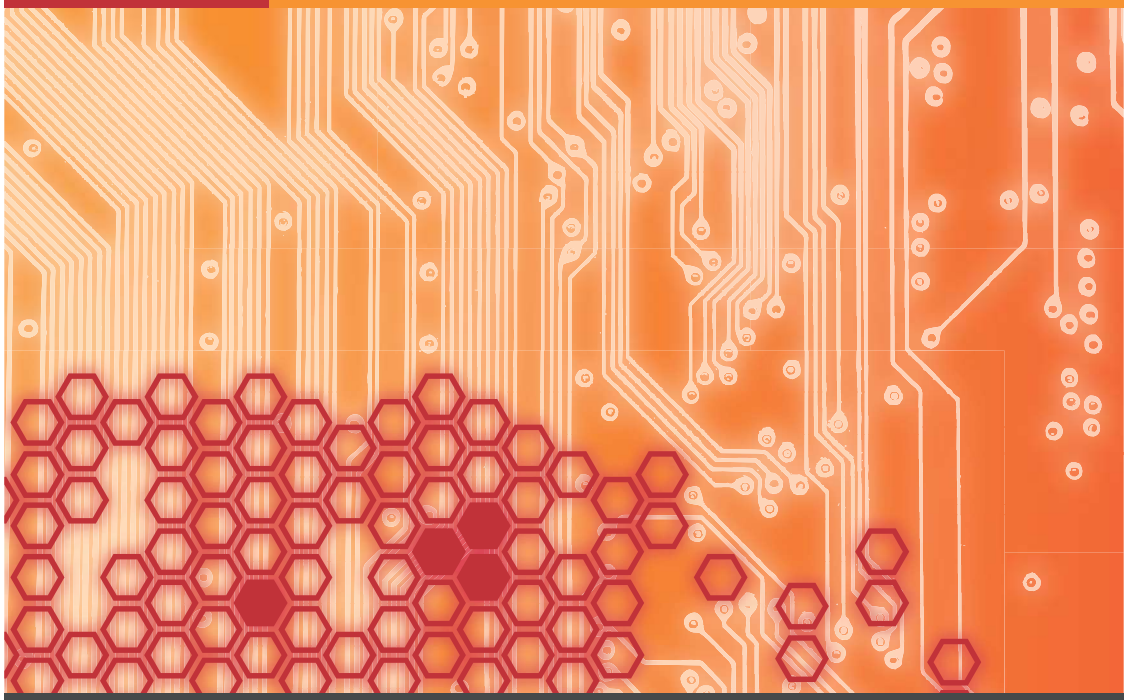
University of Žilina

FACULTY OF ELECTRICAL ENGINEERING



Annual Report 2012

Faculty of Electrical Engineering

1953 – 2013

ŽILINSKÁ UNIVERZITA V ŽILINE

University of Žilina

Annual Report 2012

Faculty of Electrical Engineering

2013

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Contents

Department of Control and Information Systems

General Information

The Department of Control and Information Systems (further referred to as the DCIS) guarantees the study branch Automation – study programme Automation in bachelor degree, study branch Automation – study programme Process Control Engineering in MSc. degree and study branch Automation – study program Process Control Engineering in PhD. degree at the Faculty of Electrical Engineering of the University of Žilina.

Research activities of the DCIS are directed at the sphere of information and safety-related system analysis and synthesis ranging from solution of theoretical models to practical projects of operation including implementation. There are many sectors of activities in which the DCIS has an exclusive position in the Slovak Republic, especially in expertise processing in the field of analysis and synthesis of railway interlocking systems.

The sphere of reliable and safe information transmission and processing in control of selected critical processes both in safety-related systems for all kinds of transport, complex technologies and in security systems for protection of humans and property provides dynamic incentive for all the staff. Realization of information services for operative control supported by automation and computer technology is applicable in decisive branches of the national economy.

Activities performed at the DCIS are integrated to the national and international co-operation with academic and industry sphere and realized through various forms - from research projects to exchanges of students and experts.

