

## *Predslov* *Martin Šperka*

Dear readers,

You are holding the first issue of a scientific journal which originated from a cooperation between The Faculty of Informatics at the Pan European University in Bratislava and an association EDUCATION – SCIENCE – RESEARCH that is focusing on applications of Information Technologies (IT).

Nowadays it would be more difficult to find any areas of human activity which we do not apply IT to than to count those which use them. IT are multidisciplinary - within the science and engineering discipline itself as well as in the areas where they are applied. From the broad spectrum of different application areas, different information technology branches are emphasized. Sometimes the Information Systems are important and another time it is Software Engineering or Artificial Intelligence that plays a key role.

Information Systems offer even a wide range of specializations with different architectures. They work hand in hand with Computer Systems and Networks and these are more and more mobile. Smart phones and tablet computers are becoming our everyday partners. This topic is closely related to the area of Telecommunications – hence the name Information and Telecommunication Technologies (ICT). Merging computers and telecommunications allows different forms of telepresence – from simple video conferencing to the complex geographically distributed collaborative environments and the Cloud Computing platforms.

Historically, IT were developed together with the Control Engineering sometimes called Engineering Cybernetics. This discipline deals with the control and automation of processes. These processes can be simple real time temperature controller using one chip microcomputer or the complex technological or business enterprise processes controlled by a system running at the distributed multicomputer network.

Representative of the electronic company during his presentation at the Slovak University of Technology said that the most wanted specialists in car electronics are software engineers – the huge leap since the time, when the car “electronic” system represented few wires connecting car battery with ignition, lights and window wipers.

Business processes are connected with office applications, accounting and other calculations requiring knowledge provided traditionally by business and economy schools. For this reason many companies seek job candidates with the deep IT knowledge and skills as well as wide knowledge of economics, management and soft skills (T-shape professional).

The above mentioned facts illustrate the broad definition of ICT applications. We primarily focus on application areas which are in the scope of the interest at the Pan European University. They are involved in study and research programs at the Faculty of Economics and Business, Faculty of Law, Faculty of MassMedia, Faculty of Psychology and finally Faculty of Informatics. Despite the fact that the economics and business are one of the oldest targets for computer modelling and simulation, the space for novel approaches, methods and systems exist. New super computers and grid computing allow to simulate more complex micro and macro economics models.

Using ICT in the law, forensic science (criminalistics) and criminology is usually restricted to the office applications or data bases. Collaborative work, document and project management systems, simulating and reconstructing criminal acts and accidents, data mining, expert systems and other workflow, modelling and artificial intelligence methods are very rare. Other aspects are legislative problems in the fight against computer crime, illegal Internet content, data security in computer networks and data centres, intellectual property and privacy protection.

The Internet became the most universal mass media platform, which enhances and even replaces classic newspapers, journals, books, radio and television. New technologies e.g. virtual and augmented reality brings new paradigms of communication by the enhancing modern telepresence tools (video conferencing, Internet telephony and unified communication) with a third spatial dimension. Huge information assets distributed all over the world and accessible through the Semantic Web represents an effective and efficient form of Technology Enhanced Learning, but can be used in the science, business and cultural heritage protection.

ICT are not only a new tool for psychologists but psychological aspects of computing - for example in human computer interaction, social networks and dealing with the information flood are crucial in the design of future information systems.

These are main topics we would like to focus on, but they are not strictly limited. The first issue of the journal is heterogeneous, although in the future we plan to publish monothematic issues focused on one or maximum two subjects. We decided to publish papers in English as well as in Slovak or Russian languages with a brief English abstract. The main goal of the journal is to achieve high quality research papers, concentrated on the original results. As the border between scientific and highly innovative and creative engineering solutions in the IT is fuzzy, preferred topics for publications are novel applications of the existing IT and new IT at known applications with the focus in the above mentioned areas. In order to achieve this target we welcome any comments, opinions and suggestions from you, dear authors and readers.

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