

Special section on “data analysis and accessibility using computer science”

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1 Introduction

This special section has the goal to discuss the academic research and practical findings on all aspects of data analysis using computer science processes universally. It provides a global forum for the investigation and reporting of diverse issues that affect data analysis: the role, scope, and impact on decision-making and strategies of organizations and in society.

It includes the main aspects of the data analysis, as organizational issues, technological developments, educational issues, and analytical techniques that foster or inhibit evidence-based decision-making in organizations and in society and the papers present original research contributions, case studies and demonstrations with original scientific results, methodological aspects, concepts and approaches in the multidisciplinary field of data analysis using computer science.

The thematic scope of this special section includes scientific issues relating to the data analysis organization and implementation, or to the utility and usability of novel input/output computer systems, provided that contributes to new knowledge for universal access.

Specifically the special section contributes for (a) technological developments: mobile technology, virtual environments, augmented reality, assistive technology, computer vision, image processing, automation and

robotics, architectures and other tools for universal data analysis and access, social networking, accessible media, cloud computing for deployment, scalability to big data analysis and universal access, innovative techniques to support big data analysis, identification of technological barriers to access and data analysis that are not addressed by existing research; (b) apps for data analysis in organizations: multi-platform facilities universally accessible, organizational and technological issues for data analysis, technological developments and analytical techniques for data analysis in order to facilitate decision-making; (c) universal e-education: mobile learning, eLearning, social media in education, new learning models; and case studies: empirical studies and data analysis and data access for all citizens, methodologies for data analysis accessibility, universal data accessibility guidelines, best practice, evaluation techniques and tools, perceptions of data analysis efficiency to end user for decision-making and scenarios conception.

2 Development of the special section

In this special section, we showcase extended versions of a series of selected papers previously presented at The 2015 World Conference on Information Systems and Technologies (WorldCIST'15) held at Ponta Delgada, Azores, Portugal, between the 1st and 3rd of April 2015. The special section is focused on research work to enhance data analysis in the context of universal access and accessibility and was also open to other authors who submitted thematically related contributions.

The event represents the third global conference for researchers and practitioners to present and discuss recent results and innovations, current trends, professional

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experiences and challenges of modern Information Systems and Technology research, technological innovations, developments and applications. All WorldCIST'15 conference papers had undergone a “blind review” process by at least two members of the Program Committee. After further reviews, a set of ten high-quality papers were selected, copyedited, and finally released in this special section.

3 Papers in the special section

A summary of the aims of these papers is provided in the following.

The paper “Creating Virtual Exhibition Rooms from Emigration Digital Archives” [1] discusses the creation of Virtual Exhibition Rooms (VER) from ontological descriptions of the Emigration Digital Archives. They present the data retrieved from documents and stored in a digital repository, and then they propose the use of the CIDOC conceptual reference model (CIDOC-CRM) ontology. The authors of the article “The Electronic Record in the school-family relationship: Perceptions of Teachers and Guardians” [2] studied a new form of communication between the school and the family, through an Electronic Record (ER), using a questionnaire to analyse the perceptions of teachers and guardians towards the adoption of an ER. In the article “A comparison of research data management platforms: Architecture, flexible metadata and interoperability” [3] made an overview of current platforms that can be used for data management purposes and which was designed for institutional repositories and digital libraries. The authors of “Using NVivo to Assess a Program of Goal Corrected Empathic Attunement Skills: A Case Study in the Context of Higher Education” [4] focuses on the use of NVivo10 in the process of assessing a developmental program in Goal Corrected Empathic. In “Comparative Study on Skills Needed by Organizations and effectively developed in eLearning Management Courses” Sousa and González-Loureiro [5] investigates the skills developed in higher education management courses through an eLearning platform. The article “Methodology for Data and Information Quality Assessment in the Context of Emergency Situation Awareness” [6] presents a new methodology to improve the capabilities of Situation Assessment system by enriching knowledge about situations with reliable metadata, to provide powerful resources to support decision-makers in emergency response systems. In “Meta-model of Information Visualization Based on Treemap” [7] describes an information visualization classification approach based on Treemap, in order to identify the best information visualization model for a given problem. The

authors propose a meta-model based on Treemap visualization methods and present a case study with the information contained in the periodic table visualization meta-model. Finally, the author of the article “Patent Information Visualization: The Use of Social Media for its Selective Dissemination and to Leverage Innovation” [8] describes the project for the development and implementation of a theoretical support model for the creation of an information system that will allow the dissemination and visualization of scientific and technical information contained in patent documents.

As the special section editors, we would like to take this opportunity to thank the various authors for their papers and the reviewers for their comments and suggestions.

We are also grateful to Constantine Stephanidis, UAIS Editor-in-Chief, for his support and encouragement throughout the editorial process. Finally, we also would like to thank the support of The Iberian Association for Information Systems and Technologies (AISTI) for this special section to be a reality.

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4 List of the reviewers

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