In 2012 the staff of the DCIS consisted of 16 pedagogical workers, 2 technicians and administrative support, 2 researchers and 14 full-time postgraduate students. The pedagogical staff consisted of 4 professors, 1 guest professor, 3 associate professors, 5 senior lecturers with an academic degree PhD, 2 senior lecturers without this degree.

Staff of the Department

Head of the Department:	**Juraj Spalek**
Vice-head of the Department:	Aleš Janota
Department secretary:	Rastislav Pirník
Study Consultant:	Peter Nagy
Administrative Support:	Klára Berešíková
Technical Support:	Kamila Kršíková
Researchers:	Martin Čapka (till 31st August 2012), Rastislav Pirník

Sections of the Department

Section of Automation and Signalling Systems

Head of the Section:	Karol Rástočný
Professors:	Aleš Janota, Karol Rástočný, Juraj Spalek
Guest Professor:	Pavel Přibyl
Senior Lecturers (with PhD):	Jozef Hrbček, Vojtech Šimák, Juraj Ždánsky
Senior Lecturers (without PhD):	Peter Nagy

Section of Communication and Information Systems

Head of the Section:	Mária Franeková
Professors:	Mária Franeková
Associate Professors:	Peter Vestenický, Václav Končelík (till 31st August 2012), Ľudmila Muzikářová († 4th November 2012)
Senior Lecturers (with PhD):	Tatiana Brončeková, Peter Peniak, Peter Holečko
Senior Lecturers (without PhD):	Emília Bubeníková

Postgraduate Students

Internal (full-time):	Michal Gregor, Tomáš Mikluščak, Ľubomír Pekár, Ján Halgaš, Peter Matis, Zuzana Lobotková, Juraj Ilavský, Marek Výrostko, Ján Capák, Ján Beňuš, Marián Hruboš
External (part-time):	Peter Holečko, Pavol Mrmus, Milan Slivka, Ján Slezák, Peter Nagy, Emília Bubeníková, Anna Cerovská, Peter Lüley

Education

Courses in Bachelor and Master Degree Programmes

Bachelor Degree Programmes

Code	Title	Sem.	Hours/Week L-S-LE*	Teachers
Courses at the Faculty of Electrical Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
Winter semester 2012/2013				
31100	Algorithmisation of problems	1	2-2-0	Holečko
31443	Theory of automated control 1	4	3-1-1	Hrbček, Bubeníková
31504	Bachelor project supervisor	5	0-0-5	BP

Code	Title	Sem.	Hours/Week L-S-LE*	Teachers
Courses at the Faculty of Electrical Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
31521	Communication security	5	3-1-1	Franeková
31534	Single-chip controllers programming	5	2-0-2	Šimák
31536	Sensor technology	5	3-1-1	Janota
31541	Control systems reliability and safety	5	3-2-0	Rástočný
Summer semester 2011/2012				
31209	Programming languages 1	1	2-2-0	Brončeková
31202	Information communication networks	2	1-0-2	Pirník
31204	Computing technical environment	2	1-0-2	Vestenický
31425	Logical systems	4	3-1-1	Ždánsky
31437	Control systems	4	2-1-2	Spalek
31443	Theory of automated control 1	4	3-1-1	Hrbček, Bubeníková
31444	Theory of information and signals	4	3-1-1	Muizkářová
31600	Bachelor work supervisor	6	0-2-0	BW
31606	Distributed control systems	6	3-1-1	Franeková, Vestenický
31612	Information systems	6	3-1-1	Nagy
31623	Control systems programming	6	2-0-2	Ždánsky
Courses at the Faculty of Civil Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
92347	Applied electronics	2	2-0-2	Nagy, Šimák
92347	Applied electronics (External Study)	2	18-0-0	Nagy

