

***FACULTY OF MANAGEMENT SCIENCE
AND INFORMATICS***

ANNUAL REPORT 2013

UNIVERSITY OF ŽILINA



Edited by Faculty of Management Science and Informatics
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FACULTY OF MANAGEMENT SCIENCE AND INFORMATICS



Foreword

Faculty of Management Science and Informatics, University of Žilina was founded on July 17th, 1990 by approval of University Senate. The main idea of foundation was integration of developing knowledge from IT in the Faculty Programmes of study. That was above all students and staff from Department of Technical Cybernetics existing from 1972 on the University (in that time University of Transport and Communication, Faculty of Mechanical-Electrical Engineering). From this time University and Faculty were going through many changes and development connected by evolution, as well events, caused by society changes and corresponding legislative.

Faculty of Management Science and Informatics is one of the seven Faculties at University of Žilina, where are:

- **Faculty of Operation and Economy in Transport**
- **Faculty of Electrical Engineering**
- **Faculty of Mechanical Engineering**
- **Faculty of Civil Engineering**
- **Faculty of Special Engineering**
- **Faculty of Human Sciences**

There are more than **13 000** students on the University of Žilina, including **1 459** students at the **Faculty of Management Science and Informatics**.

Study programmes at the Faculty are interdisciplinary coming out from more than 40- years experiences in education on the University, especially on the Department of Technical Cybernetics, as well from the programmes of study Information and Control Systems and Applied Mathematics - formers Study programmes at this Faculty.

Activities of the Faculty are determined by new trends of information and communication technology development, where the high priority task is to insure the continual interconnection between research, education and acceptance of postgraduates in the praxis. The main education and professional activities lie with fields as design and realization of technical tools for information and control systems, analysis, synthesis and design of integrated information and control systems, management, marketing, logistics, entrepreneurship, activity of transportation and communication systems, control and optimization of goods and passenger transport, control and optimization of databases design and their transmission and data processing, problematic of multimedia information systems and graphic information systems, simulation mediums for communication networks and systems and mathematical modelling.

Faculty of Management Science and Informatics offers the study in all three levels programmes of study (**Bachelor, Master and Doctoral**). All programmes are officially approved by the Accreditation Commission of the Slovak Republic. The programmes are interdisciplinary; they were conceived and created based on many years of the Faculty's successful research and educational tradition. Detailed descriptions of these programmes is performed in following text

During its existence, the **Faculty of Management Science and Informatics**, as both a research and teaching institution, became a worthy equal partner to similar faculties not just in Slovakia, but in other countries as well. Earning this reputation was a long and strenuous process; but now the scientific and academic staff of the Faculty, as well as their graduates, have achieved a well-deserved position in the world-wide academic community of informatics and management. **For a long time, our graduates have experienced great interest from employers. According to an official study in 2013, our Faculty ranked 3rd place among the top 20 faculties whose graduates were most in demand (in 2010 we were in first place; in 2011 and 2012 we ranked second one.)**

In conclusion I would like to stress that the main task of the technical-oriented faculties is to conduct continual education and research so that the knowledge obtained permits the graduates to contribute to society. I believe our Faculty's activities are helping our present and future students to be fully valuable individuals, capable by using their knowledge, skills and experiences in the conditions of the millennium.

Prof.Ing. Karol M a t i a š k o ,
PhD.

Dean

Presidium of the Faculty:

Dean: Prof. Ing. Karol **M a t i a š k o**, PhD.

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Faculty Registrar: Ing. Marta **Rešetková**, PhD..

Tel.: +421-41-513 40 75
e-mail: marta.resetkova@fri.uniza.sk

Departments of the Faculty:

Organisational structure of the Faculty creates Dean's Office, eight Departments, three special workplaces and two Sub-Campuses:

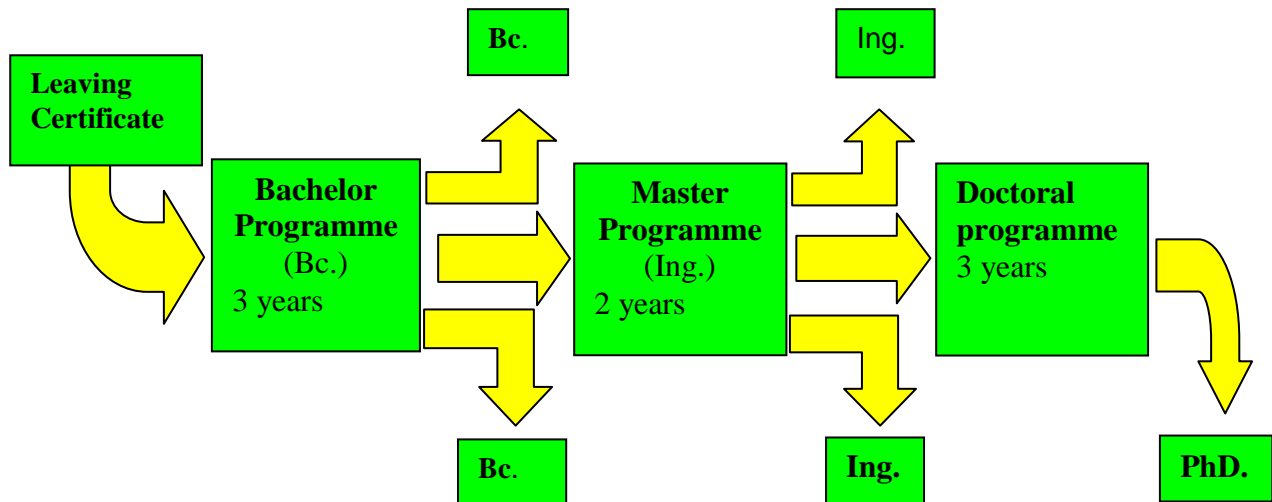
- **Department of Mathematical Methods**
- **Department of Macro and Microeconomics**
- **Department of Informatics**
- **Department of Technical Cybernetics**
- **Department of Information Networks**
- **Department of Transportation Networks**
- **Department of Management Theories**
- **Department of Software Technologies**
- **Information Centre**
- **Project's Centre**
- **Centre of Information Technologies**
- **Sub-Campus in the town Prievidza**
- **Sub-Campus in town Ružomberok**

Educational Activities

Educational activities consist of:

- Design and realization of technical means for information and management systems
- Analysis and synthesis of regulation and automation systems
- Control and optimisation methods
- Data transmission and data processing
- Issues concerning multimedia information systems, graphic systems and simulation of components for communication networks, systems and mathematical modelling
- Management, marketing, logistics, entrepreneurial skills, creation of transport and communication systems

Study Programmes



In the frame of **Bachelor Programme** there are three accredited programmes provided for study at the Faculty:

- *Informatics*
- *Computer Engineering*
- *Management*

The programme is a well-rounded higher education in the 1st degree.

Aim of the **Bachelor level** consists in preparation of experts on application of acquired knowledge in their professional life and at the same time to be able of study in the higher levels (MSc., PhD).

In the frame of **Master Programme** there are five accredited programmes provided to study at the Faculty:

- *Information Systems*
- *Applied Network Engineering*
- *Information Tools for Decision-Making Support*
- *Computer Engineering*
- *Management*

In the Programme **Information Systems** there are possibilities for the students to make choice in following Professional Orientations:

- **Data Processing**
- **Information-Communication Networks**
- **Business Informatics**
- **Distributed and Parallel Systems**

Goals of the **Masters level** consist in preparation of experts for commanding places in the area of application of acquired knowledge in the praxis, in the research and science and at the same time to be able for study in the doctoral level

In the frame of **Doctoral Programme** there are three accredited programmes provided for study at the Faculty:

- **Applied Informatics**
- **Informatics Tools for Decision- Making Support Systems**
- **Management**

Doctoral Programme is the highest level of higher education. The aim of the Doctoral Programme is to prepare the graduate student for independent, creative scientific-research work by giving the student comprehensive theoretical knowledge and mastery of the methods of scientific work as demonstrated in a given scientific project. The programme lasts three years (full time) or five years (part time). The Doctoral Programme requires 3 semesters of advanced study, satisfactory completion of a comprehensive examination, then, after 3rd semesters, submission of a written dissertation, based on independent original research that must be a significant contribution to the field of study. Oral examination consists of a defence of the dissertation. The graduate is granted the scientific academic title „**Philosophiae Doctor** (abbr. **PhD.**)“, which is written in abbreviation after the candidate's name.

Scientific and Professional Orientation of the Faculty:

Ambitious of the Faculty's activities is to connect high quality education with scientific research results and development.

Faculty's orientation in the scientific area is connected not only to traditions in the field of information and communication systems theory, applied informatics, mathematical methods, automation and management, but as well to the possibility of large-scale interdisciplinary interaction, based on the broad-spectral erudition of teachers and scientific workers of the Faculty. Therefore there is possibility to specify, as a priority, following perspective directions:

- **Information sciences and knowledge systems**
- **Intelligent transportation systems**
- **Mathematical modelling in the ICT, communication systems and management**
- **Management (information / communication)**
- **Information technologies and information techniques.**

The Faculty is involved in the following scientific fields:

- **Mathematical modelling, simulation and optimization of:**
 - databases,
 - information and transportation communication networks,
 - transport of goods and passengers

- **Information and technical security of:**
 - analysis and design of databases systems
 - analysis and design of multimedia systems
 - next generation communication networks
 - embedded and multi-agent systems

- **Management of human and technical resources:**
 - management, marketing, logistics and entrepreneurship
 - regulation automation systems

In the frame of the Faculty there are following long term research topics which should be developed in the future:

- **Applied mathematics**
- **Multimedia technologies**
- **Management and logistics**
- **Economic management**
- **Modern educational techniques and technologies**
- **Information and communication technologies for society development**
- **Simulation tools and simulation of technologic activities**
- **Modelling of database, distributed data processing and data mining**
- **Management. diagnostic, decision-making in complex systems by use of methods in applied mathematics and cybernetics with application in industry management and in management of complex systems**
- **Digital signal processing**

The scientific orientations of the Faculty's Professors are in following areas:

1. Prof.Ing Karol Matiaško, PhD.

Prof. Karol **Matiaško** is a lecturer, author, researcher and consultant, specializing in the areas of database systems and data processing. He started his career in informatics as a researcher at the Research Institute of Transport where he participated in the development of the database system core for the railway information system. His work at the University involved his participation in the design and/or development of many information systems for both industry and academia. Currently his research interests include *Data modelling and processing* and also the area of *Intelligent transport systems*. His teaching covers the areas of *Database systems, Data processing and Programming languages*. He has an extensive list of publications including textbooks on database systems and programming languages

2. Prof.RNDR. Jaroslav Janáček, PhD.

Prof. Jaroslav **Janáček** deals mostly with operations research and related disciplines as mathematical programming and transportation science. During the last decade, he focused on design of private and public service systems, where mathematical and informatics approach to the optimal system structure determination is based on solving discrete location problems. This research was continued with various generalizations of the approach to a many-to-many distribution system and a distribution system, where capacity limit and demand on compactness were imposed on the served areas. This part of research was performed on his own software. Recently he focused on so-called *Public service system design* and also on service systems, which provide fair access to a service. This research follows two streams, where the first one employs the above-mentioned developed software with the goal to adjust it so that it would be able to solve a public system design problem to exact optimum. The second stream makes use of *commercial software* (Xpress-IVE) and focuses on *design of an approximate method*, which would be able to solve very large instances of the p-median problem as a core of public service system design.

3. Prof.Ing. Juraj Miček, PhD.

Prof. Juraj **Miček**'s research interests include mainly control and information systems, practical system design and digital signal processing with particular emphasis on noise reduction. His work has resulted in the development of many unique systems and devices for both domestic and overseas applications; this has also resulted in more than forty scientific publications. Practical aspects of the design of systems based on thirty-two bit microcontrollers were dealt with in his textbook *Monolithic Microcomputers with ARM7Core, Architecture, Programming and Applications*. The problems of noise and interference were analysed in his scientific monograph *Noise in Signal Processing Systems*. Presently he is working on the solution of problems and the development of applications in the field of wireless sensory networks and multi-robotic systems. His teaching interests cover a wide range of subjects including signal processing, automatic control and information technology.

