Editorial

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Micro and Processor (MIPRO)[1] is both the name of the Croatian Society for Information and Communication Technology, Electronics and Microelectronics, and the name of the international convention organised by this society. MIPRO was established in 1978 as one of the first gatherings on the application of micro-computers in central part of Europe. Today, MIPRO is not only an academic gathering, but a meeting of researchers and practitioners from the areas of economy, science, profession, education, state administration and local government and it is organised as ten conferences, several tutorials, workshops and exhibition:

1 MEET – microelectronics, electronics and electronic technology

2 GVS – grid and visualisation systems

3 CTI – telecommunications and information

4 CTS – computers in technical systems

5 CIS – intelligent systems

6 CE – computers in education

7 DE – digital economy

8 ISS – information systems security

9 BIS – business intelligence systems

10 GLGPS – government, local government, public services

11 MIPRO Junior

All of the papers selected for this special issue are from the Computers in Education Conference, at the 34th International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO 2011), held in Opatija, Croatia, 23–27 May 2011, founded by Marina Čičin-Šain and Pavle Dragojlović. The scope of this conference is education and methods of teaching computer science, implementation of computer technology in schools, distance learning, computer aided learning and computer aided education.

The first CE conference organised under MIPRO was held in 1997, with seven contributed papers in the Croatian language only. From 1998, English was added as an official language and since then, the number of papers contributed has grown steadily from 17 that year; 24 in 1999, 25 in 2000, to 94 in 2010. In 2001, reviewing by two independent reviewers was introduced.

Teaching computer science is not like teaching other subjects, mainly due to intensive developments in information and computing technologies. Apart from computer science, new technologies are being used in other educational subjects and often they both frighten and excite teachers. There are also requirements for specialised knowledge and different ways of doing business brought about by globalisation. Because of this, continuing education of teachers is needed.

MIPRO's CE conference provides a forum where teachers and others involved in continuing education can meet and exchange ideas and experiences. Its audience is mainly those who take care of education and the application of new technology and those who use computers when educating others. It attracts interest from teachers of computer science, from primary school to undergraduate and postgraduate level, including teachers of other subjects, such as mathematics, economy, or geography. There is also interest from industry (those using computers in their business have an interest in continuing education of their staff), early childhood educators, teachers working with people with disability, students, school principals with organisational issues, and hardware, software and web maintenance specialists.

The first three papers are addressing current developments in Web 2.0; social networking collaborative knowledge building, with applications in both education and business:

The first article by Pamela Wilson 'An uneasy truce: brokering collaborative knowledge building and commodity culture' provides an ethnographic case study of a genealogy and social media site that has provided the structure and tools for collaborative knowledge building. The author examines this process as part of a new Web 2.0 paradigm for cultural, educational and business practices and focuses, in particular, upon the tensions and inherent contradictions between the corporate for-profit model with, a wiki model for collaborative knowledge-building.

The paper by Hannu Jaakkola et al., 'A path towards networked organisations – the push of digital natives or the pull of the needs?', looks at adoption speed of social networking to business and working life. The paper includes a framework characterising the differences between generations of population and the characteristics of modern enterprise.

The paper by Goran Bubaš et al., 'The integration and assessment of students' artefacts created with diverse Web 2.0 applications', focuses on the creation of students'

artefacts with various Web 2.0 tools (e.g., those for online creation of mind maps, block-diagrams, slideshow presentations, online comic strips, surveys, etc.) including evaluation of those tools and examples of their use.

The next five papers deal with improvement of education, each in their own, different way and use of ICT in teaching of different subjects, from chemistry to history. It finishes off with an insight into students attitude towards cheating on exams.

The paper by Marjan Krašna and Tomaž Bratina, 'Designing digital security course in educational sciences', discusses a newly created a Master level course for teaching digital security in education, that include topics of data security, computer viruses, computer fraud, spyware, and identity theft.

The paper by Ivana Milanovic et al., 'An instance of a mathematical model in chemical kinetics', presents application of mathematics in teaching of chemistry and chemical kinetics in the classroom, using the software package GeoGebra.

The paper by Jadranka Sunde et al., 'Visualising complex information – genealogical maps and multiple relationships', looks into ways how to make history lessons more interesting by using an online social networking (genealogy) tool. Second part of this paper covers exploration of ways how to visualise complex historical and genealogical data.

The paper by Marina Čičin-Šain, 'What do students think about cheating on exams?', presents the results of a study on what do freshmen think about cheating on exams.

The paper by Dzenan Ridjanovic, 'Main memory software environment for pedagogical prototypes', examines use of software prototypes in information systems and software engineering as effective means of eliciting and validating user requirements using Modelibra, is explained in this paper. The paper shows how a game, a graphical design tool and a web application may be prototyped with Modelibra.

The paper by Vladan Jovanovic and Mile Pavlić, 'Using data samples in validating data models', examines validation of data models, specifically represented by presumably normalised relations.

The guest editors would like to express their appreciation to the authors for their contributions to this special issue on MIPRO Computers in Education, to the referees and to the Editor-in-Chief Mika Sato-Ilich and Professor Lakhmi Jain for their support.

Notes

1 More can be found at http://www.mipro.hr.