Master Degree Programmes

Code	Title	Sem.	Hours/Week L-S-LE*	Teachers
Courses at the Faculty of Electrical Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
Winter semester 2012/2013				
32101	Control systems safety analyses	1	3-2-0	Rástočný
32103	Information systems security	1	3-0-2	Holečko
32120	Computer networks	1	3-1-1	Vestenický
32130	Theory of automated control 2	1	3-1-1	Hrbček
32142	Signal processing appliances	1	3-1-1	Bubeníková
32124	Safety systems components	1	3-1-1	Nagy
32311	Expert systems	3	3-0-2	Janota
32316	Master project	3	0-0-5	head of DW
32342	Processes visualisation	3	2-0-2	Ždánsky
32301	Safety systems applications	3	3-0-2	Nagy
32302	Safety systems	3	3-0-2	Nagy
32329	Applications of information systems in process control	3	3-1-1	Peniak
Summer semester 2011/2012				
32202	Higher programming languages applications	2	2-1-2	Holečko
32203	Secure system communication	2	3-1-1	Franeková
32214	Information systems in medicine	2	2-0-2	Brončeková
32221	Object-oriented system development	2	2-0-2	Rástočný, Janota
32225	Signal processing appliances	2	3-1-1	Muzikářová
32238	Artificial intelligence	2	2-0-2	Spalek
32243	Safety systems	2	3-1-1	Rástočný
32401	Wireless communication	4	3-1-1	Vestenický

Code	Title	Sem.	Hours/Week L-S-LE*	Teachers
Courses at the Faculty of Electrical Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
32402	Diploma work	4	0-0-0	head of DW
32403	Diploma project	4	0-0-10	head of DW
32400	Information systems applications	4	3-0-2	Vestenický
32411	Intelligent transportation systems	4	3-2-0	Spalek, Janota, Přibyl
32417	Artificial intelligence programming	4	3-2-0	Janota
32420	Signal processing appliances	4	6-2-2	Muzikářová
Courses at the Faculty of Operation and Economics of Transport and Comm.			*(L) lessons - (S) seminars - (LE) lab. exercises	
13P102	Information systems in transport	1	2-2-1	Vestenický
Courses at the Faculty of Civil Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
40I235	Communication and safety technologies	2	2-1-0	Nagy

External Master Degree Programme

Code	Title	Sem.	Hours/Week L-S-LE*	Teachers
Courses at the Faculty of Electrical Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
Summer semester 2011/2012				
32401	Wireless communication	4	3-1-1	Vestenický
32402	Diploma work	4	0-2-0	Franeková, Rástočný, Janota, Spalek, Nagy
32403	Diploma project	4	0-0-10	Franeková, Rástočný, Janota, Spalek, Nagy
32400	Applications of information systems	4	3-0-2	Vestenický
32411	Intelligent transportation systems	4	3-2-0	Janota, Spalek
32417	Programming of artificial intelligence	4	3-0-2	Janota

External Master Degree Programme

Code	Title	Sem.	Hours/Week L-S-LE*	Teachers
Courses at the Faculty of Electrical Engineering			*(L) lessons - (S) seminars - (LE) lab. exercises	
33118	World language	1	2-0-0	Janota
33119	Dissertation thesis	1	0-1-0	Rástočný
33222	Theory of systems	1	2-0-0	Muzikářová
33223	Theory of automated control	1	2-0-0	Koščová, Exnar
33224	Control systems	1	2-0-0	Rástočný, Spalek
33225	Logical and event systems	1	2-0-0	Rástočný, Spalek
33226	Process control	1	2-0-0	Peniak
33227	Reliability and diagnostics of technical systems	1	2-0-0	Rástočný
33228	Multimedia technology in control	1	2-0-0	Muzikářová
33229	Modelling and simulation of systems (MSS)	1	2-0-0	Rástočný

Science, Research and Development

Scientific-research and development activities of department are focused on the area of control tasks algorithmisation, automation of control on process, operational and management levels while utilising modern artificial

intelligence approaches, and on the area of reliable, safe and secure communication and information processing in control of selected critical processes, above all the ones which imply the criterion of safety besides usual optimisation criteria. For reasons given there is a large number of research projects and cooperation projects with praxis and industry directed into the area of applied telematics and intelligent control and safety systems in transport and industry

Laboratory of industrial processes control

The laboratory is oriented on development and simulation of algorithms for industrial processes control. The fundamentals of equipment are PCs, Siemens PLCs, extension modules for sensors and actuators connection, modules for remote inputs and outputs, visualisation panels, frequency converters and programming and configuration software. The interconnection of components and positions is realised by industrial networks. The operation of this technology is supported by actual models of industrial processes.

