

## GUEST EDITORIAL PREFACE

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Training of information technology professionals at all levels must be based on most modern scientific knowledge and developments so that it can promote to society creativity and innovation. The achievement of this form of education requires active and efficient use of modern information and communication technologies, in order to achieve high quality education that: is accessible anytime and anywhere; adapts to individual needs, and provides equal opportunities to obtain knowledge and skills. This gives a learner the necessary tools for successful engagement with the labour market, raises the quality of life in an information society and improves the global knowledge-based economy.

This special issue is dedicated to the application of innovative information technologies in the education and training of IT professionals. The authors of the included papers are partners in a European Erasmus thematic network project entitled “Future Education and Training in Computing: How to support learning anytime anywhere (FETCH)”. Some of the objectives of this project are to raise the quality of education of IT specialist through introducing modern information and communication technologies in education and to develop new didactical theories and learning models for using social media in education.

The first paper by Leon Rothkrantz from Delft University of Technology, entitled “How Social Media facilitate learning communities and peer groups around MOOCs”, proposes to introduce a new didactical model about using social media in Massive Open Online Courses (MOOCs). Students are connected by and cooperate via a social network of study friends for example via Facebook or Twitter. They inform each other about to be expected study activities, learning experiences, cooperate in study activities and take the role of tutor or model for other students. Next to the didactical model the paper presents a matching algorithm to create peer groups to perform group work. It describes a tool, which recommends best matching students, taking care of abilities and personal characteristics of students and requirements set by the lecturers in such a way that balanced groups are created. Students make a selection from the offer. Special Apps have to be downloaded on phones or computer devices to connect the teaching-learning environment.

The second paper, titled “How students’ experience in e-learning affects their judgments about the quality of an online course” by Roumiana Peytcheva-Forsyth and Blagovesna Yovkova from Sofia University, Bulgaria, discusses issues about the quality assurance

of the learning experience when e-learning is introduced in traditional universities. The article presents a study of students' opinions and attitudes about the quality of different elements in the pedagogical design of blended courses. The majority of the students involved in the research have had no or little experience in online learning. The authors try to find out whether there is a relation between the students' previous experience in e-learning and their judgements about different aspects of its quality.

The third paper "An Approach to Teaching Introductory Programming for IT Professionals Using Games" by Tzvetomir I. Vassilev from the University of Ruse, Bulgaria addresses the difficulties of teaching introductory programming to students in the field of information technologies and computer science. The paper proposes an approach for teaching programming for IT professionals using a new game library, specially developed for training, which controls virtual models moving in a virtual environment. The system uses appealing 3D graphics to attract attention. Initial results show that the students enjoyed the course, most of them liked the game library approach better than the traditional one and do recommend using it in the future.

The next paper "Mouse Usage Biometrics in eLearning Systems: Detection of Impersonation and User Profiling" by Daniela Chudá and Peter Krátky, STU in Bratislava, Slovakia, proposes to use Biometrics to suppress impersonation in e-learning systems and thus to improve credibility of exams taken at home. The paper provides preliminary results of cheating detection method based on mouse usage data gathered in an e-learning system. Mouse path is analysed in deeper by decomposition to arcs and straight segments in order to study single-intent moves and to reveal curve characteristics. The paper also describes preliminary results of predicting learning styles of students according to the characteristics of computer mouse usage patterns for further recommendation of suitable materials.

The last paper in the issue is a regular paper not linked with FETCH project. "Examining the impact of Emotional Intelligence on Orga-

nizational Role Stress: An empirical study of the Indian IT sector" is written by Shubhangini Rathore and Vandana Ahuja, Jaypee Institute of Information Technology, India. The paper attempts to explore the relationship between organizational Role Stress and Emotional Intelligence in the Indian IT industry. Data was collected from a total of 160 employees, both Managers and Non Managers working in the Delhi NCR Region. Emotional Intelligence was measured by developing a scale consisting of 27 items, which was developed by the researchers in the previous studies; by adapting to Indian and Western perspectives on emotional Intelligence. Stress was measured using the Organizational Role Stress questionnaire comprising of 50 items. The results show a strong correlation between Role Stress and Emotional Intelligence and significant impact of Emotional Intelligence and Organizational Stress.

The set of papers published in this issue of the International Journal of Human Capital and Information Technology Professionals pictures the importance of Education and Training in Information Technology and drives the path towards the alignment of these initiatives with competence needs of tomorrow's society.

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