Multidisciplinary and interdisciplinary approaches in information technology research

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During the last two years that I have been the Editor-in-Chief of the Journal of Information Technology Research (JITR), volumes 8 and 9, I have tried to maintain the multidisciplinary approach of this journal. Moreover, I have recommended going a step beyond in order to promote interdisciplinary research papers that give better answers to the very complex problems we have in the Knowledge Society construction (García-Peñalvo, 2015b, 2016c).

Different topics have been underlined as interesting following this multidisciplinary and interdisciplinary approach in information technology research, such as, visual analytics (García-Peñalvo, 2015c), entrepreneurship (García-Peñalvo, 2015a), Massive Open Online Courses (MOOCs) (García-Peñalvo, 2015d), digital humanities (García-Peñalvo, 2016a), mobile technologies (García-Peñalvo, 2016b) or computational thinking (García-Peñalvo, 2016b).

Other important news about the journal is that in 2016 JITR was included in the Emerging Sources Citation Index, a new index in the Web of Science™ Core Collection.

We have the proposal of following in this line during next volumes, starting with this first issue of volume 10 that comprises 6 papers.

Lacomba Masmiquel et al. (2017) describe the design and use evaluation of a system that allows the academic behavior analysis of high school students using a data model based on business intelligence techniques. Based on the system data analysis information can be extracted and the right decisions taken in order to help and improve the student academic performance. The proposed model also allows the extraction of information to other levels, where its primary objective is the application to improve the academic performance of students or to prevent situations of academic failure.

Kumar Dubey and Kumar Saxena (2017) present a novel hybrid method based on Cosine Similarity and Mutual Information to find out relevant feature subset. The proposed method is applied to various high dimensional datasets and the obtained results showed that authors' method is capable of eliminating the redundant and irrelevant features.

Lu and Wu (2017) analyze the Quantum-behaved Particle Swarm Optimization algorithm. They study contraction-expansion coefficient and its control method. To the different performance characteristics with different coefficients control strategies, a control method of coefficient with Q-learning is proposed by the authors. This method can tune the coefficient adaptively, and the whole optimization performance is increased.

Orozco and Morales-Morgado (2017) present the use of geometric configurations built with GeoGebra as a tool for teaching the definition of vector and its operations. These are Open Educational Resources (OERs) (Ramírez Montoya & García-Peñalvo, 2015), and they were built under the Open Knowledge scheme (García-Peñalvo, García de Figuerola, & Merlo-Vega, 2010), so everyone to have access to them.

Gupta et al. (2017) undertake an empirical study through surveys and case studies in industrial settings to analyze the software development practices focused on non-functional requirements.

In the last paper of this issue, Belattar et al. (2017) propose an intelligent Content-Based Dermoscopic Image Retrieval (CBDIR) system with Relevance Feedback (RF) for melanoma diagnosis that exhibits: efficient and accurate image retrieval as well as visual features extraction that is independent of any specific diagnostic method.

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