Laboratory of safety critical control systems

The laboratory is oriented on development and simulation of algorithms for industrial processes control. The fundamentals of equipment are PCs, Siemens PLCs, extension modules for sensors and actuators connection, modules for remote inputs and outputs, visualisation panels, frequency converters and programming and configuration software. The interconnection of components and positions is realised by industrial networks. The operation of this technology is supported by actual models of industrial processes.

Laboratory of traffic processes control

The laboratory is focused on the area of system identification, design and implementation of control algorithms for traffic and industrial systems. It is equipped with programmable logical automata, safety PLCs, I/O modules, converters, traffic and industrial systems models and specialised computers with software; Automation Studio, Safe Designer, MATLAB, Atmel Studio, RSLogix, RSLinx, RSView.

Laboratory of information technologies

The laboratory is oriented on information systems (databases, web technologies, virtualisation), computer networks (modelling, simulation, monitoring) and its safety (penetration testing, intrusion detection, firewalls, cryptanalysis, antimalware).

Hardware equipment: Juniper IDP 75 – intrusion detection system; Fluke Networks Time Machine Express NTM - EX2 – network traffic monitoring device

Software equipment: OPNET Modeler + Wireless Suite – network modelling, simulation and emulation environment; OPNET IT Guru Academic Edition – academic edition of environment; PRTG Paessler Network Monitor – network traffic monitoring tool.

Laboratory of experimental tasks

The laboratory is intended for experimental operations related to bachelor, master and research tasks including realisation of electronic devices.

Laboratory of automated control theory and signal processing

The laboratory is aimed on testing of theoretical fundamentals from the area of automated control theory (continuous and discrete systems), theory of information and signals and digital signal processing with custom programs and MATLAB with its specialised toolboxes (Simulink, Control Toolbox, Signal Processing Toolbox). It includes actual educational models by Humusoft CE 151 (ball on plane) with accessories (Extended Real Time Toolbox and Real Time Windows Target) and appliances by

IMFsoft (motor rpm regulator, temperature regulation).

Laboratory of modelling and simulation

The laboratory is aimed on education of specialised subjects requiring support of software tools. It is mainly intended for modelling of functional properties of control systems (UML; Rhapsody software tool), reliability and safety attributes (CARE software tool), control procedures and control structures (Matlab and LabView environments). In case of need it is available for other applications – design and work with database systems, expert systems and so on. The laboratory includes technology utilised in objects protection (alarm systems, electric fire signalisation, camera surveillance systems). The laboratory can also be utilised for students' individual work during working out the semester projects and diploma theses.

Laboratory of computer networks and secure communications

The laboratory is focused on the area of LANs including wireless communication technologies. The technical equipment for computer networks includes basic PCs, structural cabling distributor, switches and routers 3com a Cisco, IEEE 802.11 wireless networks analyser. The technical equipment for industrial communication networks includes PROFIBUS and CAN protocol analysers.

Laboratory of microcomputers and robotics

The laboratory is intended for research and development in the area of robotics and microcomputers. It is equipped with computers and programmable interfaces for ATMEL microcomputers and ABB industrial robots. The laboratory hosts the research of mobile sensor platform for robots navigation.

Laboratory of modelling, optimisation and simulation technologies for ITS

The laboratory is focused on development, modification and realisation of mathematical and simulation models for the support of traffic network control. The main objective is development of methods and algorithms for predictive control of telematic subsystems.

Device equipment: I/O card, SW - toolbox for predictive control, workstation for the complex control system model, specialised literature.

