Preface: computational intelligence on digital information management

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Biographical notes: Richard Chbeir is currently an Associate Professor in the Computer Science Department of the Bourgogne University, Dijon-France. His research interests are in the areas of distributed multimedia database management, object-oriented information systems, spatio-temporal applications, indexing methods, security and watermarking Bioinformatics and the development and the integration of information systems. He has published international journals and books (IEEE Transactions on SMC, Journal of Methods of Information in medicine, JDIM, etc.) conferences (ACM SAC, Visual, IEEE CIT, FLAIRS, PDCS, etc.), and has served on the programme committees of several international conferences (IEEE SITIS, ACM SAC, IEEE ISSPIT, EuroPar, etc.). He is currently the Chair of the French Chapter ACM SIGAPP.

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1 Editorial preface

Nowadays, most of the society activities and business models are driven by the unprecedented evolution of data acquisition technologies together with advances in computing and communications. This has resulted in an explosive growth in the number, size, diversity of potentially useful digital information sources of various types (image, audio, video, et.) in several application domains, such as bioinformatics, education, environment, security, etc., and leads us towards a *digital society*. However, the massive size, semantic heterogeneity, autonomy, and distributed nature of the digital multimedia repositories present significant hurdles in acquiring useful knowledge from the available data. Naturally, issues on how to capture, store, preserve, interpret, monitor, control, deliver and manage the massive available data sources and systems become crucial and require various improvements and major modifications of the current tools to be provided to the end-user. Currently, there is notable number of research work on designing and deploying information and organisational management systems, experts systems, tutoring systems, decision support systems and in general, industrial systems.

This Special Issue attempts to addresses these issues and includes extended and revised papers from the IEEE International Conference on Digital Information Management (ICDIM) held in Bangalore-India in 2006. ICDIM aims to bring people from academia, research laboratories and industry and offer a collaborative platform to address the emerging issues of the digital society and solutions in information science and technology.

After a very tight review process, the 5 following papers out of 80 papers presented at IEEE ICDIM'06 have been selected for this special issue:

- Improving interaction responsiveness of multimedia presentations by H. Alustwani, J.M. Bahi and A. Mostefaoui.

- Multishape-feature and text-feature integration on 3D model similarity retrieval by Saiful Akbar, Josef Küng, Roland Wagner.

- A bottom-up algorithm for query decomposition by Le Thi Thu Thuy, Doan Dai Duong Virendrakumar C. Bhavsar and Harold Boley.

- Improving web information indexing and retrieval based on centre block duplication detection by Tyrone Cadenhead, Jinlin Chen and Terry Cook.

- A comprehensive data quality methodology for web and structured data by C. Batini, F. Cabitza, C. Cappiello and C. Francalanci.

We hope this Special Issue motivates, researchers to take the next step beyond building models to implementing, evaluating, comparing and extend proposed approaches. Many people worked long and hard to help this issue become a reality. Firstly, we would like to gratefully acknowledge and sincerely thank all the reviewers for their timely and insightful valuable comments and criticism of the manuscripts that greatly improved the quality of the final versions. Of course, thanks are due to the authors, who provided excellent papers and timely extended revisions. Finally, we are grateful to the Editor-in-chief of *IJICA* for the trust in us, their efforts, patience and painstaking editorial work during the production of this Special Issue.

2   Participated reviewers

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