4. Prof. Ing. Martin Klimo, PhD.

Prof. Martin **Klimo** received his diploma in telecommunication engineering from the University of Transport and Communication (UTC) Zilina in 1973. From 1973 to 1990 he was an Assistant Professor on Technical Cybernetics Department at UTC. Since 1990 he held position as an Associated Professor and in 1993 he was appointed head of the Department of Information Networks. From 1990 to 1993, and since 1997 he is a member of University Scientific Board. He is presently a Professor at the Department of Information Networks and a national delegate in ICT Committee of the 7Frame Programme. His professional interests include *Communication theory*, *Queuing theory* and *Fuzzy logic implementation by memristors*. He is author of 3 monographs, 4 textbooks, 28 articles and 52 conference contributions

5. Prof. Ing. Matilda Drozdová, PhD.

Prof. Matilda **Drozdová** has been working in the area of information and communication services and information systems architecture since 1990. Currently, her research work is oriented to the implementation of ICT services to the real life, using of the principle *Model Driven Engineering* by the Architectures of the system creation.

In the past she promotes *e-education* as one of the ICT services at the university level by means of various national and international projects. She was as the team member in four national projects of State program of research and development, project manager of five projects of Slovak ministry for education research agency. In the international projects she was the team member two Leonadro da Vinci projects, three Tempus projects, one 5. Frame project and one 6. Frame project. She is authors of two books co-author 3 books and author and co-author more than 70 papers in the journals and contributions in the conference proceedings.

6. Prof. Ing. Štefan Hittmár, PhD.

Prof. Štefan **Hittmár** is a lecturer, author, researcher and consultant, specializing in the areas of management systems and information in decision making. He started his career in transport management as a researcher at the Research Institute of Transport where he participated in the development organizational, information and managerial processes in transport systems. There he was a member of team, head and contractor a lot of many scientific and practical projects, studies and research tasks.

His work at the University has involved his participation in the preparing and development of *Management theory* and in the application it for both industry and educational process. Currently his research interest includes *decision-making processes* and also the area of *modelling managerial activities*. His teaching covers the areas problematic of the basic *Management*, *Strategy management*, *Projecting of management system*, *Methodology of teaching process*. He has an extensive list of publications including textbooks and monographs on management area.

7. Prof. Ing. Tatiana Kováčiková, PhD.

Activities of Prof. Tatiana **Kováčiková** are focused to converged telecommunication network architectures, services and protocols. She participated in a number of international research projects such as COST, EURESCOM and EC funded projects. Since 2002, she has been actively involved in standardization in the area of Next Generation Networks, Cloud Computing and Intelligent Transport Systems at ETSI (European Telecommunication Standardization Institute) located in Sophia Antipolis, France.

8. Prof Ing. Josef Vodák, PhD.

Prof. Josef **Vodák** is working as a lecturer, researcher and consultant in the field of performance management with a particular interest in small and medium enterprises. Within the area of performance management, he focuses on the strategic perspective of a company, its market and value delivery, collaborations with other companies and, as one of the key areas, its human capital. For the future, he will continue to develop more advanced systems for company development and for increasing company value using concepts of performance management. He strongly believes that human capital is a key factor necessary for a success in company's performance management. He is also confident that performance management is a fruitful area for scientific as well as educational activities of a university, with potentially considerable impact on the business landscape

Scientific activities of the Faculty:

In the following list there are some of research projects realized in 2013 at the Faculty:

Projects supported by EU Foundations

1. LoE STF 448/01 ETSI STF 448/01 *Local Dynamic Map (LDM) Standardization for Vehicle ITS Station*
Prof.Ing. Tatiana **Kováčiková**, PhD.
2. LoE STF 440/02 ETSI STF 440/02 *Cable Network Transition to IPv6*
Prof.Ing. Tatiana **Kováčiková**, PhD.
3. 2013-03.15-03 *Micro-fluidic Simulations with Biomedical Applications*
Dr. Ivan **Cimrák**
4. FP7-PEOPLE-2011-CIG-303580 *Biomed-Micro-fluidics*
Dr. Ivan **Cimrák**

Science and Education Grant Agency – Ministry of Education in Slovak Republic

1. 1/1116/11 *Adaptive Data Distribution in Mobile Ad-hoc Networks*
Prof.Ing. Karol **Matiaško**, PhD.
2. 1/0067/11 *Dynamic and Content of Decision-Making Processes in Human Potential Motivation*
Assoc.Prof Ing. Martina **Blašková**, PhD
3. 1/0374/11 *Modelling and Optimization of Mobility and Infrastructure in Logical Networks*
Assoc.Prof.RNDr. Stanislav **Palúch**, PhD.
4. 1/0888/11 *Knowledge Management – Modelling and Applications*
Prof.Ing. Štefan **Hittmár**, PhD

5. 1/1099/11 *Modelling and Simulation of Dynamic Interactions Surroundings:
Driver/Car/Traffic Situation*
Prof. Ing. Mikuláš **Alexík**, PhD.
6. 1/0992/11 *Cooperation Management – Effective Access for Concurrence Advantage
Profit*
Assoc. Prof. Ing. Jozef **Strišš**, PhD.
7. 1/0296/12 *Public Service Systems with Fair Access to Service*
Prof. RNDr. Jaroslav **Janáček**, PhD.
8. 1/0339/13 *Use of Complex Data Recourses in Design and Solution of Microscopic
System Models Providing Public Services in Wide-Spread Area*
Assoc. Pro. Ing. Ľuboš **Buzna**, PhD.
9. 1/0421/13 *Efficiency Attribute and Human Capital*
Assoc. Prof. Ing. Alžbeta **Kucharčíková**, PhD.
10. 1/0526/13 *Modelling of Multilateral Relations of Economic Subjects and Quality
Enhancement in Decision-Making Processes with IOCT Support*
Ing. Emese **Tokarčíková**, PhD.
11. 035ŽU-4/2013 *Study Programme of 2nd Level: Operations Management and
Logistics*
Assoc. Prof. Ing. Jaroslav **Král**, PhD.
12. 060ŽU-4/2012 *Viro-on-line Tool to Education Support of Subjects in the IP Networks
Area and Communities Knowledge Portal*
Assoc. Prof. Ing. Pavol **Segeč**, PhD.
13. 2012et018 *Special Security Level-Crossing Equipment*
Ing. Michal **Hodoň**, PhD.

Applied Research Projects

1. 6/2013/FRI/R/190 *Arrangement of Address SW GTN for Particular Controlled Area*
Asasoc. Prof. Ing. Emil **Kršák**, PhD.
2. 10/2007/FRI/R *Application Support Services for iKVC-VIS System*
Asasoc. Prof. Ing. Emil **Kršák**, PhD.
3. 7/2013/FRI/R/190 *Development of SW GTNv4.7-BC Type with New
Function Attribute*
Asasoc. Prof. Ing. Emil **Kršák**, PhD.
4. 16/2013/FRI/R/150 *Development and Realization of Address Software to Control of
Railway Corridors*
Asasoc. Prof. Ing. Emil **Kršák**, PhD.

Projects supported by Agency for Science and Research

1. SK-SRB-0050-11 *Reconstruction and Revitalisation of Railway Infrastructure in Conformity with Regional Development*
Ing. Peter **Márton**, PhD.
2. 0441-11 *Optimization of Micro-fluidic Equipment for Biomedical Applications*
Dr. Ivan **Cimrák**
3. 0760-11 *Design of Fair Service Systems on the Transportation Networks*
Prof. Ing. Jaroslav **Janáček**

Another Projects

1. 867/2013 *Satisfaction Inquiry of Slovak Post's, Ltd. Customers with Quality of Post Services in 2013*
Assoc.Prof.Ing. Miroslav **Hrnčiar**, PhD.
2. 042/13_RT *Open Hardware for Applications in Various Research and Industry Fields*
Prof.Ing. Juraj **Miček**, PhD
3. SK-PL-0023-12 *Support Systems for Medical Decision-Making*
Assoc.Prof.Ing. Elena **Zaitseva**, PhD.
4. 1/2013 *Agreement of Financial Providing for Optical Network Infrastructure*
Asasoc.Prof.Ing. Emil **Kršák**, PhD.
5. 2012et016 *Arrangement of Attractive Virtual Education Portal*
Assoc.Prof.Ing. Vitaly **Levashenko**, PhD.
6. 0310/2008/SMS *Measurement-Preciseness - Test and Verification of Position Algorithms*
Assoc.Prof.Ing. Peter **Šefčík**, PhD.

Centre of Excellence

26220120050 *Centre of Excellence for Systems and Services of Intelligent Traffic IDS2*
Faculty is a University Coordinator
Leader of project: Prof.Ing. Karol **Matiaško**, PhD.

Scientific Board:

Chairman: Prof. Ing Karol **M a t i a š k o**, PhD.

Members:

Assoc.Prof.Ing. Martina Blašková , PhD.	PhD. Prof. Ing. Martin Klimo , PhD.
Assoc.Prof.Ing. Pavel Čičák ,	Prof.Ing. Milan Kolesár PhD.
Prof.Ing. Milan Dado , PhD.	Prof.Ing. Tatiana Kováčiková , PhD
Prof.Ing. Matilda Drozdová , PhD.	Assoc.Prof.Ing. Emil Kršák , PhD.
Assoc.Prof.Ing. Mária Đurišová , PhD.	Assoc.Prof.Ing.. Penka Martincová , PhD.
Assoc.Prof.Ing. Peter Fabían , PhD.	Prof. Ing. Juraj Miček , PhD.
Assoc.Prof.RNDr.Elena Gramatová , PhD.	Assoc. Prof. Ing. Vladimír Mlynarovič , PhD.
Assoc.Proff.Ing. Karol Grondžák , PhD..	Assoc. Prof. RNDr. Stanislav Palúch , PhD.
Assoc.Prof. Zdeněk Havlice , PhD.	Assoc.Prof. RNDr. Štefan Peško , PhD.
Prof. Ing. Štefan Hittmár , PhD.	Prof. Ing. Ladislav Šimák , PhD
Assoc.Prof.Ing. Miroslav Hrnčiar , PhD.	Prof. Ing. Karel Šotek , PhD.
Assoc. Prof. Ing. Vladimír Jamrich , PhD.	Prof.Dr.Ing. Róbert Štefko , PhD.
Prof. RNDr. Jaroslav Janáček , PhD.	Prof.Ing. Liberios Vokorokos , PhD.
Assoc.Prof.Ing. Ľudmila Jánošíková , PhD.	Prof.Ing. Peter Závodný , PhD.