Co-operation

Co-operation Partners in Slovakia

- ADOTEL-HEX Ltd., Transportation and telecommunications automation, Žilina
- ANDIS Ltd., Analog and digital systems, Bratislava
- APPLIFOX, a. s., Nové Mesto nad Váhom
- ARDOS AZ Inc., Bratislava
- B+R automatizace, Ltd. – organisation section, Nové Mesto nad Váhom
- Betamont Ltd., Zvolen
- CONTAL. Ltd., Žilina
- ELISS, Ltd., Žilina
- ESA Solution Ltd., Žilina
- Faculty of Electrical Engineering and Information Technology, Slovak Technical University, Bratislava
- Faculty of Electrical Engineering and Information Technology, Technical University, Košice
- Faculty of Mechanical Engineering, Technical University, Košice
- GiTy, a. s., Martin
- HELDIS Ltd., Ružomberok
- KIA Žilina
- MtF – Slovak Technical University, Bratislava
- National highway company (Národná diaľničná spoločnosť a. s.), Bratislava
- Rockwell Automation Slovakia Ltd.
- Siemens PSE Bratislava

- Siemens PSE, Žilina
- Siemens Rail Automation Engineering, Žilina
- Scheidt&Bachmann Slovensko Ltd., Žilina
- Skytoll Inc., Bratislava
- SOMI Systems Inc., Banská Bystrica
- Slovak Standards Institute, Bratislava
- Technical university Košice
- Transportation research institute, Žilina
- Intelligent transportation systems association (Združenie Inteligentné dopravné systémy Slovensko), Bratislava
- Želsys Inc., Bratislava
- ŽSR (Slovak Railways), Bratislava

International co-operation Partners

- ADAC – Allgemeiner Deutscher Automobil – Club e. V, Germany
- AŽD Praha Ltd., Prague, CR
- DE BUELE Technics, Hamme, Belgium
- ELTODO EG, Prague, CR
- Faculty of Transportation, Czech Technical University, Prague, CR
- HTE – Scientific Association for Infocommunications, Budapest, Hungary
- První Signální Inc., Ostrava, CR
- Transport telematics association (SDT – Sdružení pro dopravní telematiku), Prague, CR
- Scheidt&Bachmann, Mönchengladbach, Germany
- SIEMENS AG, Transportation Systems, Vienna, Austria
- Signalbau Inc., Přerov, CR
- Thales Rail Signalling Solutions GmbH, Vienna, Austria

Visitors to the Department

Name	Institution	Length of stay
Milan KUNHART	AŽD Praha, CR	5 days
Jerzy MIKULSKI	Politechnika Ślaska, Wydzial Transportu, Katowice,Poland	5 days
Andrzej BIAŁOŃ	Centrum naukovo-techniczne kolejnictwa, Warszawa, Poland	5 days
Jakub MŁYŃCZAK	Politechnika Ślaska, Wydzial Transportu, Katowice, Poland	3 days
Balázs SÁGHI	TU Budapest, Hungary	1 day
Vladimír FALTUS	FD ČVUT Praha, Czech Republic	2 days
Roman SLOVÁK	Bundesamt für Verkehr, BAV, Switzerland	1 day
Vladimír Iljič REČICKIJ	Business-industrial association of Russian federation, Moscow, Russia	1 day
Margarita GEORGIEVA	Todor Kableshkov University, Sofia, Bulgaria	5 days

Visits to Foreign Institutions

Name	Institution	Length of stay
Mária FRANEKOVÁ	Silesian University of Technology, Faculty of Transport, Katowice, Poland	3 days
	Silesian University of Technology, Faculty of Transport, Ustroň, Poland	3 days
	Krynica-Zdrój, Poland	3 days
	Todor Kableshkov University, Sofia, Bulgaria	5 days
	Vienna, Austria – world congress ITS 2012	1 day
Aleš JANOTA	Brussels, Belgium – DC-TUD COST	2 days
	Reykjavik, Island – DC-TUD COST	3 days
	Istanbul, Turekey – DC-TUD COST	3 days
	University Liège, Belgium	2 days

