TABLE OF CONTENTS

Committees3
Table of Contents7
Survey of Intelligent Collaborative E-Learning Systems
Mobile Technologies Education based on Smart Laboratory Models
A Real-Time Tool Integration for Lectures
The economic aspects of the electronization in Education process
Manufacturing Processes Simulation of Mass Customization Used by Education of Technical and Economical Subjects
Improving Student Engagement and Learning Outcomes through the Use of Industry-Sponsored Projects in Human-Computer Interaction Curriculum
Project and Team Based Teaching of System Programming in the Course of Operating Systems
Applications for Interactive Whiteboards in Computer Science Courses63 M. Biňas* * Technical university of Košice, Košice, Slovakia

Analysis of Factors Influencing the Motivation of Generations Y and Z to Perform in the Educational Process
D. Cágáňová*, A. Stareček*, M. Bednáriková*, N. Horňáková*
* Faculty of Materials Science and Technology in Trnava, Slovak University of Technology in Bratislava, Slovakia
Virtual Reality for Education and Workforce Training75 D. W. Carruth*
* Center for Advanced Vehicular Systems, High Performance Computing Collaboratory (HPC2), Bagley College of Engineering, Mississippi State University
Effective Collaborative Environment with Live Broadcasts using Slovak National Telepresence Infrastructure
 * Slovak Centre of Scientific and Technical Information, Bratislava, Slovakia ** University Centre for Innovation, Technology Transfer and Intellectual Property Protection, Technical University of Košice, Košice, Slovakia *** Department of Computers and Informatics, Faculty of Electrical Engineering and Informatics, Technical University of Košice, Košice, Slovakia
Estimation of Human Body Height from Uncalibrated Image
IT Academy project: An opportunity for the IT industry in Slovakia91 L. Derjaninová*, R. Hajduk*, M. Michalko**, F. Jakab**, J. Sekerák*, D. Šveda*** * University of Pavol Jozef Šafárik in Košice / Lifelong Learning Centre and Projects Support, Košice, Slovakia ** Technical University of Košice / Department of Computers and Informatics, Košice, Slovakia *** University of Pavol Jozef Šafárik in Košice / Institute of Mathematics, Košice, Slovakia
Content Security Policy (CSP) as countermeasure to Cross Site Scripting (XSS) attacks
I. Dolnák*
* University of Žilina, Faculty of Electrical Engineering, Žilina, Slovak Republic
Implementation of Referrer Policy in order to control HTTP Referer header privacy.103 I. Dolnák*
* University of Žilina, Faculty of Electrical Engineering, Žilina, Slovak Republic
Introduction to HTTP Security Headers and implementation of HTTP Strict Transport Security (HSTS) header for HTTPS enforcing107 I. Dolnák*, J. Litvik**
* University of Žilina, Faculty of Electrical Engineering, Žilina, Slovak Republic ** University of Žilina, Faculty of Electrical Engineering, Žilina, Slovak Republic

	rašnar*, O. V. Zhuykova**, O. F. Shikhova**, E. V. Sosnovich**, G. Chmelíková**: ech Technical University in Prague/Faculty of Mechanical Engineering, Praha, Czechublic
•	lashnikov Izhevsk State Technical University/Faculty of Civil Engineering, Izhevsk,
	lovak University of Technology in Bratislava/Faculty of Materials Science and nology, Trnava, Slovakia
M. D	ribution to Cloud Computing Security Architecture rozdova*, S. Rusnak*, P. Segec*, J. Uramova*, M. Moravcik* versity of Zilina, Zilina, Slovakia
	n school-company collaboration on educating students to a structured career
M. D	zbor*, J. Tapak*, P. Rabatin*, T. Hrusovsky* systems Slovakia, s.r.o, Strategy & Development Dept., Kosice, Slovakia
	fer – Searching implementation in sales portals and marketing egies creation
R. F	asuga*, K. Rebrošová**, E. Kubanda*, V. Pilík*, J. Mičanin*, J. Rýdel***, uchařík***
-	partment of Computer Science, VŠB Technical University of Ostrava, Czech Republic epartment of Marketing and Business, VŠB Technical University of Ostrava, Czech ublic
•	erious Investment s.r.o., Ostrava, Czech Republic
Spe	ech Interface Dialog with Smart Glasses1
	rouzian*, P. Pulli*, M. Pleva**, J. Juhar**, S. Ondas**
Engi	ot. of Information Processing Science, Faculty of Information Technology and Electric neering, University of Oulu, Oulu, Finland
	ept. of Electronics and Multimedia Communications, Faculty of Electrical Engineering informatics, Technical university of Kosice, Košice, Slovakia
-	ect and Team Based Teaching of System Programming in the course of Operati
	enči*, Z. Bilanová*, A. Deák*, M. Vrábel* partment of Computers and Informatics, Technical University of Košice, Košice, Slova
•	olic-based 2D convolver for CNN in FPGA1 abovsky*, P. Segec*, M. Moravcik*, J. Papan*
	culty of Management Science and Informatics, University of Zilina,
* Fac	
Expe	erience in Flipping the Classes in Engineering Study