In the procedure to be appointed as a *Professor* in 2013 was successful

<i>Name of candidate</i>	<i>Title of Inauguration work</i>
Assoc.Prof.Ing. Vitaly Levashenko , PhD.	Design of Systems for Support of Decision-Making on the base of Indefinite Dates

In the procedure to be appointed as *Associated Professor* were successful

<i>Name of candidate</i>	<i>Title of Habilitation work</i>
Ing. Pavel Segeč , PhD.	Protocol SIP in Multi-Service Communication Architectures
Ing. Norbert Adamko , PhD.	Agent Orientation in Simulation of Complex Service Systems
Ing. Ondrej Karpiš , PhD.	Wireless Sensory Networks
Ing. Milan Kubina , PhD.	Selection and Implementation of Information System CRM in the company
Ing. Peter Šefčík , PhD.	Efficient use of FPFA resources by implementation of selected DSP methods
Ing. Ján Kapitulík , PhD.	Analysis of Possibilities of Wireless Sensor Networks in Road Transport

Scientific Board of the Faculty, after successful defence of **Dissertation Thesis**, has appointed in **2013** with title **PhD.** following graduates of Doctoral Programme:

<i>Name</i>	<i>Theme of Dissertation Thesis</i>	<i>Supervisor</i>
Ing. Michal Hodoň	On board localization technologies for vehicle positioning	Prof. Dr.Dr.h.c.mult. Eckehard Schnieder
Ing. Miroslav Rusin	Data analysis and reliability in medical systems	Assoc.Prof.Ing. Elena Zaitseva , PhD.
Ing. Jana Púchyová	Behaviour of multi-agent systems with defined aim	Prof.Ing. Juraj Miček , PhD.
Ing. Dušan Nemček	Modelling of selected mechanisms with guaranty of service quality in communication networks	Assoc.Prof.Ing. Katarína Bachratá , PhD.
Ing. Ľubomír Takáč	Data-processing in wide-broad databases	Assoc.Prof.Ing.. Michal Zábovský , PhD.
Ing. Štefan Tóth	Image-processing with use of demand in VANET environment	Assoc.Prof.Ing. Emil Kršák , PhD.
Ing. Michal Salaj	Application of strategic 6-sigma tools in management of slender logistic operations	Assoc.Prof.Ing. Jaroslav Král , PhD.
Mgr. Anna Havranová	Use of BSC access in efficiency management	Prof.Ing. Josef Vodák , PhD.
Ing. Monika Kerestěšová	Planning model in management and human potential motivation in organization	Assoc. Prof. Ing. Martina Blašková , PhD.
Ing. Anna Závodská	Knowledge in strategic marketing	Prof. Ing. Josef Vodák , PhD.
Ing. Filip Janovič	Modelling and optimization of parallel algorithms efficiency	Prof. Ing. Ivan Hanuliak , PhD.
Ing. Dan Slováček	Modelling and optimization of parallel computers efficiency	Prof. Ing. Ivan Hanuliak , PhD.
Ing. Veronika Šramová	Use of scenarios in enterprise planning	Prof. Ing. Štefan Hittmár , PhD.
Ing. Martin Húdik	Modelling, optimization and prediction of parallel algorithms efficiency	Prof. Ing. Ivan Hanuliak , PhD.
Ing. Tomáš Majer	Problems of tracking in wide-ranging transport network	Assoc. Prof. Ing. Stanislav Palúch , PhD.

Ing. Marek Kvet	Design of wide-ranging public service systems with methods of covering	Prof. RNDr. Jaroslav Janáček , PhD.
Ing. Juraj Cenek	Spacing plans of lines in regional collective personal transport	Assoc. Prof. Ing. Ľudmila Jánošíková , PhD.
Ing. Lubomír Toman	Sophisticated tools for decision-making support in conditions of uncertainty by design of public service systems of evacuation types	Prof. RNDr. Jaroslav Janáček , PhD.
Ing. Miroslav Faktor	System of Micro-geometry Analysis in Tooled Surface 2D and 3D	Prof. Ing . Miroslav Neslušan , PhD.

Publication Activities:

Members of the Faculty of Management Science and Informatics have published in the year **2013** results of research activity in **259** publications. Some of the more significant titles there are in the following list.

Scientific monographs published in inland editors

VODÁK, J., SOVIAR, J., LENDEL, V., VARMUS, M.: *Marketing and Innovative marketing Management*
1st edition, Žilina, ISBN 978-80-971206-4-1, pp. 197

LEVASHENKO, V., ZAITSEVA, E., KOVALÍK, Š.: *Design of Systems in Support of Decision-Making on the Base of Infinitive Data*
1st edition, University of Žilina, ISBN: 978-80-554-0680-0, pp. 245

University textbooks published in inland editors

HITTMÁR, Š., LENDEL, V., KUBINA, M.: *Information Systems in Company*
1st edition, University of Žilina, ISBN 978-80-554-0712-8, 2013, pp.228

MIČEK, J., JUREČKA, M.: *Modern Means of Implementation of Methods in Digital Signals Processing I*
1st edition, University of Žilina, 2013, ISBN978-80-554-0714-2, pp.350

ŠEVČÍK, P., KAPITULÍK, J.: *Modern Means of Implementation of Methods in Digital Signals Processing II*
1st edition, University of Žilina, 2013, ISBN 978-80-554-0676-3, pp. 222

HITTMÁR, Š., JANKAL, R.: *Strategic Management*
1st edition, University of Žilina, 2013, ISBN 978-80-554-0734-0, pp.148

Scientific Works in Foreign Prestigious Journals

BOHÁČIK, J., DAVIS, N.D.: *Fuzzy Rule-Based System Applied to Risk Estimation of Cardiovascular Patients*

In: Journal of multiple-valued logic and soft computing. - ISSN 1542-3980. - Vol. 20, No. 5-6 (2013), pp. 445-466.

ZAITSEVA, E., LEVASHENKO, V.: *Multiple-Valued Logic Mathematical Approaches for Multi-State System Reliability Analysis*

In: Journal of applied logic. - ISSN 1018-4864. - Vol. 11, Iss. 3 (2013), pp. 350-362

RUSÍN, M., ARSAND, E., HARTWIGSEN, G.: *Functionalities and Input Methods for Recording Food Intake*

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Academic Senate of the Faculty:

Chairman: Assoc.Prof.Ing. Karol **G r o n d ž á k** , PhD.

Senate Registrar: Ing. Michal **Žarnay**, PhD.

Chamber of Employees:

Assoc.Prof.Ing. Norbert **Adamko**, PhD.

RNDr. Hynek **Bachratý**, PhD.

Assoc.Prof. Ing. Martina **Blašková**, PhD.

Ing. Jozef **Juríček**, PhD.

Assoc.Prof. Ing. Alžbeta **Kucharčíková**, PhD.

Ing. Peter **Palúch**, PhD. .

Ing. Juraj **Dubovec**, PhD.

Mgr. Lýdia **Gábrišová**, PhD.

Assoc.Prof.Ing. Karol **Grondžák**, PhD.

RNDr. Štefan **Kovalík**, PhD.

Ing. Peter **Márton**, PhD.

Assoc.Prof.Ing. Peter **Ševčík**, PhD.

Chamber of Students:

Bc. Miroslav **Cibuľa**

Bc. Róbert **Ďurec**

Pavol **Getler**

Michal **Krupka**

Lukáš **Lehota**

Oľga **Chovancová**

Ing. Marek **Šajna**

Human resource management

As far as the required qualification structure of the pedagogical staff at the Faculty is concerned, the situation seen within the University's context is shown in following table. It shows current number of employees at the Faculty and its development in according to categories within the period 2009- 2013.

CATEGORY/YEAR	2009	2010	2011	2012	2013
Professors	10	9	9	8	8
Guest Professors	1	-	-	-	-
Assoc. Prof.	15	16	17	18	22
Senior Lecturers PhD.	58	56	52	58	57
Senior Lecturers	13	9	9	7	6
Assistants	-	-	-	-	-
Lectors	5	4	4	3	2
Research staff	6	8	6	5	4
Tech. Admin. Staff	47	44	44	44	36
Total	155	146	141	143	134

Turnover of staff in 2013

Within the space of year **2013** the Faculty has accepted into pedagogical and scientific staff following members:

Ing. Jana **Púchyová**, PhD.

Ing. Martin **Húdik**, PhD.

Ing. Štefan **Toth**, PhD.

RNDR. Zuzana **Borčinová**

In the same period following members left the Faculty:

Ing. Tomáš **Bača**, PhD.

Ing. Mgr. Lubomír **Sadloň**, PhD.

Assoc.Prof.Ing. Peter **Gubiš**, PhD.

Ing. Ján **Repka**

AssocProf.Ing. Jaroslav **Král**, PhD.

Official guests from foreign institutions accepted by Deans Office in 2013:

Mr. V. Soběslav	University of Hradec Kralove (CZ)
Mr. Jorma J. Imppola	Sein]joki University of Applied Sciences (FIN)
Prof. S. Stankevich	CASRE, Kiev , (UA)
Assoc.Prof. Ing..Z.V. Sovreski , PhD.	University of Goce Dolčev – Štip (MD)
Assoc. Prof.V. F. Oana	Universitatea "Dunarea de Jos" din Galati (RO)
Assoc. Prof. R Dačiulyte	Mykolas Romeris University (LT)
Prof. V. Gražulis	Mykolas Romeris University (LT)
Assoc.Prof.Ing. M. Hub , PhD.	University of Pardubice (CZ)
Dr.W. Korneta	State Higher School of Vocational Education in Ciechanów (PL)
Assoc.Prof.Ing. S. Baumann , PhD.	Technical University of Dresden (D)
Dipl. Ing. B. Graf .	HfT Leipzig (D)
Dr.R. Szczebiot	PWSIP Lomza (PL)
Dr. A. Molga	University of Technology Radom (PL)
Dr.M. Wojtowicz	University of Technology Radom (PL)

Programmes of Study:

Bachelor Degree Programme: *INFORMATICS*

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5BF001	Algebra	2-2-0	6	DMM
	5BI037	Informatics 1	2-2-2	8	DI
	5BF015	Mathematics for Informatics	2-2-0	8	DMM
	5BL033	Introduction to studies	2-0-2	3	DIN
	5BE001	Basics of Economic Theory	2-2-0	5	DMME
	OPTIONAL				
	5BL015	Foreign Language	0-2-0	3	FHSc_DL
5BL009	Physical Education	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5BA026	Algorithmic Graphs Theory	2-2-0	6	DMM
	5BA024	Discrete Probability	2-2-1	6	DTN
	5BI038	Informatics 2	2-2-2	7	DI
	5BN010	Communication Technologies	2-0-2	5	DIN
	5BE002	Microeconomics	2-2-0	6	DMME
	OPTIONAL				
	5BF016	Practice of Mathematics	0-2-0	1	DMM
	5BL016	Foreign Language	0-2-0	3	FHSc_DL
	5BL010	Physical Education	0-0-2	1	IPE
5BL044	Physical Education Training Camp 1	0-1-0	2	IPE	

Recommended number of credits in the 1st year of study: 60

2nd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5BI039	Informatics 3	2-1-2	5	DI
	5BH001	Logical Systems	2-0-2	6	DTC
	5BF017	Mathematical Analysis 1	2-2-1	6	DMM
	5BI025	Assemblers	2-0-2	5	DTN
	OPTIONAL				
	5BE009	Economy of Enterprise	2-1-0	5	DMME
	5BI045	Graphics in Computers Applications	1-0-3	4	DIN
	5BI033	Spreadsheets	2-0-2	3	DI
	5BE021	Profession: Entrepreneur 1	1-2-0	2	DMME
	5BN013	Basics of Network Theory 1	2-0-2	6	DIN
	5BL017	Foreign Language	0-2-0	3	FHSc_DL
	5BL011	Physical Education 3	0-0-2	1	IPE
	5BL037	Physical Education Training Camp 1	0-1-0	2	IPE

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5UI024	Data Structures 1	2-0-2	6	DTN
	5BA022	Discrete Optimisation	2-0-2	6	DTN
	5BH018	Digital Computers	3-0-1	6	DTC
	5BI006	Basics of Database Systems	2-0-2	6	DI
	OPTIONAL				
	5BE008	Macroeconomics	2-2-0	5	DMME
	5BE014	Small and Medium Entrepreneurship	2-2-0	6	DMME
	5UI026	Electronic Processing and Documents Presentation	2-0-2	4	DMM
	5BI052	Metaprogramming	2-0-2	5	DST
	5BA008	Numerical Methods	2-0-2	3	DMM
	5BI044	Computers Graphic and Animation	1-0-3	4	DIN
	5BE022	Profession: Entrepreneur 2	1-2-0	3	DMME
	5BA030	Probability and Statistics	2-2-0	6	DTN
	5BL042	Sociology	1-2-0	5	DMT
	5BI048	Techniques of Programming 1	0-0-4	4	DI
	5BL018	Foreign Language 4	0-2-0	3	FHSc_DL
	5BL012	Physical Education 4	0-0-2	1	IPE