	Vienna, Austria – world congress ITS 2012	1 day
	Krynica-Zdrój, Poland	3 days
	Silesian University of Technology, Katowice, Poland	3 days
	UTH Radom, Poland	1 day
	Eltodo AG, Prague, Czech Republic	3 days
Karol RÁSTOČNÝ	TU Katowice (Ustroň), Poland	4 days
	ALPRO, Zagreb, Croatia	3 days
	TU Katowice, Poland	3 days
	KPM CONSULT, Brno, Czech Republic	2 days
Peter NAGY	Central control station ÖBB, climatic tunnel Arsenal Research Vienna, AT	1 day
Rastislav PIRNÍK	ČVUT- Faculty of Transport, CR	5 days
Juraj SPALEK	ELTODO EG, Prague, Czech Republic	3 days
	Meeting of departments, Ratboř, CR	3 days
	19th World Congress on ITS, Vienna, Austria	1 day
Juraj ŽDÁNSKY	University of West Bohemia, Pilsen	2 days
	Katowice-Ustroń, Poland	3 days
Ján HALGAŠ	Lappeenranta University of Technology, Finland	3 months
	University of Technology, Brno, Czech Republic	3 days
Peter MATIS	Silesian University of Technology, Katowice, Poland	4 days
Ľubomír PEKÁR	Univ. of Technology and Humanities in Radom, Poland	3 days
Tomáš MIKLUŠČÁK	Univ. of Technology and Humanities in Radom, Poland	3 days
Ján BEŇUŠ	Silesian University of Technology, Gliwice, Poland	8 days
Michal GREGOR	University of Technology, Brno, Czech Republic	3 days

Other Activities

Specialised Lectures and Courses Organized by the Department

Cryptography and its practical utilisation
Customer: Lecture for the students of Automation and Telecommunications
Lecturer: Martin Šuták – Gity, Inc., Martin
Date: 12 December 2012

Information systems security management
Customer: Lecture for the students of Safe process control
Lecturer: Martin Šuták, GiTy Inc., Martin
Date: 22 October 2012

Information systems security
Customer: Lecture for the students of Safe process control
Lecturer: Martin Šuták, GiTy Inc., Martin
Date: 22 October. 2012

Hardware and program equipment of AŽD ESA 33 electronic interlocking device
Customer: Lecture for the 2nd class students of PC
Lecturer: Petr Jelínek, AŽD Praha, Ltd.
Date: 21 November 2012

Program equipment of SIEMENS SIMIS W electronic interlocking device
Customer: Lecture for the 2nd class students of PC
Lecturer: Rastislav Kušpál, SIEMENS Ltd., Žilina
Date: 5 December 2012

Development of centralised autoblock in Hungary
Customer: Lecture for DCIS students and employees
Lecturer: Balázs Sághi
Date: 12 November 2012

Invited Lectures/Papers

Cryptography and its applying within safety – critical applications
Lecturer: Mária Franeková
Where: Faculty of transport, TU Katowice,
Date: 22.03.2012

Safety evaluation of data transmission within safety – related control systems
Lecturer: Mária Franeková
Where: Todor Kableshkov University, Sofia, Bulgaria,
Date: 10. 6. 2012 (within the Erasmus programme visit)

Education and research activities of Department of Control and Information Systems at University of Žilina
Lecturer: Mária Franeková
Where: Scientific seminar:„ Communication, electric power and informatics in transport. – КЕИТ 2012". Rimska Baňa – Bansko, Bulgaria,
Date: 8.6. - 9.6. 2012

Safety evaluation of the signalling systems
Lecturer: Karol Rástočný
Where: Faculty of transport, TU Katowice,
Date: 22.03.2012

Statistical distribution of traffic characteristics
Lecturer: Rastislav Pirník
Where: ČVUT- Faculty of transport,
Date: 13.11.2012

National system for traffic information in SR
Lecturer: Rastislav Pirník
Where: ČVUT- Faculty of transport,
Date: 13.11.2012

Operation of tunnel, operational states
Lecturer: Rastislav Pirník
Where: UoŽ – Road tunnels dispatchers' course, for NDS,
Date: 22.06.2012