A ranking-free evaluation of universities: an intellectual capital approach161 O. Hudec* * Technical University of Košice, Faculty of Economics, Košice, Slovak Republic
A Training Tool for Speech Driven Human-Robot Interaction Applications
University Leadership and Role Distribution
Behavior of Job Candidates and Current Labor Market Development in the Area of Information Technology in Slovakia
Data, Information and Technology services for Research and Management of Science
Dimensional Unit as an Aid in Students Identification
Changes in human resources in education sector and its institutions in Slovak Republic
Digital Games in Education and their Development

IT Fitness Test for Elementary Schools
The architecture of manufacturing process
Educational Robotics as a Method of Schoolboy'Competences Development and Their Professional Orientation
Success of Social Networking Sites: Evidence from the University of Novi Sad233 B. Lalic*, U. Marjanovic* * University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia
Numerical Models of Active Devices Utilized in the Optical Communication Systems
The use of the system Geogebra for graphical interpretation of functional dependencies in mathematics teaching
The Ability of University Teachers to Recognize and Regulate their Emotional Involvement
Multi-parametric Routing Mechanism in Software-Defined Networks

Impact of education and experiences of managers on performance of Slovak
construction enterprises263
P. Mesároš*, T. Mandičák*, M. Behún**, A. Ďuriš*
* Technical University of Košice, Faculty of Civil Engineering / Department of Construction Technology and Management, Košice, Slovakia
** Technical University of Košice, Faculty of Mining, Ecology, Process Control and
Geotechnologies / Institute of Earth Resources, Košice, Slovakia
Developing of managerial competencies trough ERP systems in Slovak construction
companies269
P. Mesároš*, T. Mandičák*, A. Romanová**, A. Behúnová ***
* Technical University of Košice, Faculty of Civil Engineering / Department of Construction Technology and Management, Košice, Slovakia
** University of Economics in Bratislava/Department of Information management, Bratislava, Slovakia
*** Technical University of Kosice /Department of Manufacturing Management, Prešov, Slovakia
Mixing Augmented Reality and EEG Technology to Create an Unique Learning Tool for Construction Process
A. Mesárošová*, M. F. Hernández*, P. Mesároš**, M. Behún ***
* M&B Independent Research Group, Valencia, Spain
** Technical University of Košice, Faculty of Civil Engineering / Institute of Construction
Technology and Management, Košice, Slovakia
*** Technical University of Košice, Faculty of Mining, Ecology, Process Control and
Geotechnologies / Institute of Earth Resources, Košice, Slovakia
Progress in MOOC Education at Óbuda University283
A. Mészáros*, D. Száraz*, A. Szakál*
* Óbuda University/University Research and Innovation Centre, Budapest, Hungary
From the Educational Tiger Leap Program to the ICT Startup Booming in Estonia289 T. Mets*
* University of Tartu/School of Economics and Business Administration, Tartu, Estonia
Utilization of IP Streaming in Identification of the Speaker293 M. Michalko*, D. Štefan*, M. Halászová**
* Department of Computers and Informatics, Košice, Technical University of Košice, Slovakia
** University Centre for Innovation, Technology Transfer and Intellectual Property Protection,
Technical University of Košice, Slovakia
Business Schools and RIS3 – Enterprise Architecture Perspective299
E. Molnar*, R. Molnar**, M. Gregus***
* Enterprise Services Slovakia, s.r.o., Bratislava, Slovakia
** The Imperial College Business School, London, United Kingdom
*** Department of Information Systems, Faculty of Management, Comenius University,
Bratislava, Slovakia

