

EDITORIAL

The IADIS International Journal on Computer Science and Information Systems (IJCSIS) is a peer-reviewed scientific journal published exclusively in an electronic form. 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 12, Issue 2 (ISSN: 1646-3692) combines ten selected original papers that bring together researchers covering the wide spectrum of the area of Computer Science and Information Systems in different contexts, such as, Applied Computing, Information Systems, Sustainability, etc. 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 Amira Dhokar, Lobna Hlaoua and Lotfi Ben Romdhane entitled "CLIQUES DETECTION vs MAXIMUM SPANNING TREE FOR TWEET CONTEXTUALIZATION" based on the popularity of Social Media, propose a new approach of "Tweet Contextualization based on combining automatic summarization techniques and sentence aggregation". The focus of the proposed method is to decide on relevant, informative and semantically related sentences that best portray themes expressed by the tweet, and then build a concise context.

The second contribution by Sujay Muramalla, Ragaad AITarawneh, Shah Rukh Humayoun, Ricarda Moses, Sven Panis and Achim Ebert named "RADIAL VS. RECTANGULAR: EVALUATING VISUALIZATION LAYOUT IMPACT ON USER TASK PERFORMANCE OF HIERARCHICAL DATA" focus on the impact of layout on user task performance. The authors performed user evaluation studies on two selected space-filling visualization layouts (the Sunburst lay and the Icicle layout) to measure user task performance while interacting with a hierarchical data structure in terms of accuracy and efficiency.

The third paper, by Hanene Rouabeh, Chokri Abdelmoula and Mohamed Masmoudi, with the title "VHDL DESIGN FOR A SPEED LIMIT SIGN SEGMENTATION ALGORITHM", brings us to the importance of colour segmentation on the field of image processing. The authors present a red colour segmentation algorithm, which was developed to provide an accurate road sign segmentation approach using color information. According to the authors "the developed approach is specially designed to segment road signs with red borders in order to be used as a detection stage".

The fourth paper by Hardy Pundt entitled "INTEGRATION OF CONTEXT-INFORMATION TO SUPPORT SPATIAL DECISION SYSTEMS" reports on the necessity of improving spatial decision making through fostering a holistic approach. The ultimate purpose is to make SDSS (Spatial decision support systems) context-aware to reduce the danger of producing wrong decisions.

The fifth paper, by Oksana Arnold, Sebastian Drefahl, Jun Fujima, Klaus P. Jantke and Christoph Vogler, titled "DYNAMIC IDENTIFICATION BY ENUMERATION FOR CO-OPERATIVE KNOWLEDGE DISCOVERY" presents the transformation of a tool for data analysis into an intelligent adaptive assistant. This transformation is based on the management of concepts, methods, and technologies from disciplines such as meme media technology, natural language processing, and theory of mind modelling and induction.

The sixth work with the title "EVALUATION OF TYPE-1 HYPERVISORS ON DESKTOP-CLASS VIRTUALIZATION HOSTS" authored by Duarte Pousa and José Rufino focuses on the concept that System virtualization has become a essential IT tool. In this paper, the authors present the results of a study performed on commodity virtualization servers, aiming to evaluate the performance of a representative set of the type-1 virtualization platforms mainly in use nowadays: VMware ESXi, Citrix XenServer, Microsoft Hyper-V, oVirt and Proxmox.

The seventh contribution entitled “MINING DIATOM ALGAE FOSSIL DATA for DISCOVERING PAST LAKE SALINITY” written by Ray R. Hashemi, Azita A. Bahrami, Jeffrey A. Young, Nicholas R. Tyler and Jay Y. S. Hodgson reports on the need to fully understand the causes of climate changes. In this research, the authors used the diatom algae fossils obtained from the bottom of an inland lake to determine the historical climate changes around the lake and by extension the historical salinity of the water. The finding of the historical quantified salinity of inland lakes is particularly important to comprehend climate change, carbon dioxide levels, and global warming.

The eighth paper by Samuel Mann entitled “A TRANSFORMATION MINDSET FOR COMPUTING EDUCATION FOR SUSTAINABILITY” examines the notion of Computing Education for Sustainability (CEfS). The author concludes that CEfS is not having adequate impact in terms of a contribution at scale to system change actions resulting in a recuperative socio-ecological transformation. Therefore, the author describes a transformation mindset that can provide a new lens for improving the role of CEfS.

The ninth contribution by Reza Kiani Mavi and Craig Standing called “ECO-INNOVATION ANALYSIS WITH DEA: AN APPLICATION TO OECD COUNTRIES” focuses on the importance of Government regulations require businesses improving their processes and products/services in a green and sustainable manner. Consequently, the authors assess the eco-innovation performance of Organisation for Economic Co-operation and Development (OECD) countries with data envelopment analysis (DEA).

The last work authored by Pavel Tarasov and Hitesh Tewari with the title “THE FUTURE OF E-VOTING” presents a protocol developed on blockchain technology that can be used for electronic voting. The proposed protocol offers anonymity of voter transactions, while keeping the transactions private, and the election transparent and protected. Accordingly, to the authors, the applications for the proposed protocol are not limited to government elections only. These can also be used to opinion polls or corporate elections providing a unified platform for voting regardless of the cost or circumstance.

These papers illustrate the different facets of research done on different contexts of Information systems. Furthermore, how information systems can improve all aspects of society and contribute with the work they have developed to the improvement of daily life. 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.

The Editors

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