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: 3D Interface, Information Extraction, Artificial immune system, Security in Cloud Computing, Genetic Algorithm, Activity recognition, 3D Render Distribution, Software visualization, Event Perception, New Programming Language, Distributed computing, MOOC environments, etc.

Contreras, D. Et al. [1] talks about a novel framework to tightly integrate interactive recommendation systems in a 3D virtual environment. Specifically, we propose to integrate a Collaborative Conversational Recommender (CCR) in a 3D social virtual world. Our CCR Framework defines three layers: the user interaction layer (3D Collaborative Space Client), the communication layer (3D Collaborative Space Server), and the recommendation layer (Collaborative Conversational Recommender). Additionally, we evaluate the framework based on several usability criteria such as learnability, perceived efficiency and effectiveness. Results demonstrate that users positively valued the experience.

Ghoulam A. Et al. [2] presents a local grammar approach to extract medical named entities from French patient clinical reports. Experimental results show that the proposed approach achieved an F-Measure of 90. 06%.

Baldominos, A. G. Et al. [3] writes about a design of an evolutionary algorithm for building classifiers specifically aimed towards performing classification and sentiment analysis over texts. Moreover, it has properties taken from Artificial Immune Systems, as it tries to resemble biological systems since they are able to discriminate harmful from innocuous bodies (in this case, the analogy could be established with negative and positive texts respectively). A framework, namely OpinAIS, is developed around the evolutionary algorithm, which makes it possible to distribute it as an open-source tool, which enables the scientific community both to extend it and improve it. The framework is evaluated with two different public datasets, the first involving voting records for the US Congress and the second consisting in a Twitter corpus with tweets about different technology brands, which can be polarized either towards positive or negative feelings; comparing the results with alternative machine learning techniques and concluding with encouraging results. Additionally, as the framework is publicly available for download, researchers can replicate the experiments from this paper or propose new ones.

Venkateshwaran K., D. Et al. [4] talk about that Agent can play a key role in bringing suitable cloud services to the customer based on their requirements. In agent based cloud computing, agent does negotiation, coordination, cooperation and collaboration on behalf of the customer to make the decisions in efficient manner. However the agent based cloud computing have some security issues like (a.) addition of malicious agent in the cloud environment which could demolish the process by attacking other agents, (b.) denial of service by creating flooding attacks on other involved agents. (c.) Some of the exceptions in the agent interaction protocol such as Not-Understood and Cancel_Meta protocol can be misused and may lead to terminating the connection of all the other agents participating in the negotiating services. Also, this paper proposes algorithms to solve these issues to ensure that there will be no intervention of any malicious activities during the agent interaction.

Zaldaña, H. Et al. [5] shows an alternative to this process is the UV disinfection of drinking water. Most of the devices in the market use UV bulbs or mercury lamps. The UV LED, which is cheaper and smaller, allows creating new smaller devices. The main contribution of this paper is the use of Genetic Algorithms to help design a drinking water device with UV LEDs.

Pekka, S. Et al. [6] present a short abstract of your PhD thesis, called "Recognizing Human Activities Based on Wearable Inertial Measurements - Methods and Applications.

Bolívar, H. D. Et al. [7] talk about a research that is based on the method 'divide and rule', that is, volumetric surfaces are subdivided using a tree-KD of sequence of scenes in a game, so reducing the surface into small sets of points. Reconstruction efficiency is improved, because the search of data is performed in local and small regions. Processes are modeled through a finite set of states that are built using Hidden Markov Models with domains configured by heuristics. Six test that control the states of each heuristic, including the number of intervals are carried out to validate the proposed model. This validation concludes that the proposed model optimizes response frames per second, in a sequence of interactions.

Almeida-Martínez, F. J. Et al. [8] shows a reviews software visualization focused on the educational environment. Software visualization is a very wide study field, so we have focused on two areas: recursion visualization and parsers' visualization. The paper contains a retrospective about what has been made on it, what lacks we have found and the solution provided by the authors: SRec and VAST, two software tools trying to make a significant difference between them and the software made before.

Jain, S. Et al. [9] propose an extension of perception process in an existing emotion model, EMIA and suggest the formalization of event perception and appraisal processes to make it adaptable. This has been carried out using five parameters for event description along-with fuzzy logic which makes the process more effective yet simple.

González, C. Et al. [10] shows a comparative the new programming language of Apple, Swift, with the main

programming language of Apple before Swift, Objective-C. They are going to show the differences, characteristics and novelties to verify the words of Apple about Swift. With that they want to answer the next question: Is Swift a new programming language easier, more secure and quicker to develop than Objective-C?

Torres, E. Et al. [11] expose a report with a solution based on dynamic partial replication where the number of replicas for each file and its management is handled by an agent architecture. they compare their solution with full replication and with static partial replication both in terms of storage capacity consumption and service time. Their results show that their proposed solution provides equivalent performance with a better use of disk storage capacity.

Corbi, A. D. Et al. [12] shows a software framework that aims at assisting teachers in MOOCs during math-nature exercise correction tasks. This framework might fit for math, physics, or technical teachings. As a test experience, they apply it to 300+ physics homework bulletins from 80+ students. Test results show their solution might turn very useful when guiding assistant teachers during correction shifts.

Rios, S. Et al [13] explains how wereable technologies are capable of measuring the heart beat and, further, using other sensors like Accelerometer and Gyroscope, embedded on a simple clock allow us to monitor the physical activity of the user. Their main goal is to use the pulsations measurements in conjunction with the physical activity for the detection of driver drowsiness/sleepiness in advance in order to prevent accidents derived from fatigue.

Dr. Carlos Montenegro

REFERENCES

[1] Contreras, D. Et al. "A 3D Visual Interface for Critiquing-based Recommenders: Architecture and Interaction", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 7-15, 2015.

[2] Ghoulam A. Et al. "Using Local Grammar for Entity Extraction from Clinical Reports", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 16-24, 2015.

[3] Baldominos, A. G. Et al. "OpinAIS: An Artificial Immune System-based Framework for Opinion Mining", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 25-34, 2015.

[4] Venkateshwaran K., D. Et al. "Security Framework for Agent-Based Cloud Computing", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 35-42, 2015.

[5] Zaldaña, H. Et al. "The Use of Genetic Algorithms in UV Disinfection of Drinking Water", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 43-48, 2015.

[6] Pekka, S. Et al. "Recognizing Human Activities Based on Wearable Inertial Measurements - Methods and Applications", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 49-50, 2015.

[7] Bolívar, H. D. Et al. "An Architecture Approach for 3D Render Distribution using Mobile Devices in Real Time", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 51-60, 2015.

[8] Almeida-Martínez, F. J. Et al. "SRec and VAST: Visualizing Software with a Student-Centered Aim", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 61-68, 2015.

[9] Jain, S. Et al. "Formalization of Event Perception and Event Appraisal Process", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 69-73, 2015.

[10] González, C. Et al. "Swift vs. Objective-C: A New Programming Language", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 74-81, 2015.

[11] Torres, E. Et al. "A Quantitative Justification to Dynamic Partial Replication of Web Contents through an Agent Architecture", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 82-88, 2015.

[12] Corbi, A. D. Et al. "Semi-automated correction tools for math-like exercises in MOOC environments", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 89-95, 2015.

[13] Rios, S. Et al." Variation of the heartbeat and activity as an indicator of drowsiness at the wheel using a smartwatch", International Journal of Artificial Intelligence and Interactive Multimedia, vol. 3, no. 3, pp. 96-100, 2015