Information and communication networks
Lecturer: Rastislav Pirník
Where: UoŽ – Faculty of building,
Date: 12.03.2012

Tunnel operation control (Central control system)
Lecturer: Jozef Hrbček
Where: UoŽ – Road tunnels dispatchers' course, for NDS,
Date: 22.06.2012

Membership in International Institutions /Committees

Mária Franeková
Member of the international programme committee of the 12th international conference Transport Systems Telematics TST'12, Katowice-Ustroń, Poland: 10. - 12. 10. 2012
Member of the editorial board of international scientific journal Advanced in Electrical and Electronic Engineering, Poland, ISSN 1804-3119
Member of the editorial board of international scientific journal Archives of Transport System Telematics, CR, ISSN 189-8208
Member of the editorial board of international scientific journal Journal of Scientific and Applied research, Bulgaria ISSN 1314-6289

Aleš Janota
Member of the Domain Committee Transport and Urban Development (DC TUD) COST, Brussels
Member of the programme committee of the 12th international conference Transport Systems Telematics TST'2012, Katowice-Ustroń, Poland: 10.-13.10.2012
Member of the programme committee of the XVI. International conference Computer Aided Science, Industry and Transport TRANSCOMP 2012, Zakopané, Poland: 3.-6.12.2012
Member of the programme committee of the 9th Symposium on Formal Methods for Automation and Safety in Railway and Automotive Systems FORMS/FORMAT 2012, Braunschweig, Germany: December 11-13, 2012
Member of the scientific committee of the 2nd Central European School of Doctoral Study, Krynica-Zdrój, Poland: 18.-20.09.2012

	Chairman of the editorial board of the international scientific journal Archives of Transport System Telematics, Katowice, Poland, ISSN 1899-8208
	Member of the international programming council of the journal TransNav International Journal on Marine Navigation and Safety of Sea Transportation, Gdynia, Poland, ISSN 2083-6473, ISSN 2083-6481 (electronic version)
	Member of scientific board of Faculty of transport and electrotechnics, UTH Radom, Poland
	Member of ACM – Association for Computing Machinery, USA
	Member of the International Institute of Informatics and Systemics, USA
Karol Rástočný	Member of the programme committee of the 12th International conference Transport Systems Telematics, Ustroň, Poland: 10. - 13. 10. 2012
	Member of the programme committee of the 9th International conference IEEE Applied Electronics, Pilsen, CR: 5. - 6. 9. 2012
	Member of the editorial board of the international scientific journal Transport Problems, ISSN 1896-0596
	Member of the editorial board of the international scientific journal Archives of Transport System Telematics, ISSN 1899-8208
	Member of the editorial board of the international scientific journal Advances in Electrical and Electronic Engineering, ISSN 1804-3119
	Member of the editorial board of the journal New railway trends, ISSN1212-3942
Juraj Spalek	chief editor delegate of the scientific journal ANNALS OF FACULTY ENGINEERING HUNEDOARA – JOURNAL OF ENGINEERING, ISSN: 1584-2665, ISSN: 1584-2673, indexed in COPERNICUS – Journal Master List
	Member of the scientific committee ACTA TECHNICA CORVINIENSIS – Bulletin of Engineering, e-ISSN: 2067-3809, Edited by Faculty of Engineering Hunedoara University Politehnica Timisoara, http://acta.fih.upt.ro/bibliographic-info.html
	Member of the programme committee of the international scientific journal Archives of Transport Systems Telematics, Polish Association of Transport Telematics, ISSN 1899-8208
	Member of the programme committee of the international scientific multiconference Federated Conference on Computer Science and Information Systems FedCSIS – event: International Conference on Wireless Sensor Networks (WSN'2012), Wrocław, Poland, 9 - 12 September, 2012 (http://www.fedcsis.org/wsn/committee)
	Member of the scientific committee and reviewer of the scientific electronic conference ICTIC 2012 (Information and Communication Technologies- International Conference), FMI-UoŽ, 19.- 23.3.2012
	Member of the appraisal team of the International Journal of Mechanic Systems Engineering (IJMSE), World Academic Publishing Company
Peter Vestenický	Member of the programme committee of the conference FedCSIS, Wrocław, Poland, 9 - 12 9. 2012

