

Editor's Note

The International Journal of Interactive Multimedia and Artificial Intelligence provides an interdisciplinary forum in which scientists and professionals can share their research results and report new advances on Artificial Intelligence and Interactive Multimedia techniques.

The research works presented in this issue are based on various topics of interest, among which are included: DSL, Machine Learning, Information hiding, Steganography, SMA, RTECTL, SMT-based bounded model checking, STS, Spatial sound, X3D, X3DOM, Web Audio API, Web3D, Real-time, Realistic 3D, 3D Audio, Apache Wave, API, Collaborative, Pedestrian Inertial, Navigation System, Indoor Location, Learning Algorithms, Information Fusion, Agile development, Scrum, Cross Functional Teams, Knowledge Transfer, Technological Innovation, Technology Transfer, Social Networks Analysis, Project Management, Links in Social Networks, Rights of Knowledge Sharing and Web 2.0.

García-Díaz, V. Et al. [1] talks about build the first step towards a language and a development environment independent of the underlying technologies, allowing developers to design solutions to solve machine learning-based problems in a simple and fast way, automatically generating code for other technologies. That can be considered a transparent bridge among current technologies. They rely on Model-Driven Engineering approach, focusing on the creation of models to abstract the definition of artifacts from the underlying technologies.

Al-asadi, T.A. Et al. [2] presents a new approach for hiding the secret image inside another image file, depending on the signature of coefficients. The proposed system consists of two general stages. The first one is the hiding stage which consist of the following steps. The second stage is extraction stage which consist of the following steps.

Mahmoud, M. A. Et al. [3] writes about an automated multi-agent negotiation framework for decision making in the construction domain. It enables software agents to conduct negotiations and autonomously make decisions. The proposed framework consists of two types of components, internal and external. Internal components are integrated into the agent architecture while the external components are blended within the environment to facilitate the negotiation process. They also discuss the decision making process flow in such system. They finally present the proposed architecture that enables software agents to conduct automated negotiation in the construction domain.

Zbrzezny, A.M. Et al. [4] talks about an SMT-based bounded model checking (BMC) method for Simply-Timed Systems (STSs) and for the existential fragment of the Real-time Computation Tree Logic. They implemented the SMT-based BMC algorithm and compared it with the SAT-based BMC method for the same systems and the same property language on several benchmarks for STSs. For the SAT-based BMC we used the PicoSAT solver and for the SMT-based BMC we used the Z3 solver. The experimental results show that the SMT-based BMC performs quite well and is, in fact, sometimes significantly faster than the tested SAT-based BMC.e agent interaction.

Stamoulias, A. Et al. [5] presents a novel method for the introduction of spatial sound components in the X3DOM framework, based on X3D specification and Web Audio API. The proposed method incorporates the introduction of enhanced sound nodes for X3DOM which are derived by the implementation of the X3D standard components, enriched with accessional features of Web Audio API. Moreover, several examples-scenarios developed for the evaluation of our approach. The implemented examples established the achievability of new registered nodes in X3DOM, for spatial sound characteristics in

Web3D virtual worlds.

Ojanguren-Menendez, P. Et al. [6] talk about the real-time collaboration which is being offered by multiple libraries and APIs (Google Drive Real-time API, Microsoft Real-Time Communications API, TogetherJS, ShareJS), rapidly becoming a mainstream option for web-services developers. However, they are offered as centralized services running in a single server, regardless if they are free/open source or proprietary software. After re-engineering Apache Wave (former Google Wave), we can now provide the first decentralized and federated free/open source alternative. The new API presented allows to develop new real-time collaborative web applications in both JavaScript and Java environments

Anacleto, R. Et al. [7] shows a pedestrian inertial navigation system that is typically used to suppress the Global Navigation Satellite System limitation to track persons in indoor or in dense environments. They propose a system that uses two inertial measurement units spread in person's body, which measurements are aggregated using learning algorithms that learn the gait behaviors. In this work they present our results on using different machine learning algorithms which are used to characterize the step according to its direction and length. This characterization is then used to adapt the navigation algorithm according to the performed classifications.

Schön, E. M. Et al. [8] present a study that was carried out with 175 interdisciplinary participants from the IT industry. For the evaluation of the results, 93 participants were included who have expertise in the subject area Agile Methodologies. On one hand, it is shown that the collaborative development of product-related ideas brings benefits. On the other hand, it is investigated which effect a good understanding of the product has on decisions made during the implementation. Furthermore, the skillset of product managers, the use of pair programming, and the advantages of cross-functional teams are analyzed.

López-Cruz, O. Et al. [9] present and demonstrate in use a methodology based in complex network analysis to support research aimed at identification of sources in the process of knowledge transfer at the interorganizational level. The importance of this methodology is that it states a unified model to reveal knowledge sharing patterns and to compare results from multiple researches on data from different periods of time and different sectors of the economy. The resulting demonstrated design satisfies the objective of being a methodological model to identify sources in knowledge transfer of knowledge effectively used in innovation.

Magaña, D. Et al. [10] will carry out a literature review of papers that use Artificial Intelligence as a tool for project success estimation or critical success factor identification. Project control and monitoring tools are based on expert judgment and parametric tools. Projects are the means by which companies implement their strategies. However project success rates are still very low. This is a worrying situation that has a great economic impact so alternative tools for project success prediction must be proposed in order to estimate project success or identify critical factors of success. Some of these tools are based on Artificial Intelligence. In this paper we will carry out a literature review of those papers that use Artificial Intelligence as a tool for project success estimation or critical success factor identification.

Gil López, E. Et al. [11] explores the last developments of the legal system concerning these issues. Knowledge sharing among individuals has changed deeply with the advent of social networks in the environment of Web 2.0. Every user has the possibility of publishing

what he or she deems of interest for their audience, regardless of the origin or authorship of the piece of knowledge. It is generally accepted that as the user is sharing a link to a document or video, for example, without getting paid for it, there is no point in worrying about the rights of the original author. It seems that the concepts of authorship and originality is about to disappear as promised the structuralisms fifty years ago. Nevertheless, the legal system has not changed, nor have the economic interests concerned.

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