

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 (Volume 9, Issue 2 - ISSN: 1646-3692) combines 11 selected original papers that bring together researchers covering the wide spectrum of Theory and Practice in Modern Computing, Intelligent Systems and Agents, Data Mining, e-Health, ICT, Society and Human Beings, Information Systems and Information Systems Post-implementation and Change Management 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 Luís Santos, Christophoros Christophorou, Eleni Christodoulou, George Samaras and Jorge Dias titled DEVELOPMENT STRATEGY OF AN ARCHITECTURE FOR E-HEALTH PERSONALISED SERVICE ROBOTS focuses on a service development strategy for a mobile social robot. The paper presents a service robot design based on the principles of a Service-Oriented Architecture (SOA), whose modularity design maximizes the advantages of multidisciplinary contributions from researchers of different areas. The key purpose of this research is the constant proactive provision of personalized support to elderly people, towards improving their quality of life and independence.

The second paper, by Vesna Kirandziska and Nevena Ackovska, entitled A CONCEPT FOR BUILDING MORE HUMANLIKE SOCIAL ROBOTS AND THEIR ETHICAL CONSEQUENCE reports on the demands that occur in the human – robot interaction. The authors' purpose is to create social robots, in particular to develop more human-like empathic robots. Therefore, in order to better understand how human recognize other human's emotions a study about human-human emotion perception was done. Accordingly, to the authors the results "showed that humans are not so precise in perceiving other human's emotions. This result brought the idea of a new concept for making social emotion aware robots."

The third contribution by Alexander Streicher, Daniel Szentes and Wolfgang Roller with the title SCENARIO ASSISTANT FOR COMPLEX SYSTEM CONFIGURATIONS reflects on their concept and implementation of a mobile scenario assistant, which facilitates the automatic configuration of complex systems for demonstration scenarios. The authors present the features of a mobile assistance and e-learning system called Scenario Assistant (SCENAS), which conceals the difficulty of the underlying configuration of a complex, heterogeneous system for image exploitation. As a result, the addition of this work is the concept and implementation details of the mobile, distributed scenario assistant SCENAS.

The fourth paper by Umair Azfar Khan and Yoshihiro Okada entitled EMOTIONAL DECISION MAKING RESPONSE OF NON-PLAYABLE CHARACTERS IN A ROLE-PLAYING GAMEFILTER focuses on the concept of Role-Playing Games (RPGs). The authors suggest a system where every character has some specific purposes and to accomplish those purposes the characters prepare a plan and act on it according to its defined ethical orientation. After the plan is created, there is a chance that the character might perform emotionally to that plan based on its orientation. Therefore, the user gets a dynamic system where every character has the possibility of making changes, which is governed by the mental makeup of the characters.

The fifth paper, by Joachim Staib, Marcel Spehr and Stefan Gumhold, titled USER ASSISTED EXPLORATION AND SAMPLING OF THE SOLUTION SET OF NON-NEGATIVE MATRIX FACTORIZATIONS reflects on the notion that non-negative matrix factorization (NMF) gives an important

tool for the analysis of positive data. The authors present a new approach that is based on sampling a set of valid factorizations by proposing an algorithm that can aid greatly the enhancing usefulness of NMF.

In the sixth contribution by Isabel Maria Lopes and Filipe de Sá-Soares called INSTITUTIONALIZATION OF INFORMATION SYSTEMS SECURITY POLICIES ADOPTION: FACTORS AND GUIDELINES it is identified the factors that can condition the adoption of information systems security policies by entities. Empirically, this research involved interviewing the officials in charge of information systems in 44 Town Councils in Portugal. Consequently, this paper identified new guidelines, which are believed to improve the institutionalization of ISS policies in the organizational area of Local Government in Portugal.

The seventh paper by Richard Monette and Anthony Whitehead named PARTICLE-BASED PARTICIPATING MEDIA RENDERING USING DENSITY OCTREES presents “a novel technique for computing volumetric single scattering lighting solutions for particle-based inhomogeneous participating media data sets.” The authors try to “calculate volumetric lighting solutions for particle-based data sets as such data sets have the advantage of being spatially unbounded and relatively unrestricted with regard to memory as compared to uniform grids.” It is concluded that the rendering system is capable to reach high quality output in an efficient and time competitive manner as compared to the current industry standard particle-rendering tool.

The eighth work, entitled AUTONOMOUS ACQUISITION OF NATURAL SITUATED COMMUNICATION by Kristinn R. Thórisson, Eric Nivel, Bas R. Steunebrink, Helgi P. Helgason, Giovanni Pezzulo, Ricardo Sanz, Jürgen Schmidhuber, Haris Dindo, Manuel Rodriguez, Antonio Chella, Gudberg K. Jonsson, Dimitri Ognibene and Carlos Hernandez describes the challenge of proposing a method for observation-based machine learning of natural language and communication. The framework here presented can learn intricate communicative skills with minimal up-front knowledge.

The ninth paper, CONNECTIVITY, SIMPLIFICATION, AND PERFORMANCE MEASUREMENT: GUIDELINES FOR BUSINESS PROCESS STRATEGISTS IN RE-ENGINEERING PROJECTS authored by Matthias Lederer and Sebastian Huber explores the notion of a new modeling approach proposed by the authors that associates business objectives with flow objects of business processes in a combined Strategy Process Matrix. This approach contributes to “aligning business processes with corporate strategy by first modeling the Strategy Process Matrix and then by redrawing workflows according to the optimization rules on the basis of graphical diagrams.”

The tenth paper, MISALIGNMENT SYMPTOM ANALYSIS BASED ON ENTERPRISE ARCHITECTURE MODEL ASSESSMENT, authored by Dóra Óri explores the idea that business-IT alignment and misalignment are seen as duality-like concepts concerning the harmony or disharmony between business and IT. The paper focuses on the misalignment assessment, by introducing the primary building blocks of architecture-based misalignment analysis

The final paper by Andreas Hufgard and Johannes Schulz titled USER ACTIVITIES IN BUSINESS PROCESSES - A SYSTEM-BASED ANALYSIS OF SPECIALIST USERS draws attention on “on system data (a pool encompassing activities of 253,000 users) to answer practical and theoretical questions about activities performed by users in ERP systems.” And also identifies three central issues with relation to scope and types of user activities

These papers illustrate the different facets of research done on Theory and Practice in Modern Computing, Intelligent Systems and Agents, Data Mining, e-Health, ICT, Society and Human Beings, Information Systems and Information Systems Post-implementation and Change Management and their applications in our society 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.

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