Membership in National Institutions/Committees

Mária Franeková	Member of the Cultural and educational grant agency (KEGA) MŠVVaŠ, SR, KEGA committee Nr. 2 Member of the Technical standardisation committee nr. 83, Slovak Institute of Technical Standardisation (SÚTN), Bratislava Member of the PROFIBUS.sk association, FEI STU Bratislava Member of the SSKI association (Slovak society for cybernetics and informatics), SAS Bratislava Member of the organisational committee of International scientific conference ELEKTRO 2012, Rajecké Teplice, SR: 21.- 22. 5. 2012 Member of the organisational committee of International scientific conference RTT 2012 - 14th International Conference on Research in Telecommunication Technologies, Boboty-Vrátna, SR: 21.- 22. 5. 2012 Member of the organisational committee of International scientific conference ITSIC 2012 – Information and Communication Technologies. 19. - 23. 5. 2012, Žilina
Aleš Janota	Member of the Technical standardisation committee Nr. 104 Industrial processes control, Slovak Institute of Technical Standardisation (SÚTN) Bratislava Member of the program committee of the 20th International symposium EURO-ŽEL2012 „New challenges for European railways ", Žilina: 5.–6.6.2012
Karol Rástočný	Chairman of the programme committee of the International conference on railway communication and safety technology, Vyhne: 08. – 10. 02. 2012 Member of the programme committee of the International symposium EURO – ŽEL 2012. Žilina, 05.- 06. 06. 2012 Member of the organisational committee of the International symposium EURO – ŽEL 2012. Žilina, 05.- 06. 06. 2012 Chairman of the editorial board of AT&P Journal, ISSN 1335-2237 Member of the Technical standardisation committee Nr. 83, Slovak Institute of Technical Standardisation (SÚTN), Bratislava
Juraj Spalek	Member of the Slovak society for cybernetics and informatics of SAV (SSKI) Member of the Slovak society for applied cybernetics and informatics (SSAKI) Member of the working group for technical sciences of the Agency for research and development support for Slovak Ministry of Education Member of the working group for OV 16 of the Accreditation committee of Slovak Ministry of Education
Rastislav Pirník	Member of the organisational committee of the 9th International conference ELEKTRO 2012, Rajecké Teplice, SR: 21.- 22. 5. 2012
Jozef Hrbček	Member of the organisational committee of the 9th International conference ELEKTRO 2012, Rajecké Teplice, SR: 21.- 22. 5. 2012

Membership in University Boards

Mária Franeková	Member of the Branch Committee of 5.2.14 Automation at the FEE University of Žilina Chairman of the Alumni Club (KAP) FEE association Member of the Scientific Board of FEE University of Žilina

	Member of the Organisational Board of Children university of Žilina, 9th – 13th July 2012
Aleš Janota	Member of the Scientific Board of FEE University of Žilina Member of the Branch Committee for science branch 5.2.14 Automation at the FEE University of Žilina Faculty coordinator of Erasmus programme (till 30.9.2012)
Karol Rástočný	chairman of the Branch Committee for study branch 5.2.14 Automation at the FEE University of Žilina Member of the Scientific Board of FEE University of Žilina Member of the FEE University of Žilina senate
Juraj Spalek	Member of the Scientific Board of University of Žilina Member of the Scientific Board of FEE University of Žilina Member of the Branch Committee 5.2.14 Automation FEE University of Žilina
Peter Vestenický	Member of the Branch Committee for science branch 5.2.14 Automation at the FEE university of Žilina
Emília Bubeníková	Member of the executional board of Alumni Club (KAP) FEE association

Awards

Award for an Excellent Presentation at the 14th Conference of Doctoral Students, Elitech 2012: Tomáš Mikluščak

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