

Contents

Editorial i

Research

Methods to Incorporate Proactivity into Context-Aware Recommender Systems for E-Learning-
Daniel Gallego, Enrique Barra, Pedro Rodríguez, Gabriel Huecas 101

Towards a Novel Graphical Editor for Modeling Learning Scenarios-
Marwa HARRATHI, Maha KHEMAJA PRINCE 114

Test and Diagnosis of Wireless Sensor Networks Applications-
Dima Hamdan, Oum-El-Kheir Aktouf, Ioannis Parissis, Abbas Hijazi, Bachar El Hassan 128

Use of NLPCA for Sensors Fault Detection and Localization Applied at WTP-
K. Bouzenad, M. Ramdani, N.Zermi, K.Mendaci 138

Conference Notification 149

- The Eighth International Conference on Digital Information Management (ICDIM 2013)

Editorial

This issue of the *Journal of E-Technology* as other earlier issues, publish papers on E-learning, thus specializing on this domain. The first paper addressed the Recommender systems in e-learning with contextual information derived from the use of ubiquitous learning environments. *Daniel Gallego, Enrique Barra, Pedro Rodríguez and Gabriel Huecas* in their paper on **'Methods to Incorporate Proactivity into Context-Aware Recommender Systems for E-Learning'** have highlighted the methods to generate proactive recommendations to e-learning systems users when the situation is appropriate without being needed their explicit request.

Marwa HARRATHI and Maha KHEMAJA PRINCE in the next paper on **'Towards a Novel Graphical Editor for Modeling Learning Scenarios'**, presented an interesting approach and a graphical tool based both on the IMSLD specification and on MDA (Model Driven Architecture) transformations to Business Process Modeling Ontology (BPMO) notation.

In the next paper on **'Test and Diagnosis of Wireless Sensor Networks Applications'**, the authors *Dima Hamdan, Oum-El-Kheir Aktouf, Ioannis Parissis, Abbas Hijazi and Bachar El Hassan* view that fault tolerance approach requires to addresses all fault issues comprehensively. Hence they proposed an integrated fault tolerance framework (IFTF) that reduces the false negative by combining a network diagnosis service (component/element level monitoring) with an application testing service (system level monitoring). Through simulation they found that the IFTF reduces the false negative rate of application level failures significantly.

Even the Principal Components Analysis is studied well in research, certain obstacles such as sensitivity to noise are the core issues which remain as limitations. They have applied Fuzzy Robust Principal Components Analysis (FRPCA) which achieves better result compared with the classical method. They used Fuzzy Robust method and compared with the classical one to monitoring a biological nitrogen removal process. They presented the results that demonstrated the performances superiority of this method compared with the conventional one.

The papers published in this issue, we do hope would have good impact in the forthcoming research.

Editors