Recommended number of credits in the 2nd year of study: 120

3rd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
5	COMPULSORY				
	5UA013	Modelling and Simulation	2-0-2	6	DTN
	5BS001	Operational Systems	2-0-2	6	DI
	5US003	Software Engineering	2-0-4	6	DI
	OPTIONAL				
	5BI031	Database System - Access	2-0-2	4	DI
	5BA017	Data, Information, Knowledge	2-0-2	5	DMME
	5BS005	Identification of Systems	2-0-2	6	DTC
	5UM023	Communication Management	2-2-0	5	DMT
	5BF019	Mathematical Analysis 3	2-1-1	6	DMM
	5BH023	Microprocessors	2-0-2	6	DTC
	5US007	Multimedia Information Systems	2-0-2	6	DTN
	5UA005	Petri Nets	2-0-2	6	DTN
	5BL003	Law 1	2-2-0	6	DMME
	5BH021	Technical Equipment of PC	0-0-2	3	DTC
	5UA017	Queuing Theory	2-0-2	5	DMM
5BI029	Basics of Programming in WINDOWS	2-0-2	4	DST	
5BN015	Basics of Network Theory 2	2-0-2	6	DIN	
5BL013	Physical Education 5	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
6	COMPULSORY				
	5BZ001	Bachelor Project	0-0-8	12	G
	5BL040	English Language 1	0-0-0	3	FHSc_DL
	OPTIONAL				
	5IUE022	Taxes and Budget	2-1-0	5	DMME
	5BS012	Implementation of UNIX-LINUX	2-0-2	6	DMM
	5BS004	Information and Control Systems in Transport	2-0-1	3	DST
	5BI032	Compilers	2-0-2	6	DI
	5BS002	Management Information Systems	2-0-2	6	DMT
	5BA020	Modern Approximate Methods	2-0-2	4	DMM
	5UI014	Computers Graphics	2-0-2	6	DTN
	5BL004	Law 2	2-2-0	5	DMME
	5BL06	Psychology	2-1-0	4	G
	5BI022	Open Source Software	1-0-3	4	DMM
	5BI050	Techniques of Programming 2	0-0-4	4	DI
	5UA002	Game Theory	2-2-0	6	DMM
	5BA010	Scheduling Theory	2-2-0	6	DMM
	5UI002	Reliability Theory	2-0-2	5	DI
	5BI054	Development of Applications for Mobile Equipment	1-0-3	5	DST
5BL14	Physical Education 6	0-0-2	1	IPE	

Minimum number of credits to conclude the Bachelors Programme of study: 180

Compulsory Optional Courses

From the groups of Compulsory Optional Courses student is to choose one group of following courses groups which correspond to his future professional orientation in the Masters Degree Programme. These groups of Compulsory optional course are connected with the Programmes of study in MSc. Degree level due to professional orientation.

Information Systems -Business Informatics, Informatics Tools for Decision Support Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Autumn	5BE007	Finance of Enterprise	2-0-2	6	DMME
	COMPULSORY OPTIONAL				
Spring	5BA006	Modelling and Optimisation	2-0-2	6	DTN
	5BI046	Software Modelling	2-0-2	6	DST

Information Systems – Applied Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Autumn	5US009	Internet and Intranet Application Development	2-0-2	4	DST
	COMPULSORY OPTIONAL				
Spring	5BI010	JAVA – Language and Development Applications	2-0-2	6	DI
	5BA006	Modelling and Optimisation	2-0-2	6	DTN
	5BI046	Software Modelling	2-0-2	6	DST

Applied Network Engineering

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Autumn	5BN003	Computer Networks 1	2-0-4	6	DIN
	5BN011	Computer Networks 3	2-0-2	6	DIN
	COMPULSORY OPTIONAL				
Spring	5US004	Analysis of Processes	2-0-2	5	DIN
	5BN004	Computer Networks 2	2-0-4	6	DIN

Optional Courses

Following courses are recommended for the students intending to study in Masters Degree Programme

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
OPTIONAL					
Autumn	5BF019	Mathematical Analysis 3	2-2-1	6	DMM
	COMPULSORY OPTIONAL				
Spring	5BA030	Probability and Statistics	2-2-0	6	DMM

Bachelors Degree Programme: COMPUTER ENGINEERING

1st year

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5BF001	Algebra	2-2-0	6	DMM
	5BI037	Informatics 1	2-2-2	8	DI
	5BF017	Mathematical Analysis 1	2-2-1	6	DMM
	5BE001	Basics of Economic Theory	2-2-0	6	DMME
	5BF005	Basics of Physics	3-1-1	6	FEE
	OPTIONAL				
	5BF009	Practice of Mathematics	0-2-0	1	DMM
	5BL015	Foreign Language 1	0-2-0	3	FHSc-DL
	5BI011	Practice of Programming 1	0-0-2	1	DI
5BL009	Physical Education	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5BF004	Electrical Circuits	2-2-0	5	DTC
	5BI038	Informatics 2	2-2-2	7	DI
	5BN010	Communication Technologies	2-0-2	5	DIN
	5BF014	Mathematical Analysis 2	2-2-1	6	DMM
	5BH008	Theory of Automatic Control 1	2-1-1	6	DTC
	OPTIONAL				
	5BI036	Practice of Programming 2	0-0-2	1	DI
	5BL016	Foreign Language 2	0-2-0	3	FHSc-DL
	5BL044	Physical Education Training Camp 1	0-1-0	2	IPE
5BL010	Physical Education 2	0-0-2	1	IPE	

Recommended number of credits in the 1st year of study: 60

2nd year

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5BF007	Electronics	2-0-2	6	DTC
	5BI039	Informatics 3	2-1-2	5	DST
	5BH001	Logical Systems	2-0-2	6	DTC
	COMPULSORY OPTIONAL				
	5BF019	Mathematical Analysis 3	2-2-1	6	DMM
	5BN003	Computer Networks 1	2-0-4	6	DIN
	5BH009	Theory of Automatic Control 2	2-0-3	6	DTC
	5BS011	UNIX – Development Environment	1-0-3	4	DMM
	OPTIONAL				
	5BI045	Graphics in Computers Applications	1-0-3	4	DIN
	5BI025	Assemblers	2-0-2	5	DTN
	5BE021	Profession: Entrepreneur 1	1-2-0	2	DMME
	5BN013	Basics of Network Theory 1	2-0-2	6	DIN
	5BL017	Foreign Language 3	0-2-0	3	FHSc-DL
	5BL011	Physical Education 3	0-0-2	1	IPE
	5BL037	Physical Education Training Camp 1	0-1-0	2	IPE

From the group of Compulsory optional courses student has to choose min one course

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5BA024	Discrete Probability	2-2-1	6	DTN
	5BH002	Measurements	2-0-2	6	DTC
	5BL004	Law 2	2-2-0	5	DMME
	5BH018	Digital Computers	3-0-1	6	DTC
	5BH004	Digital Systems	2-0-2	6	DTC
	COMPULSORY OPTIONAL				
	5BN004	Computer Networks 2	2-0-4	6	DIN
	5BH022	Elements of Automatic Systems	2-0-2	6	DTC
	5BI006	Basics of Database Systems	2-0-2	6	DI
	OPTIONAL				
	5BI044	Animation in Computers Applications	1-0-3	4	DIN
	5UI026	Electronic Processing and Documents Presentation	2-0-2	4	Dmm
	5BF010	Complex Variable and Integral Transformation	2-1-1	4	DMM
	5BA008	Numerical Methods	2-0-2	3	DMM
	5BE022	Profession: Entrepreneur 2	1-2-0	3	DMME
	5BL042	Sociology	1-2-0	5	DMT
	5BL018	Foreign Language 4	0-2-0	3	FHSc-DL
	5BL012	Physical Education 4	0-0-2	1	IPE

Recommended number of credits in the 2nd year of study: 120

3rd year

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
5	COMPULSORY				
	5BH005	Electronic Systems	2-0-2	6	DTC
	5BH019	Construction and Technology of Electronic System Production	1-0-3	4	DTC
	5BS001	Operational Systems	2-0-2	6	DI
	COMPULSORY OPTIONAL				
	5BH013	Microcomputers and their Applications	1-0-3	6	DTC
	5BH023	Microprocessors	2-0-2	6	DTC
	5BI029	Basic Programming in Windows	2-0-2	4	DST
	OPTIONAL				
	5BI007	Algorithms and Computational Complexity	2-0-0	3	DI
	5BI031	Database Systems – Access	2-0-2	4	DI
	5BS005	Identification of Systems	2-0-2	6	DTC
	5UM023	Communication Management	2-2-0	5	DMT
	5US007	Multimedia Information Systems	2-0-2	6	DTN
	5UA005	Petri Nets	2-0-2	6	DTN
	5BN011	Computers Networks 3	2-0-2	6	DIN
	5BL003	Law 1	2-2-0	6	DMME
	5BN015	Basics of Network Theory 2	2-0-2	6	DIN
	5BH021	Technical Equipments of PC	0-0-2	3	DTC
	5US009	Internet and Intranet Application Development	2-0-2	4	DST
5BL013	Physical Education 5	0-0-2	1	IPE	

From the group of Compulsory optional courses student has to choose min one course

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
6	COMPULSORY				
	5BH0020	Computer Engineering	2-0-4	6	DTC
	5BZ001	Bachelors Project	0-0-8	12	G
	5BL040	English Language	0-0-0	3	FHSc-DL
	COMPULSORY OPTIONAL				
	5BI010	JAVA – Language and Development Applications	2-0-2	6	DI
	5BH014	Computer Process Control	2-0-3	7	DTC
	OPTIONAL				
	5BS012	Implementation of UNIX - LINUX	2-0-2	6	DMM
	5BS004	Information and Control Systems in Transport	2-0-1	3	DST
	5BI032	Compilers	2-0-2	6	DI
	5BE014	Small and Medium Entrepreneurships	2-2-0	6	DMT
	5BL004	Law 2	2-2-0	5	DMME
	5BL006	Psychology	2-1-0	4	G
	5UI002	Reliability Theory	2-0-2	5	DI
	5BI054	Development of Applications for Mobile Equipment	1-0-3	5	DST
	5BL014	Physical Education 6	0-0-2	1	IPE

From the group of Compulsory optional courses student has to choose courses to obtain 15 credits

Bachelor Degree Programme: MANAGEMENT

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5BF001	Algebra	2-2-0	6	DMM
	5BI047	Informatics for Management 1	2-1-1	6	DI
	5BF017	Mathematical Analysis 1	2-2-1	6	DMM
	5BL003	Law 1	2-2-0	6	DMME
	5BE001	Basics of Economic Theory	2-2-0	6	DMME
	OPTIONAL				
	5BF009	Practice of Mathematics	0-2-0	1	DMM
	5BI011	Practice of Programming 1	0-0-2	1	DI
	5BM021	Presentation Techniques	0-2-0	3	DMT
	5BL015	Foreign Language 1	0-2-0	3	FHSc-DL
5BL009	Physical Education	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5BI040	Informatics for Management 2	2-1-1	6	DI
	5BE014	Small and Medium Entrepreneurship	2-2-0	6	DMT
	5BM010	Management 1	2-2-0	6	DMT
	5BE002	Microeconomics	2-2-0	6	DMME
	5BE016	Business Economy	3-2-0	6	DMT
	OPTIONAL				
	5BL016	Foreign Language 2	0-2-0	3	FHSc-DL
	5BL010	Physical Education 2	0-0-2	1	IPE
	5BL044	Physical Education Training Camp 1	0-1-0	2	IPE

Recommended number of credits in the 1st year of study: 60

2nd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5BA015	Economical Statistics	2-1-1	6	DTN
	5BE005	Financial Accounting	2-2-0	6	DMME
	5BS013	Information Systems of Enterprise	2-0-2	6	DMT
	5UM011	Project Management	2-1-1	6	DMT
	OPTIONAL				
	5BI045	Graphics in Computers Applications	1-0-3	4	DIN
	5BI033	Spreadsheets	2-0-2	3	DI
	5BL17	Foreign Language 3	0-2-0	3	FHSc-DL
	5BL11	Physical Education 3	0-0-2	1	IPE
	5BL037	Physical Education Training Camp 1	0-1-0	2	IPE

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5BE018	Marketing	2-2-0	6	DMT
	5BM016	Operational Management	3-1-0	6	DMT
	5BM014	Human Resource Management	2-2-0	6	DMT
	OPTIONAL				
	5BI044	Computers Graphic and Animation	1-0-3	4	DIN
	5UI026	Electronic Processing and Documents Presentation	2-0-2	4	DMM
	5BA008	Numerical Methods	2-0-2	3	DMM
	5BI046	Software Modelling	2-0-2	6	DST
	5BL018	Foreign Language 4	0-2-0	3	FHSc-DL
5BL012	Physical Education 4	0-0-2	1	IPE	

