Editorial

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Biographical notes: Dr. Eva Milková is an Associate Professor at the Faculty of Informatics and Management, University of Hradec Králové in Czech Republic. Her recent science research has been concerning on the graph theory, combinatorial algorithms and e-learning. More information you can find on http://lide.uhk.cz/home/fim/ucitel/fumilke1/www/.

Dr. Piet Kommers is an Associate Professor at the University of Twente and lecturer at Fontys Academy in the Netherlands. His specialties are educational technology and cognitive ergonomics. A conceptual representation for learning has his major interest. For the UNESCO institutes in Kiev and Moscow he made studies into new didactic methods based upon ICT tools and infrastructures. New PhD studies are planned into the rationales for adaptation and userinterfaces. Summer schools for PhD students are planned in Finland and Malta. Piet Kommers will chair the ICALT-2006 conference in FONTYS Academy in the Southern Netherlands.

In this special issue we collected for you eight various views to the newer didactic approaches and software tools in teaching and learning algorithmic and programming skills of students. You can also read opinions and authors' experiences in promoting a closer understanding on if and how media essentially shape new ways of learning. The overall tendency is to fertilise general educational ICT methods with specific notions from subject matter domains. The fields of mathematics and computer science in particular are rich in applying interactive modelling so that the learner is stimulated to experiment and finally gets a good intuition on larger architectural decisions. This exemplar of training methodology is a seed in the continuous evolution of interactive learning technology. So please, enjoy this special issue and try to extrapolate its message into your domain of interest.

The first paper illustrates one of possible ways how to develop basic algorithmic skills of students. The second one follows with communicative approach to teaching programming, especially the programming language Pascal. The third one deals with using Spreadsheet calculations to demonstrate concepts of programming and problem solving. The fourth paper is on didactic Computer graphics and the fifth paper shows a new approach to the education of Prolog programming. The sixth paper illustrates teaching and learning combinatorial optimisation using visualisation. The seventh one focuses on mind tools as a means of leveraging ICT for the development of cognitive skills of students. Finally, the last paper deals with game and stimulation development to get both fun and learning environments.