

## EDITORIAL

The IADIS International Journal on Computer Science and Information Systems (IJCSIS) is a peer-reviewed scientific journal published exclusively in an electronic format. Its mission is to publish original contributions pertaining to the topics of Information Systems and their uses, to disseminate knowledge amongst its readers and to be a reference publication. The IADIS IJCSIS publishes original research papers and review papers, as well as auxiliary material such as short ongoing research papers, case studies, conference reports, management reports, book reviews and commentaries.

The Volume 16, Issue 2 (ISSN: 1646-3692) combines six selected original papers that bring together researchers covering the wide spectrum of the area of Computer Science and Information Systems in different contexts. The authors' contributions embrace significant research topics and intend to provide a current depiction of the research in the field while opening way to future research.

The first paper in this issue by Celmar Guimarães da Silva entitled "REVEALING BAND AND CIRCUMPLEX PATTERNS IN REORDERABLE MATRICES USING POLAR SORT AND FAST MULTIDIMENSIONAL PROJECTIONS" proposes a new version of the Polar Sort algorithm. The author exchanges Classical MDS with FastMap, a method with asymptotic time complexity  $O(n)$ . The new algorithm (Polar Sort with Fastmap) rearranges rows and columns according to their bidimensional projections and uses a barycenter-based ordering identical to Polar Sort's approach.

The second paper by Damiano Oriti, Andrea Sanna, Francesco De Pace, Federico Manuri, Francesco Tamburello and Fabrizio Ronzino entitled "3D SCENE RECONSTRUCTION SYSTEM BASED ON A MOBILE DEVICE" presents a "reconstruction system that allows users to receive a 3D CAD model starting from a single image of the object to be digitalized and reconstructed". The system's precision and robustness was evaluated and the key results show how the proposed solution has a comparable accuracy (chamfer distance) with the state-of-the-art methods for 3D object reconstruction.

The third contribution by Douglas Omwenga Nyabuga and Guohua Liu named "SPECTRAL-SPATIAL CLASSIFICATION OF HYPERSPECTRAL DATA USING 3D-2D CONVOLUTIONAL NEURAL NETWORK AND INCEPTION NETWORK" proposes a spectral-spatial classification of hyperspectral data using a 3D-2D convolutional neural network and inception network. The authors state that the presented framework, which includes PCA and successive 3D-2D spectral-spatial convolutional layers with an inception network layer, has addressed the decreasing accuracy issue.

The fourth paper by Evan Bryer, Theppatorn Rhujittawiwat, John R. Rose and Colin F. Wilder with the title "IMPROVEMENT OF CLUSTERING ALGORITHMS BY IMPLEMENTATION OF SPELLING BASED RANKING", aims to adjust an existing clustering algorithm with the use of the Hunspell spell checker to specialize it for the use of

cleaning early modern European book title data. By implementing the Hunspell library into the best performing clustering algorithm the authors examined, they were able to substantially improve it over its base form for the purposes of text data cleaning.

The fifth paper by Hanna Koskinen, Susanna Aromaa and Vladimir Goriachev entitled “HUMAN FACTORS ENGINEERING PROGRAM DEVELOPMENT AND USER INVOLVEMENT IN DESIGN OF AUTOMATIC TRAM” presents a human factors engineering (HFE) program for automated trams including iterative evaluation of future solution that have been developed for the SmartTram project in order to acknowledge appropriately the human and social aspect in the design of the automatic tram.

The sixth paper entitled “DESIGN AND PROTOTYPING OF WEB-BASED SUPPORT FOR SHIP-HANDLING SYSTEM VIA MOBILE WIRELESS COMMUNICATION” by Tsuyoshi Miyashita, Ryota Imai, Masaki Kondo and Tadasuke Furuya focuses on a prototype developed by the authors to provide ship operators on board with manoeuvring assistance from shore to solve the potential problems. The prototype was developed by using wireless and mobile communication, VPN, and web browser and was tested in a real environment.

These papers illustrate the different facets of research done on different contexts of Computer Science and Information Systems. The review of the relevant literature contributes to the theoretical grounding of these areas and the innovative empirical research on different technologies creates opportunity for the development of innovative findings.

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