Recommended number of credits in the 2nd year of study: 120

3rd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
5	COMPULSORY				
	5BM013	Quality Management	2-2-0	6	DST
	5BE007	Finance of Enterprise	2-2-0	6	DMME
	OPTIONAL				
	5BI031	Database Systems – MS Access	2-0-2	4	DI
	5BM017	Management 2	1-2-0	4	DMT
	5BS007	Multimedia Information Systems	2-0-2	6	DTN
	5BH021	Technical Equipments of PC	0-0-2	3	DTC
	5BN019	Basics of Research	0-2-0	3	DMT
	5BL013	Physical Education 5	0-0-2	1	IPE

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
6	COMPULSORY				
	5BZ001	Bachelors Project	0-0-8	12	G
	5BL002	Foreign Language 1	0-0-0	3	FHSc-DL
	OPTIONAL				
	5BS004	Information and Control Systems in Transport	2-0-1	3	DST
	5II014	Computers Graphics	2-0-2	6	DTN
5BL014	Physical Education 6	0-0-2	1	IPE	

Minimum number of credits to conclude the Bachelors Programme of study: 180

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Autumn	5UE013	Controlling	2-1-0	4	DMME
	5BM015	Supply Management	2-1-0	4	DMT
	5BM023	Marketing Communication	2-2-0	5	DMT
	5BA013	Modelling and Simulation	2-0-2	6	DTN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Spring	5UE022	Taxes and Budget	2-0-1	5	DMME
	5BL036	Business Ethics	2-1-0	4	DMT
	5BE020	Financial-Economical Analysis	2-1-1	4	DMME
	5BM018	Quality in Services	2-1-0	4	DM
	5BE008	Macroeconomics	2-2-0	5	DMME
	5BF014	Mathematical Analysis 2	2-2-1	6	DMM
	5BL038	Politology	2-2-0	4	DMT
	5BL004	Law 2	2-2-0	5	DMME
	5BL006	Psychology	1-2-0	4	G
5BL042	Sociology	1-2-0	5	DMT	

From the group of Compulsory optional courses student has to choose courses, so that to obtain 15 credits in Bachelors Programme of study.

Abbreviations: DMM - Department of Mathematical Methods
 DI - Department of Informatics
 DTC - Department of Technical Cybernetics
 DIN - Department of Information Networks
 DTN - Department of Transportation Networks
 DMT - Department of Management Theories
 DMME - Department of Macro and Microeconomics
 DST - Department of Software Technology
 G - Guarantee for Programme of Study
 FEE - Faculty of Electrical Engineering
 FHSc-DL - Faculty of Human Science – Department of Languages
 IPE - Institute of Physical Education

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Master Degree Programme: INFORMATION SYSTEMS

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5II015	Data Structures 2	2-0-2	5	DTN
	5II007	Database Systems 2	2-0-2	5	DI
	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5IN009	Optimisation of Networks	2-0-2	5	DTN
	COMPULSORY (due to Professional Orientation)				
	5IP001	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5IS008	Architectures of Information systems	2-0-2	5	DIN
	5II008	Discrete Simulation	2-0-2	5	DTN
	5IA002	Theory of Information	2-0-2	5	DMM
	COMPULSORY (due to Professional Orientation)				
		5IP002	Project 2	0-2-4	6

Recommended number of credits in the 1st year of study: 60

2nd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5II017	Cryptography and Safety	2-0-2	5	DMM
	5IP005	Internship	0-0-0	0	G
	COMPULSORY (due to Professional Orientation)				
		5IP003	Project 3	0-2-4	6

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5IZ001	Diploma Thesis	0-0-20	30	G
	5IL004	English Language 2	0-0-0	3	DL

Minimum number of credits to conclude the form of study: 120

Groups of Compulsory Optional courses from the kernel of the Programme of Study

Applied Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Autumn	5II013	Advanced Object Technologies	2-0-2	5	DTS
	5IE001	Theory of Enterprise	2-0-2	5	DMME
COMPULSORY OPTIONAL					
Spring	5II028	Database Languages	2-0-2	5	DI
	5II012	Data Mining	2-0-2	5	DI
	5IS006	Geographic Information Systems	2-0-2	5	DTN

Business Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Autumn	5IE017	Econometrics	2-0-2	5	DMME
	5IE015	Finance	2-2-0	5	DMME
	5II001	Fuzzy Sets and Neural Networks	2-0-2	5	DTN
COMPULSORY OPTIONAL					
Spring	5IE010	Accounting and Analysis	3-2-0	5	DMME
	5II024	Artificial Neural Networks and Soft Computing	2-0-2	5	DMME

Distributed and Parallel Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
COMPULSORY OPTIONAL					
Autumn	5IS007	Distributed Systems	2-0-2	5	DTC
	5IS011	HPC and Grid computing	2-0-2	5	DTC
	5IS013	Developing Standards Open MP and MPI	2-0-2	5	DTC
COMPULSORY OPTIONAL					
Spring	5IA006	Mathematical Programming	2-0-2	5	DTN
	5II026	Complexity of Distributed and Parallel Algorithms	2-0-2	5	DTC

From the group of Compulsory optional courses student has to choose courses, so that to obtain min 15 credits.

Groups of Optional courses

Applied Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
OPTIONAL					
Autumn	5IS009	Expert Systems	2-0-2	6	DTN
	5IS011	HPC and Grid computing	2-0-2	5	DTC
	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5II032	Design Patterns	2-0-2	5	DI

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
OPTIONAL					
Spring	5US004	Analysis of Processes	2-0-2	5	DIN
	5IA010	Implementation of Optimization Algorithms	2-0-2	5	DTN
	5IM014	Quality Management – Access and TQM Methods	2-1-0	5	DMT
	5IA008	Metaheuristics	2-0-2	5	DTN
	5IE012	Prognostics	2-0-2	6	DMME
	5IS010	Real Time Systems Programming	2-0-2	5	DI
	5II030	Techniques of Programming 3	0-0-4	4	DI
	5UA02	Game Theory	2-2-0	6	DMM
	5BA010	Scheduling Theory	2-2-0	6	DMM
	5UI002	Reliability Theory	2-0-2	5	DI

Business Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
OPTIONAL					
Autumn	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5IE005	Managerial Accounting	2-0-2	6	DMME
	5II032	Design Patterns	2-0-2	5	DI
	5II013	Advanced Object Oriented Technologies	2-0-2	5	DI
	5II023	Artificial Intelligence	2-0-2	5	DTN

Semester	OPTIONAL				
Spring	5II003	Database Languages	2-0-2	5	DI
	5UI026	Electronic Processing and Documents Presentation	2-0-2	4	DMM
	5IA010	Implementation of Optimal Algorithms	2-0-2	5	DTN
	5IM012	Quantitative Methods of Logistics	2-0-2	5	DMM
	5IA008	Metaheuristics	2-0-2	5	DTN
	5IE012	Prognostics	2-0-2	6	DMME
	5BA010	Scheduling Theory	2-2-0	6	DMM

Minimum number of credits to conclude the form of study: 120

Distributed and Parallel Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
	OPTIONAL				
Autumn	5IS009	Expert Systems	2-0-2	6	DTN
	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5IA009	Mathematical Aspects of Efficient Counting	2-0-2	5	DTC
	5II032	Design Patterns	2-0-2	5	DI

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
	OPTIONAL				
Spring	5US004	Analysis of Processes	2-0-2	5	DIN
	5IS006	Geographical Information Systems	2-0-2	5	DTN
	5IM014	Quality Management – Access and TQM Methods	2-1-0	5	DMT
	5IE012	Prognostics	2-0-2	6	DMME
	5IS010	Real Time Systems Programming	2-0-2	5	DI
	5BA010	Scheduling Theory	2-2-0	6	DMM
	5UI002	Reliability Theory	2-0-2	5	DI

Master Degree Programme: COMPUTER ENGINEERING

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY OPTIONAL				
	5IP0P1	Project 1	0-2-4	6	G
	5IH009	Digital Signal Processing 1	2-0-2	5	DTC
	5IH013	Technical Means of Control and Information Systems	2-0-2	5	DTC
	5IH011	Introduction to the Theory of Discrete Systems	2-2-0	6	DTC

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5IH002	Design of the Customer Integrated Circuits	2-0-2	5	DTC
	5IH006	Digital Data Transmission	2-0-2	5	DTC
	5IP0P2	Project 2	0-2-4	6	G

Recommended number of credits in the 1st year of study: 60

2nd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5IP005	Internship	0-0-0	0	DMT
	5IP0P3	Project 3	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5IL004	English Language 2	0-0-0	3	DL
	5IZ001	Diploma Work	0-0-20	30	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	COMPULSORY OPTIONAL				
	5IH007	Adaptive Systems of Automatic Control	2-0-2	5	DTC
	5IS007	Distributed Systems	2-0-2	5	DTCT
	5II017	Cryptography and Safety	2-0-2	5	DMM
	5II013	Advanced Object Oriented Technologies	2-0-2	5	DI
	5II021	Basics of Programming in the Kernel of an Operational System	2-0-2	5	DI

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	COMPULSORY OPTIONAL				
	5II012	Data Mining	2-0-2	5	DI
	5IH008	Digital Signal Processing 2	2-0-2	5	DTC
	5IA002	Theory of Information	2-2-0	5	DMM

From the group of Compulsory Optional Courses student must choose courses to fulfil minimum number of credits 15

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	OPTIONAL				
	5IH015	Applications of the microprocessors implemented into the FPGA devices	2-0-2	6	DTC
	5II019	Computer Speech Recognition	2-0-2	6	DTC

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	OPTIONAL				
	5UI026	Electronic Processing and Presentation of Documents	2-0-2	6	DTC
	5BA010	Scheduling Theory	2-2-0	6	DMM
	5IH010	Selected Methods of Signal Compression	2-0-2	6	DTC

Minimum number of credits to conclude the form of study: 120

www.fri.uniza.sk link: Study – Master study

Master Degree Programme: MANAGEMENT

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5IE017	Econometrics	2-0-2	6	DMT
	5IE005	Management Accounting	2-2-0	6	DMME
	5IM021	Marketing Control	2-2-0	6	DMT
	5US003	Software Engineering	2-0-4	6	DI
	5IP0M1	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5IM026	International Management and Marketing	2-2-0	6	DMT
	5IM022	Systems for Support of Decision-Making	2-0-2	6	DMT
	5IP0M2	Project 2	0-2-4	6	G

Recommended number of credits in the 1st year of study: 60

2nd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5IM027	Logistics	3-1-0	6	DMT
	5IM017	Organizational Behaviour	2-2-0	6	DMT
	5IP009	Design of Management Systems	0-4-1	6	DMT
	5IM009	Strategic Management	2-0-2	6	DMT
	5IP005	Internship	0-0-0	0	G
5IP0M3	Project 3	0-2-4	6	G	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5IL006	Foreign Language 2	0-0-0	3	DL
	5IZ001	Diploma Work	0-0-20	30	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	COMPULSORY OPTIONAL				
	5UM023	Managerial Communication	2-2-0	5	DMT
	5IM011	Management Games and Simulations	1-0-2	5	DMT
	5IM025	Marketing Tools and Applications	2-0-2	5	DMT
	5IM029	Research in Management	2-1-1	5	DMT

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	COMPULSORY OPTIONAL				
	5IM014	Complex Quality Management- TQM Methods	2-1-0	5	DMT
	5IM024	Marketing of Services	2-2-0	5	DMT
	5IE012	Prognostic	2-2-0	6	DMME

From the group of Compulsory Optional Courses student must choose courses to fulfil minimum number of credits 15

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	OPTIONAL				
	5IS009	Expert Systems	2-0-2	4	DTN
	5IE015	Finance	2-2-0	5	DMME
	5US009	Internet and Intranet Application Development	2-0-2	4	DST

