Editorial

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Biographical notes: Santi Caballé received his PhD, Master's degree and Bachelor's degree in Computer Science from the Open University of Catalonia (Spain). He is an Associate Professor and a Researcher in the Department of Computer Science of the Open University of Catalonia, where he coordinates several online courses in the areas of software engineering and information systems. His research focuses on the fields of e-learning and computer-supported collaborative learning, software engineering, and distributed and grid technologies, where he has published over 120 peer-reviewed research contributions to books journals and conferences and has organised several international conferences and workshops.

Stavros Demetriadis received his BSc in Physics, his MSc in Electronic Physics and his PhD in Multimedia Learning Technology from Aristotle University of Thessaloniki. He is currently an Assistant Professor in the Department of Informatics, Aristotle University of Thessaloniki, Greece. He has published more than 70 research papers in scientific journals and conference proceedings and has been awarded three 'Best Paper' awards in international conferences. His research focuses on adaptive systems for collaborative learning, computer-supported collaborative learning, multimedia and blended learning.

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issues and proceedings in the field. He is Editor-in-Chief of the *IJSSC* and of the EI Indexed *IJGUC*, Inderscience. His research interests include parallel and distributed algorithms, Cluster, Grid, Cloud and P2P computing, networking systems, optimisation and meta-heuristics.

With the fast development of the internet, virtual campuses and organisations strongly exploit network systems and learning applications by leveraging current well-known social networks and learning management systems. However, latest and powerful technologies still lack of intensive knowledge management solutions that can enhance these applications a great deal by providing dynamic adaptive mechanisms, information sharing among peers, interaction data analysis in terms of awareness and feedback and so on.

This special issue responds to the need of advanced solutions of knowledge-intensive models, methods and tools in support for current complex learning and social network systems in the context of both academia and industry. These solutions are necessary to enhance and improve current performance and outcomes of social networks and learning systems. Validation of the proposed approaches is expected by using simulation tools or piloting prototypes in a real context.

The special issue follows the Third International Conference on Intelligent Networking and Collaborative Systems (INCoS 2011) held on 30 November to 2 December 2011, at Fukuoka Institute of Technology (FIT), Fukuoka, Japan (http://voyager.ce.fit.ac.jp/~incos2011).

The four papers of this special issue face the following issues and challenges:

In the first paper, Yoosooka and Wuwongse propose a new approach to automatic retrieval of learning objects (LOs) from local or external LO repositories via linked open data (LOD) principles. The approach dynamically selects the most appropriate LOs for an individual learning package in an adaptive e-learning system based on the use of LO metadata, learner profiles, ontology, and LOD principles. The approach is designed to interlink the domain ontology with external open knowledge in the LOD cloud. Moreover, commonly known vocabularies are employed to represent metadata and to link it with external LO repositories. By using these techniques, the LOs and external knowledge can be exchangeable, shareable, and interoperable, resulting in an enhanced access to better learning resources. From the evaluation of a prototype system it was discovered that the system yielded positive effects in terms of the learners' satisfaction.

Feidakis et al., in the second paper, investigate how sense and analysis of user's emotions has appeared in the focus of the research agenda during the last decade with many applications, especially in learning. The latter is informed by the study of emotions that has been attained for many years. To this end, the author first review prominent theories and models of learning with respect to student's emotions and emotion recognition technologies and then analyse the design of a system endowed with emotion awareness features. Part of the work presented is based on the results of a pilot CSCL project, named emot-project. Finally, the authors define an agenda for future work.

Bratitsis et al. study how fairy tales have intrigued educators when teaching young children. In the paper, story creation is examined with the perspective of the children as authors. A Web 2.0 service, Tikatok, which provides several facilities for creating stories in a book-like format, is utilised in order to examine the effect of the digital medium (ICTs) in the story creation process by the children. An experiment is conducted

involving eight kindergarten students divided into four pairs, worked in different settings. The results show an impressive effect of the computer on children's motivation, as well as several qualitative aspects of story creation.

The fourth paper by Salamanos and Vazirgianni studies the effect of diffusion on the evolution of a market consisting of infinitely divisible goods and buyers with constant elasticity of substitution utility functions. As a result, the authors propose a model that assumes that the buyers are organised by a social network and in consecutive time periods and that the market prices and the allocation of the goods to buyers are equilibrated by a market equilibrium mechanism. In this context, the paper analyses the distribution of the market prices and the market share of the goods, for several configurations of the social network graph and the control parameters. The experimental results demonstrate that the long time behaviour of the market is correlated with the rate of diffusion and the elasticity of substitution of the buyers' utility functions. Finally, the authors present the critical points where there is a phase transition between several patterns of long time states.

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