

## 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 Applied Computer Science, Information Systems and their Applications, 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.

This volume (ISSN: 1646-3692) combines 11 selected original papers that bring together researchers covering the wide spectrum of Computer Graphics, Visualization, Computer Vision and Image Processing, Theory and Practice in Modern Computing, Intelligent Systems and Agents and Data Mining and their applications. 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 work.

The first paper in this issue by Irfan Riaz, Jingchun Piao and Hyunchul Shin titled HUMAN DETECTION BY USING CENTRIST FEATURES FOR THERMAL IMAGES focuses on human detection in a thermal image. The paper presents a fresh human detection scheme for thermal images by using CENsus TRansform hISTogram (CENTRIST) features and Support Vector Machines (SVMs). The authors' purpose is to implement "an appropriate feature descriptor which will be a part of our efficient human detection system."

The second paper by Martin Steiger, Thorsten May and Jörn Kohlhammer, STABLE INCREMENTAL LAYOUTS FOR DYNAMIC GRAPH VISUALIZATIONS presents contributions that enhance the quality of incremental layout algorithms. The authors express a set of extension techniques to stabilize interactive dynamic graph layout algorithms.

The third contribution by Diana Fernández Prieto, Dirk Zeckzer and José Tiberio Hernández entitled UCIV 4 PLANNING: A USER-CENTERED APPROACH FOR THE DESIGN OF INTERACTIVE VISUALIZATIONS TO SUPPORT URBAN AND REGIONAL PLANNING underlines the focus on decision making in the context of urban and regional planning. The paper presents the UCIV 4 Planning Approach to conduct the design of interactive visualizations to sustain planning processes. This approach recommends a set of activities that can assist in the collection of important information about the stakeholders and their analysis tasks.

The fourth paper by Daw-Tung Lin and Yen-Hsiang Chang entitled OCCLUSION HANDLING FOR PEDESTRIAN TRACKING USING PARTIAL OBJECT TEMPLATE-BASED COMPONENT PARTICLE FILTER addresses the importance of pedestrian tracking in security and intelligent video surveillance. As a result, this study presents a novel technique of tracking multiple people in occlusion conditions. The authors developed a "combined component-based human-shaped template and a particle filter, resulting in improved object occlusion handling". This system is able to track specific people in real-time, as well as handling the occlusion of multiple objects.

The fifth paper, by Bernard Ijesunor Akhigbe, Olubukola Daniel Adekola, Babajide Samuel Afolabi and Emmanuel Rotimi Adagunodo, titled TOWARDS THE USE OF FACTOR ANALYSIS FOR USER-CENTRIC EVALUATIVE RESEARCH IN INFORMATION SYSTEM introduces the potentials of factor analysis. Consequently, the authors present a step by step algorithmic like approach, in order to emphasize

the use of the FA (factor analysis) method considering its value for data reduction in user-centric evaluative research in Information Systems.

The sixth contribution by Martin Lukac, Michitaka Kameyama and Yoshichika Fujioka VLSI PLATFORM FOR REAL-WORLD INTELLIGENT INTEGRATED SYSTEMS BASED ON ALGORITHM SELECTION focuses on a VLSI platform for the Algorithm Selection based Universal robotic Platform. In the authors' words the paper "describe a platform that combines the algorithm selection approach to image processing with a parallel architecture using the packet control transfer scheme and the configuration memory size reduction".

The seventh paper by Amine Chohra, Arash Bahrammirzaee and Kurosh Madani named THE IMPACT OF IRRATIONALITY ON NEGOTIATION STRATEGIES WITH INCOMPLETE INFORMATION highlights the complex problem that is decision-making in negotiation with incomplete information. This work addresses the social and cognitive negotiation behaviors for autonomous agents with incomplete information, with the purpose to discover a suitable negotiation strategy in one to one negotiation.

The eighth work, entitled EMOTIVE ONTOLOGY: EXTRACTING FINE-GRAINED EMOTIONS FROM TERSE, INFORMAL MESSAGES by Martin D. Sykora, Thomas W. Jackson, Ann O'Brien and Suzanne Elayan has the purpose of developing an approach for capturing an extensive and comprehensive array of emotions from scarce, text based messages in social-media networks (in this case Twitter), in order to facilitate supervise emotional responses to events. The authors utilize an ontology engineering approach to the problem of thorough emotion detection in sparse messages.

The ninth paper, EFFECT OF SOME POWER SPECTRAL DENSITY ESTIMATION METHODS ON AUTOMATIC SLEEP STAGE SCORING USING ARTIFICIAL NEURAL NETWORKS authored by Cuneyt Yucelbas, Seral Ozsen, Salih Gunes and Sebnem Yosunkaya explores the notion that sleep staging has a vital role in diagnosing sleep disorders. Thus, in this study, EEG, EMG and EOG signals of four participants were obtained to use in sleep staging. 20 diverse "features were extracted from the power spectral density (PSD) estimations of EEG, EOG and EMG data of four subjects".

The tenth paper, INTELLIGENT SYSTEM OF COMMUNICATION SECURITY INVESTIGATION, authored by Henryk Piech examines communication security aspects in an audited protocol operation run. Here accordingly to the author, with the proposed approach it is possible "to realize communication operation auditing and dynamically estimate the full spectrum of security aspects".

The final paper by Zehra Kavasoğlu and Şule Gündüz Öğüdücü titled PERSONALIZED SUMMARIZATION OF CUSTOMER REVIEWS BASED ON USER'S BROWSING HISTORY recommend a "novel feature based approach for personalized review summarization by giving importance to potential individual customer preferences." The authors assessed their approach through a dataset which was collected from a popular Turkish e-commerce web site.

These papers illustrate the different facets of research done on Computer Graphics, Visualization, Computer Vision and Image Processing, Theory and Practice in Modern Computing, Intelligent Systems and Agents and Data Mining s and their Applications and contribute with the work they have developed to the enrichment of this field. 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

Pedro Isaías  
Open University, Portugal

Marcin Paprzycki  
SWPS, Poland