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	COMPULSORY				
	5IS008	Architecture of Information Systems	2-0-2	5	DIN
	5IS006	Geographical Information Systems	2-0-2	5	DTN
	5IE006	Capital and Investment Theories	2-2-0	6	DMME
	5IM012	Quantitative Methods of Logistics	2-0-2	5	DMM
	5IM018	Management of Processes	2-2-0	4	DST

Minimum number of credits to conclude the form of study: 120

www.fri.uniza.sk link: Study – Master study

Master Degree Programme: APPLIED NETWORK ENGINEERING

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5IH017	Interconnected Embedded Systems	3-0-1	6	DTC
	5IH009	Digital Signal Processing 1	2-0-2	5	DTC
	5II021	Basics of Programming in the Kernel of an Operational System	2-0-2	5	DI
	5IP001	Project 1	0-2-4	6	G
	OPTIONAL				
5IN033	Advanced Connections in Information-Communication Networks	2-0-4	6	DIN	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5IN018	Theory of Communication	2-0-2	6	DIN
	5IP002	Project 2	0-2-4	6	G
	OPTIONAL				
5IN020	Advanced Connections in Information-Communication Networks	2-0-5	6	DIN	

Embedded Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5IH002	Design of the Customer Integrated Circuits	2-0-2	5	DTC
	5IH014	Digital Control	3-1-0	6	DTC
	5IH012	Techniques of Network Communication	2-0-2	6	DTC

Network Infrastructure

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5IN014	Network Integration	2-0-2	5	DIN
	5IN016	Design of Networks 1	2-0-6	6	DIN
	5IN010	Theory of Information Networks	2-0-2	5	DIN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	OPTIONAL				
	5UI026	Electronic Processing and Presentation of Documents	2-0-2	4	DMM

2nd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5IP005	Internship	0-0-0	0	G
	5IP005	Project 3	0-2-4	6	G

Embedded Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5IH019	Applied Electronics	2-0-2	6	DTC
	5IH023	Programming of Implemented Systems	2-0-2	6	DTC
	5IH021	Sensors of Non-Electrical Quantum	3-0-1	6	DTC

Network Infrastructure

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5IN027	Algorithms in Networks	2-0-2	6	DIN
	5IN031	Optimisation of Convergent Networks	2-0-6	6	DIN
	5IN011	Design of Networks 2	2-0-2	6	DIN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5IZ001	Diploma Thesis	0-0-20	30	G
	5IL006	English Language 2	0-0-0	3	DL

Minimum number of credits to conclude the form of study: 120

**Master Degree Programme: INFORMATION TOOLS FOR DECISION-MAKING
SUPPORT SYSTEMS**

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5II015	Data Structures 2	2-0-2	5	DTN
	5II007	Database Systems 2	2-0-2	5	DI
	5IN009	Optimisation of Networks	2-0-2	5	DTN
	5IP0R1	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	COMPULSORY				
	5IS008	Architecture of Information Systems	2-0-2	5	DIN
	5II008	Discreet Simulation	2-0-2	5	DTN
	5IS006	Geographic Information Systems	2-0-2	5	DTN
	5IA006	Mathematical Programming	2-0-2	5	DTN
	5IA008	Metaheuristics	2-0-2	5	DTN
	5IP0R2	Project 2	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	COMPULSORY				
	5II001	Fuzzy Stets and Neural Networks	2-0-2	5	DTN
	5II017	Cryptography and Safety	2-0-2	5	DMM
	5IP005	Internship	0-0-0	0	G
	5IP003	Project 3	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	COMPULSORY				
	5IL004	English Language 2	0-0-0	3	FHSc-DL
	5IM012	Quantitative Methods in Logistics	2-0-2	5	DMM
	5IZ001	Diploma Work	0-0-20	30	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	COMPULSORY OPTIONAL				
	5IA005	Petri Nets	2-0-2	6	DTN
	5IE001	Theory of Enterprise	2-0-2	5	DMME

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	COMPULSORY OPTIONAL				
	5IA010	Implementation of Optimization Algorithms	2-0-2	5	DTN
	5IN008	Communication Systems	2-0-2	5	DTN

From the group of Compulsory Optional Courses student must choose at least one course in each semester

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	OPTIONAL				
	5IS009	Expert Systems	2-0-2	6	DTN
	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5BI025	Assemblers	2-0-2	6	DTN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	OPTIONAL				
	5II028	Database Languages	2-0-2	5	DT
	5UI026	Electronic Processing and Presentation of Documents	2-0-2	4	DMM
	5IE012	Prognostics	2-0-2	6	DMME
	5BI050	Techniques of Programming 2	0-0-4	4	DI
	5UA002	Game Theory	2-2-0	6	DMM
5BA10	Scheduling Theory	2-2-0	6	DMM	

Minimum number of credits to conclude the form of study: 120

www.fri.uniza.sk link: Study – Master study

Students with excellent results:

Student Name	Title of Thesis	Supervisor
Vladimír Smataník	Integration of services by ESB according to principles of the SOA on IBM Web Sphere Message Broker platform	Ing. K. Zábovská , PhD.
Vendelín Ružička	Implementation of the synchronous API of IndexedDB database.	Ing. J. Varga
Miroslav Mačura	Constraint programming for the Vehicle Assignment Problem	Assoc.Prof. Ing. Ľ. Jánošíková , PhD.
Zuzana Janigová	Workflow support in an information system for energy commodity trading	Ing. D. Novotný
Martin Pohančenič	Design and implementation of a system to interconnect VoIP services and CERN's telephony network	MSc. R. Sierra
Maroš Bálint	Shortest Path Problem on Huge Transportation Networks	Assoc.Prof. RNDr. S. Palúch , PhD..
Dušan Dragula	Mobile client - server application built on the architecture WinRT	Dr. I. Cimrák , .
Martin Chovanec	Operation system for single-chip microcontrollers with Cortex-M3 core	Assoc.Prof. Ing. J. Kapitulík , PhD.
Ján Piecka	Econometric modelling of the Yield Curve in the Open-Source	Ing. Z. Staníková , PhD.
Marcel Kocifaj	Proposal of cooperation strategy for ŽILPO, Ltd.	Assoc.Prof. Mgr. J. Soviar , PhD.
Ivana Klučiarová	Information providing of selected business innovation processes	Ing. V. Lendel , PhD.
Martin Kubík	Finding of motivation climate and the proposal of motivation program of employees and managers in secondary schools in Martin	Assoc.Prof. Ing. M. Blašková , PhD.
Eliška Čavošová	Corporate marketing strategy in cooperation environment	Assoc.Prof. Mgr. J. Soviar , PhD.
Marián Krkoš	FPGA implementation of the traffic signs recognition system	Assoc.Prof. Ing. P. Ševčík , PhD.
Juraj Branický	Integration of services by ESB according to principles of the SOA on IBM Web Sphere Message Broker platform	Ing. K. Zábovská , PhD.
Monika Bačíková	The Rationalization of Selected Logistics Processes of Company	Prof. Ing. Š. Hittmár , PhD.
Alžbeta Jánošíková	Heuristics for Job Shop Problem	Assoc.Prof. RNDr. S. Palúch , PhD..
Alžbeta Pallová	Proposal of motivation program for chosen organization	Assoc.Prof. Ing. M. Blašková , PhD .
Katarína Spuchľáková	Application of Quality Management Methods and Tools in Manufacturing Business	Assoc.Prof. Ing. J. Král , PhD..
Katarína Kojtalová	The Rationalization of Selected Processes of Galimex, Ltd.	Prof. Ing. Š. Hittmár , PhD.

Students' participation at the Professional Competitions:

Networking Academy Games 2013, Technical University of Košice

Participants: Ján Janovic	1st Place in category UNI
Bc. Ján Hrnko	2nd Place in category UNI
Bc. Matej Klotton	3rd Place in category PT
Bc. Michal Kormoš	4th Place in category PT

Competition Starcraft Micro AI Tournament

Participants: Tomáš Isteník	Category Epholl
Martin Olešnaník	Category Nixone
Ján Mokrý	Category IronFist

Red-Bot – Software Robot Competition 2013 supported by **Red Hat** Company, Brno (CZ)

Participants: Students from Slovakia and Czech Republic – 18 teams

Successful students from the Faculty:

Matej Perina ,	Peter Orság
Ján Janovic	Lukáš Hulata
Štefan Mrázik .	

International Collegiate Programming Contest CERC 2013, Krakow (PL)

Participants:

Ivana Drábiková ,	Tomáš Isteník ,
Martin Olešnaník	Tomáš Kuric ,
Matej Papík ,	Marek Drevenák

Students

In November 2013, there were at the Faculty in Bachelors degree programme **1038** students, in Masters Degree programme **372** students and **38** doctoral full-time students and **12** doctoral part-time students. An overview of number of students within last five years is on the following tablet:

Number of Bachelor students

<i>Study programme</i>	1 st year	2 nd year	3 rd year
Informatics	317	186	191
Computer Engineering	58	25	39
Management	85	64	73
Total	460	275	303
Total	1038		

Number of Master students

<i>Study programme</i>	1 st year	2 nd year
Information Systems	69	109
Applied Network Engineering	18	17
Computer Engineering	22	29
Management	48	60
Total	157	215
Total	372	

Number of Doctoral full-time students

<i>Study programme</i>	1 st year	2 nd year	3 rd year
Applied Informatics	8	9	12
Informatics Tools for Decision Making Support System	0	2	0
Management	2	2	3
Total	10	13	15
Total	38		

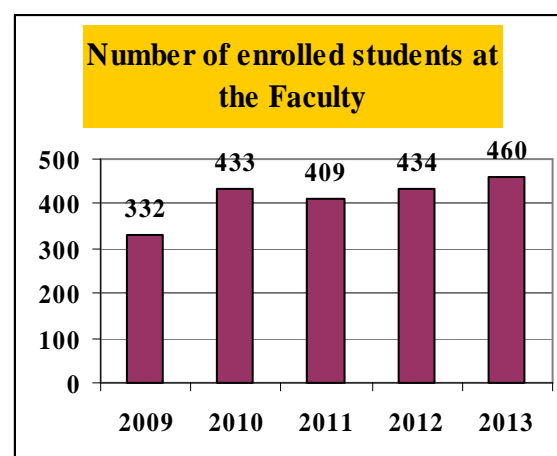
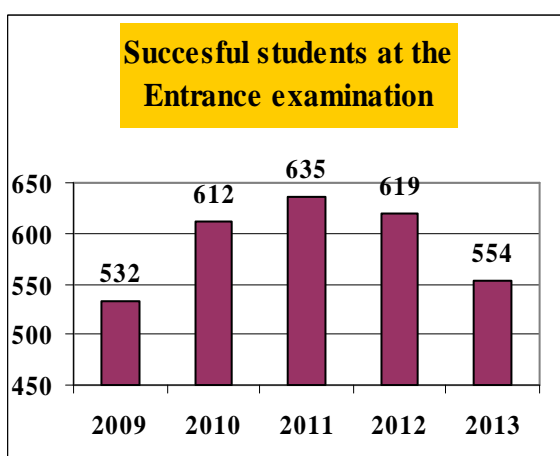
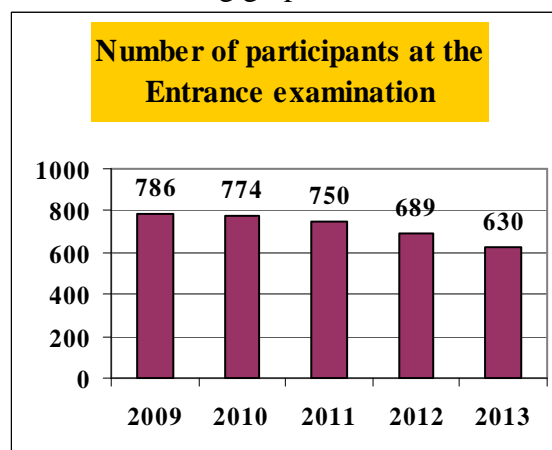
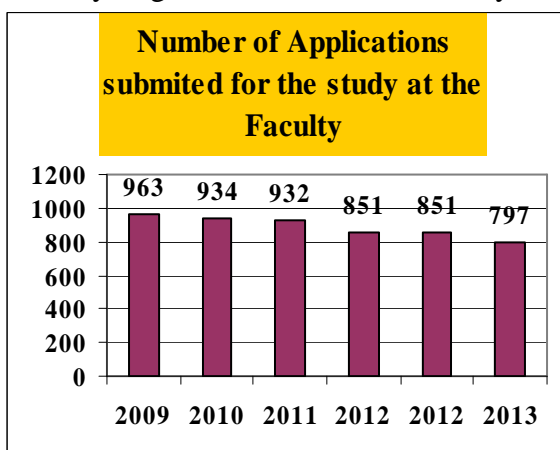
Apart this number, there are at the present **11 part-time Doctoral students** at the Faculty.