Virtual Mine – educational model for Wider Society
Overview of cloud computing and portability problems
Teaching cloud computing in cloud computing
Analysis and Implementation of Adaptive Course in Moodle
Using Virtual Reality in Education
Preliminary evaluation of the multimodal interactive system for NAO robot337 S. Ondáš*, M. Pleva*, J. Juhár*, R. Husovský* * Department of Electronics and Multimedia Communications, Technical University of Košice, Slovakia
Existing Mechanisms of IP Fast Reroute
Digital Literacy or Computer Science: Where do Information Technology Related Primary Education Models Focus on?
The Suggestion for Newspapers Application Improvement
Open Educational Resources Development and its Infancy in Slovak eLearning365 K. Pisutova*, D. Kovacevic** * Comenius University, Bratislava, Slovakia ** University of Economics in Bratislava, Bratislava, Slovakia
IP Networks Diagnostic Communication Generator

Generation of Structure Function Based on Ambiguous and Incompletely Specified Data Using the Fuzzy Decision Trees
J. Rabcan*, P. Rusnak*
* University of Zilina, Zilina, Slovakia
Analysis of Bulk-Driven Technique for Low-Voltage IC Design in 130 nm CMOS Technology385
 M. Rakús*, V. Stopjaková*, A. Daniel* * Institute of Electronics and Photonics, Faculty of Electrical Engeneering and Information Technology, Slovak University of Technology, Bratislava, Slovakia
Utilization of voluntary pro-environmentally oriented instruments in the educational process
 M. Rusko*, E. Lumnitzer** * Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava, Slovak Republic ** Technical University of Košice, Faculty of Mechanical Engineering, Slovak Republic
The Software Library used in Teaching of Multiple-Valued Logic
and Logic Function
Securing SIP infrastructures with PKI – the analysis
Transborder Multi-level Digital Interactive Education – Training Platform for Innovation Oriented Co-development
* National Science-Technological Association of Ukraine
Some aspects in e-learning for persons with disabilities
* Technical University of Kosice/Access Centre& Mechanical Engineering Faculty, Department of Automation, Control and Human Machine Interactions, Slovakia ** Technical University of Kosice/ Mechanical Engineering Faculty, Institute of Management, Industrial and Digital Engineering, Kosice, Slovakia
Virtual-Reality Technologies and Smart Environments in the Process of Disabled People Education
B. Sobota*, Š. Korečko*, L. Jacho*, P. Pastornický*, M. Hudák*, M. Sivý* * Department of Computers and Informatics, Faculty of Electrical Engineering and Informatics, Technical University of Košice, Slovak Republic
Digital Methods of Calibration for Analog Integrated Circuits in Nanotechnologies433 <i>M. Šovčík*, V. Stopjaková*, D. Arbet*, M. Kováč*, M. Potočný*</i> * Faculty of Electrical Engineering and Information Technology, Slovak University of Technology, Bratislava, Slovakia

Testing cognitive loads in solving algorithmic tasks
Encouraging scientific thinking and fostering scientific careers in the environment of the Slovak University of Technology in Bratislava
The Role of Games in Popularization of Science and Technology
Virtual Reality vs. Reality in Engineering Education
Search using a swarm of unmanned aerial vehicles
Sage Math for education and research
Computer-aided education and evaluation of student exam tasks from MS Excel473 T. Szabó*, I. Pšenáková** * Constantine the Philosopher University in Nitra, Faculty of Central European Studies/Institute of the Education of Teachers, Nitra, Slovakia ** Trnava University in Trnava, Faculty of Education/Department of Mathematics and Computer Science, Trnava, Slovakia

Utilization of specialized ICT infrastructure in the processes of science management in Slovakia
 J. Turňa*, L. Bilský**, J. Dzivák,***, J. Kasáková*** * Slovak Centre of Scientific and Technical Information/Head office, Bratislava, Slovakia ** Slovak Centre of Scientific and Technical Information / Science support section, Bratislava, Slovakia *** Slovak Centre of Scientific and Technical Information/Scientific Library, Bratislava, Slovakia
Packet Capture Infrastructure Based on Moloch
Development of the Support Tool for Education process in Informatics495 M. Vaclavkova*, J. Kostolny* * Department of Informatics, University of Zilina, Zilina, Slovak Republic
Object tracking in multicamera systems
Graphical Environment for Enhancement of Learning Data Structures
Dual Education and its Importance in the Field of Age Management in Industrial Enterprises
Training and Development Tool for the Open Innovation Quality Management System
Author Index527