

Philippe A. Martin

No Institute Given

**ReCollection: a Disposal/Formal
Requirement-Based Tool to Support Sustainable
Collection Making**

Francis Rousseaux, Alain Bonardi and Benjamin Roadley

No Institute Given

Finite State Automata and Simple Conceptual Graphs with Binary Conceptual Relations

Galia Angelova and Stoyan Mihov

No Institute Given

A Framework for Ontology Evaluation

Muhammad Fahad and Muhammad Abdul Qadir

No Institute Given

Information Fusion using Conceptual Graphs: a TV Programs Case Study

Claire Laudy and Jean-Gabriel Ganascia

No Institute Given