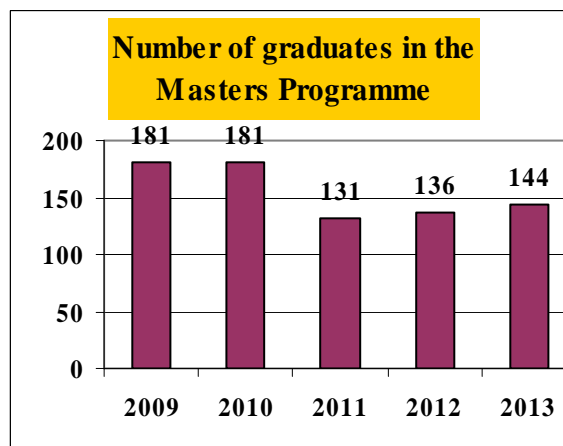
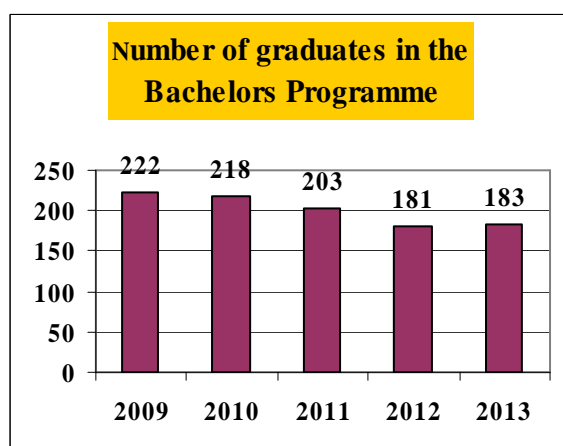
An overview of the candidates for the study, students and graduates at the Faculty in the last five years is illustrated in following graphs:

	2009	2010	2011	2012	2013
Bc.	890	872	996	1011	1038
MSc.	392	363	351	380	372
PhD.	66	67	66	55	49
Total	1348	1302	1413	1438	1459

In June 2013 participated in the Entrance exams **630** candidates for the study at the Faculty. From this number there were **564** successful and **460** students were enrolled. They started in September 2013 their Programmes of study at the Faculty

The survey of graduates within the last 5 years is on the following graphs:





Programme ERASMUS and other international activities of the Faculty

Partner's institution with ERASMUS bilateral agreements in 2013

Hochschule für Technik und Wirtschaft Dresden (D)

Technische Universität Dresden (D)

Hochschule für Telekommunikation, Leipzig (D)

JAMK University of Applied Sciences Jyväskylä, School of Information Technology, (FIN)

Seinäjoki University of Applied Sciences, (FIN)

University of Porto (P)

Universitat de les Illes Balears (E)

Mykolas Romeris Universitetas (LT)

University of Zagreb (HR)

University of Debrecen (H)

College of Telecommunications and Posts (BG)

Technical University of Sofia (BG)

Univerzita Karlova v Praze (CZ)

University of Hradec Králové (CZ)

University of Pardubice (CZ)

The State Higher School of Vocational Education in Ciechanów (PL)

Politechnika Lubelska (Lublin University of Technology) (PL)

College of Computer Science and Business Administration in Lomza (PL)

Kielce University of Technology (PL)

West Pomeranian University of Technology, Szczecin (PL)

In the year **2013** followed **30** students in the frame of the programmes ERASMUS and others exchange programmes, the programme of study at the partner's foreigner Universities and Institutions of the Faculty.

Foreign Students at the Faculty in 2013

In the frame of Student Training Agreement with Telecom SudParis Evry, FRANCE 1 student took part in 2013 of two months internship at the Faculty and in the frame of the programmes ERASMUS 2 students from University of Porto, 1 student from University of Zagreb, 2 students from partners Universities in Poland, 1 student from Greece and 2 students from Czech Republic..

Information Centre

At the Faculty of Management Science and Informatics was created **Information Centre**, which provides service for the study and acquiring of information. Centre is furnished with professional literature and with few efficient computers connected on the Internet.

Information Centre provides:

- counselling service for students in composition of Programmes of study
- coordination of students mobility and counselling service about possibility of study on the other universities abroad
- presentation and propagation of the Faculty in its various activities
- library service and coordination of editorial activity
- registration of in tray and out tray (letters, journals, package of books and parcels , ...

Intranet of the Faculty

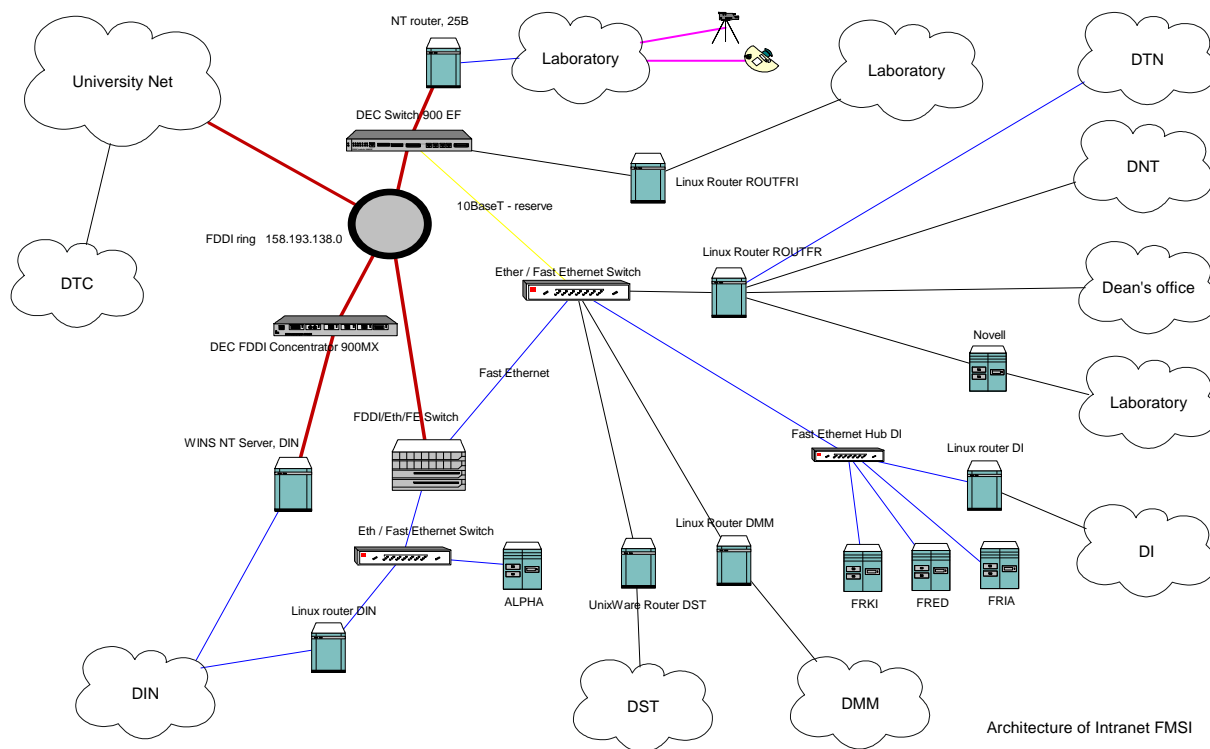
It was in 1992 when the Intranet of Faculty was created and in the meantime was continuously improving. It came into existence from the needs to process and to make accessible lot of information to students and to pedagogical staff, as well. The intranet of Faculty is a part of University Intranet, which allows access to SANET (Slovak Academic Network).

Conception of Intranet Faculty is based on the fact, that every Department is in possession of the own network, which is connected through ETERNET (10BaseT, 100BaseT or Gigabit Ethernet) to the faculty network. Apart from there are a special segments of this network - research laboratories for multimedia, parallel distributed systems, clusters, database systems, operating systems, e-business, e-learning etc.

There are following information systems at the Intranet of FMSI in service:

- **Information about study at the Faculty,**
- **News, messages,**
- **Events,**
- **Economics,**
- **Personal data, research data and information**
- **E-learning and distant learning subsystems,**
- **Study results and**
- **Assessments**

Architecture of INTRANET:



Abbreviations of Departments:

- | | | |
|---|---|------|
| Department of Mathematical Methods | - | DMM |
| Department of Informatics | - | DI |
| Department of Macro and Micro economy | - | DMME |
| Department of Technical Cybernetics | - | DTC |
| Department of Info Communication Networks | - | DIN |
| Department of Transportation Networks | - | DTN |
| Department of Management Theories | - | DMT |
| Department of Software Technologies | - | DST |

Department of Mathematical Methods

Head of Department: Assoc.Prof. RNDr. Stanislav **P a l ú c h** , PhD.

Tel.: +421-41-513 4250
e-mail: stanislav.paluch@fri.uniza.sk

Teaching Staff:

Assoc.Prof. RNDr. Štefan **Peško**, PhD.

RNDr. Ida **Stankovianska**, PhD.

RNDr. Rudolf **Blaško**, PhD.

Mgr. Peter **Czimmermann**, PhD.

Mgr. Lýdia **Gábrišová**, PhD

Mgr. Michal **Kaukič**, PhD.

RNDr. Aleš **Kozubík**, PhD

Ing. Tomáš **Majer**, PhD.

RNDr. Július **Rebo**, PhD.

RNDr. Alžbeta **Klaudinyová**

RNDr. Zuzana **Borčinová**

Administrative Department: Ing. Ľubica **Micháľková**

Tel.:+421-41-513 4251

PhD students

Mgr. Marian **Kováč**

Ing. R. **Hajtmanek**

Ing. Tomasz **Kanik**

Ing. I. **Urbaničová**

PhD.-Programme

<i>Theme</i>	<i>Student</i>	<i>Supervisor</i>
1. Possibilities of Parallel Calculations in Solving Discreet Optimization Problems	Mgr. M. Kováč	Assoc.Prof.RNDr. S. Palúch , PhD.
2. Decision-Making Models in Diagnose Determination in Veterinary Medicine	Ing. T. Kanik	Assoc.Prof.RNDr. Š. Peško , PhD.
3. Modelling of Uniform Schedules in Conditions of Uncertainty	Ing. R. Hajtmanek	Assoc.Prof.RNDr. Š. Peško , PhD.
4. Facility Location with Nonstandard Objective Function	Ing. I. Urbaničová	Assoc.Prof.RNDr. S. Palúch , PhD.

Equipment

Computer Laboratory of UNIX, Cryptography, Computer Security and Open Source Software Solutions.



Scientific Activities of Assoc.Professors

1. Assoc.Prof.RNDr. Stanislav **P a l ú c h** , PhD.

Applied mathematics, Graph theory, Discrete optimizations and their application in transport, Cryptography, Theory of information, Scheduling theory

2. Assoc.Prof.Ing. Štefan **P e š k o** , PhD.

Applied mathematics, Graph theory, Discrete optimizations and their application in transport, Scheduling theory

BACHELOR THESIS

No.	Student	Theme	Supervisor
1.	J. Černý	New activities for children educational software GCompris.	Mgr. M. Kaukič, PhD.
2.	J. Hajnár	Multiplatform Game development with Open Source tools.	Mgr. M. Kaukič, PhD.
3.	T. Krnčok	Heuristics for p-centre on graphs.	RNDr. R. Blaško, PhD.
4.	M. Ľuba	Rough set theory implementation for OSS Weka	Ing. T. Kanik
5.	R. Orješek	Intelligent Home - Automated Solution	Ing. T. Kanik
6.	R. Sokol	OSS software for videoconferencing and distance learning	Mgr. M. Kaukič, PhD.

MASTER THESIS

No.	Student	Theme	Supervisor
1.	M. Bálint	Shortest Path Problem on Huge Transportation Networks	Assoc.Prof. RNDr. S. Palúch, PhD..
2.	P. Čanecký	Digital processing of online forms in LaTeX	RNDr. R. Blaško, PhD.
3.	I. Dzurek	Models of transport demand estimation in municipal public transport	Ing. T. Majer, PhD.
4.	J. Hedvigy	Electronic filing room communication interface	Ing. T. Majer, PhD.
5.	A. Jánošíková	Heuristics for Job Shop Problem	Assoc.Prof. RNDr. S. Palúch, PhD..
6.	M. Kejmar	Project planning problem with limited number of machines	Assoc.Prof. RNDr. S. Palúch, PhD..
7.	M. Melko	Communication centre in the portal environment	Mgr. M. Vančo RNDr. M. Kaukič, PhD.
8.	M. Németh	Comparison of Algorithms for k-Shortest Paths Problem	Assoc.Prof. RNDr. S. Palúch, PhD..
9.	P. Ovsák	Timetable design in municipal passenger transport.	Assoc.Prof. RNDr. S. Palúch, PhD..
10.	J. Štencek	Travelling Salesman Problem	Ing. T. Majer, PhD.
11.	M. Štepanovič	Lightweight modular source code re-factoring tool	Ing. J. Cápik Ing. T. Majer, PhD.
12.	I. Urbaničová	Open Shop Problem	Assoc.Prof. RNDr. S. Palúch, PhD..
13.	P. Zúber	Interactive system of bus schedule design in municipal passenger transport	Assoc.Prof. RNDr. S. Palúch, PhD..

Sojourns of Pedagogical Staff at Foreign Institutions in 2013

(Except for Czech Republic)

<i>Name</i>	<i>Country</i>	<i>Institute</i>	<i>Date</i>
Assoc.Prof.RNDr. S. Palúch ,PhD.	SL - Portoroz	STA Conference	25. 5. – 28. 5. 2013
Assoc.Prof.RNDr. Š. Peško , PhD.	SL - Portoroz	STA Conference	25. 5. – 28. 5. 2013
Ing. T. Majer , PhD.	SL - Portoroz	STA Conference	25. 5. – 28. 5. 2013
Assoc.Prof.RNDr. S. Palúch ,PhD.	PL - Katowice	Silesian Uni.	26. 6. – 28. 6. 2013
Ing. T. Majer , PhD.	PL - Katowice	Silesian Uni.	26. 6. – 28. 6. 2013
Assoc.Prof.RNDr. Š. Peško , PhD.	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013

COOPERATION

V.1 Cooperation with Institutes and Enterprises in Slovakia

1. Institute of Transportation Research, Žilina
2. University of Economics, Bratislava
3. Technical University of Košice
4. Jesenius Faculty of Medicine, Comenius University, Martin
5. Faculty of Mathematics and Physics, Comenius University, Bratislava

Cooperation with Foreign Institutes and Enterprises

1. University of Economics - Prague, CZ
2. University of Pardubice, CZ
3. University of Economics, Prague, CZ, Faculty of Management, Jindřichuv Hradec, CZ
4. Mykolas Romeris University, Vilnius, Faculty of Public Administration, LITHUANIA
5. Czestochowa University of Technology, Faculty of Management, PL

OTHER ACTIVITIES

Assoc.Prof.RNDr. Stanislav Palúch, PhD.:

- Member of Scientific Board of Faculty of Management Science and Informatics, University of Žilina
- Member of Scientific Board of Faculty of Management, Jindřichuv Hradec, University of Economics, Prague
- Member of Editorial Board "Tatramountains" (Mathematical Journal)
- Member of Editorial Board "Central European Journal of Operations research – CEJOR"
- Member of Editorial Board "Studies of the University of Žilina, Mathematical Series"

Assoc.Prof.RNDr. Štefan Peško, PhD.

- Member of Scientific Board of Faculty of Management Science and Informatics, University of Žilina
- Founder member of the Society for Open Source Information Technologies (SLOVAKIA)
- Transaction on Transportation Sciences (CZECH REPUBLIC)

RNDr. Rudolf Blaško, PhD.:

- Member of Editorial Staff "Studies of the University of Žilina, Mathematical Series"

Mgr. Michal Kaukič PhD.:

- Founder members of the Society for Open Source Information Technologies (SLOVAKIA)

Department of Informatics

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Teaching Staff:

Prof. Ing. Karol **Matiaško**, PhD

Ing. Matúš **Chochlík**, PhD.

Assoc.Prof. Ing. Michal **Zábovský**, PhD

Ing. Iveta **Nedeljaková**, PhD.

Assoc.Prof. Ing. Vitaly **Levašenko**, PhD.

Ing. Monika **Václavková**, PhD.

Assoc.Prof. Ing. Karol **Gronďák**, PhD.

Ing. Anton **Lieskovský**, PhD.

RNDr. Peter **Varša**, PhD.

Ing. Zuzana **Kurillová**, PhD.

Ing. Ján **Boháčik**, PhD

RNDr. Miroslav **Benedikovič**

RNDr. Štefan **Kovalík**, PhD.

Ing. Josef **Kopecký**

Researchers: Assoc. Prof. Ing. Elena **Zaitseva**, PhD.

Ing. Miroslav **Faktor**, PhD.

Administrative Department: Anna **Ilovská**

Doctoral full-time students:

Ing. Martin **Antal**

Ing. Miroslav **Rusín**

Ing. Michal **Varga**

Ing. Jozef **Kostolný**

Ing. Slavomír **Kavecký**

Ing. Michal **Kvet**

Ing. Marek **Šajna**

Ing. Miroslav **Kvaššay**

Doctoral part-time students:

Ing. Marián **Švalec**

Ing. Michal **Joštiak**

Ing. Vladimír **Smataník**

Ing. Juraj **Branický**

Ing. Vladimír **Hanuštiak**

EQUIPMENT

Laboratories:

Laboratory	Capacity	HW
FRA 201	20 places	21 OPSYS Celeron 2.8 GHz, HDD 80GB

Server	Purpose
frdb1	Linux – teaching
frdb2	Linux – databases, teaching
fra208d	Linux - databases, teaching
frios	Linux – operating systems, teaching
e-learning	Linux – e-learning applications
elearn	Linux – e-learning applications



PhD.-Programme

Theme	Student	Supervisor
1. Searching and Indexing in Temporal Databases	Ing. M. Kvet	Prof.Ing. K. Matiaško , PhD.
2. Reliability Analysis of Multi States Systems	Ing. M. Kvaššay	Assoc.Prof.Ing. E. Zaitseva , PhD.
3. Ontology for Data Integration	Ing. M. Švalec	Assoc.Prof.Ing. M. Zábovský , PhD.
4. Large Database Visualization	Ing. M. Antal	Assoc.Prof.Ing. M. Zábovský , PhD.
5. Ontology for Data Integration	Ing. M. Joštiak	Assoc.Prof.Ing. M. Zábovský , PhD.
6. Distribution of Information Using Web-Applications in Communication with Person or Computer	Ing.M. Šajna	Prof.Ing. K. Matiaško , PhD.
7. Evaluation of Risk and Reliability in Medical Support Decision-making Systems	Ing. M. Rusín	Assoc.Prof.Ing. E. Zaitseva , PhD.
8. Modelling of Data Mining and Using by Intelligent Decision-Making in Agent Oriented Simulation Models	Ing. M. Varga	Prof.Ing. K. Matiaško , PhD.
9. Management of Grids Resources	Ing. S. Kavecký	Assoc.Prof.Ing. P. Martincová , PhD.
10. Analysis of Systems Reliability	Ing. J. Kostolný	Assoc.Prof.Ing. E. Zaitseva , PhD.
11. Searching and Indexing in Text Oriented Databases	Ing. V. Smataník	Prof.Ing. K. Matiaško , PhD.
12. Parallel Algorithm for Stochastic Optimization	Ing. J. Branický	Assoc.Prof.Ing. K. Grondžák , PhD.
13. Analytic Processing of Widespread Data Sets	Ing. V. Hanušniak	Assoc.Prof.Ing. M. Zábovský , PhD

Scientific orientation of the Assoc. Professors at the Department

1. Assoc.Prof.Ing. Penka **M a r t i n c o v á** , PhD.

Research interests belong to the area of grid computing, grid infrastructure, scheduling in distributed systems and in a grid, grid resource management, parallel programming models. Principles of operating systems.

2. Assoc.Prof.Ing. Michal **Z á b o v s k ý** , PhD.

Database systems and distributed databases, knowledge discovery in database systems, information systems development. R&D in intelligent systems, knowledge discovery and health informatics (translational medicine).

3. Assoc.Prof.Ing. Vitaly **L e v a s h e n k o** , PhD.

Data Mining, preferred area of investigation is Fuzzy Decision Trees and design of Decision making Support System. He has experience in Multiple-Valued Logic, Fuzzy Logic and Logic Design.

4. Assoc.Prof.Ing. Elena **Z a i t s e v a** , PhD.

Reliability Analysis. The preferred areas of investigation are Reliability Analysis of Multi-State System and Importance Analysis. She has experience in Multiple-Valued Logic, Algebra Logic and Logic Design.

5. Assoc.Prof.Ing. Karol **G r o n d ž á k** , PhD.

Tools and architectures for parallel and distributed computing. Special interest in parallel combinatorial algorithms and parallel algorithms on graphs. Principles of operating systems.

BACHELOR THESIS

No.	Student	Theme	Supervisor
1.	P. Adámek	Mobile client application for delivering services	Assoc. Prof. Ing. P. Martincová, PhD.
2.	M. Auješký	Software for Medical Decision Making Support System	Assoc. Prof. Ing. E. Zaitseva, PhD.
3.	M. Boháč	Information system for the protection against fires	Prof. Ing. K. Matiaško, PhD.
4.	J. Bušfy	Application for on-line communication of clients.	RNDr. Š. Kovalík, PhD.
5.	M. Čadecký	Optimization Problem Gridification	Assoc. Prof. Ing. P. Martincová, PhD.
6.	L. Čaniga	Fake medicinal products identification	Prof. Ing. K. Matiaško, PhD.
7.	P. Drábik	Android-based car driver support application	Ing. M. Šajna
8.	J. Drobec	Application for management review process	Assoc. Prof. Ing. E. Zaitseva., PhD.
9.	J. Ferlet'ák	Software application to support of management for restaurant equipment	RNDr. M. Benedikovič
10.	V. Filip	Application for Android OS - Memory Game	RNDr. P. Varša, PhD.
11.	R. Grigel'	Information system for collectors	Prof. Ing. K. Matiaško, PhD.
12.	T. Hakel	Neural Network Training Using Genetic Algorithm in Grid	Assoc. Prof. Ing. P. Martincová, PhD.
13.	M. Holúbek	Dynamic web application for the ice hockey club Prievidza	Ing. I. Nedeljaková, PhD.
14.	L. Chudoba	Job portal for students	Ing. J. Kopecký
15.	F. Janech	Framework for automatic collective web form completion	Assoc. Prof. Ing. K. Grondžák, PhD.
16.	J. Janiga	Experimental comparison of the performance of the data structures suitable for the work with the mobile entities	Ing. M. Varga
17.	M. Kaprálik	Information and reservation cinema system	Assoc. Prof. Ing. P. Martincová, PhD.
18.	P. Kello	Application for management futsal club	RNDr. M. Benedikovič
19.	M. Klempai	Instructional application for create GUI in Java project	RNDr. M. Benedikovič
20.	M. Komara	Booking system for sport venues	Ing. M. Šajna

21.	M. Košťal	Fault products identification	Prof. Ing. K. Matiaško , PhD.
22.	P. Kyseľ	Electronic stock control - system of delivery notes	RNDr. Š. Kovalík , PhD.
23.	M. Martniak	Analysis of source code in Java applications	RNDr. M. Benedikovič
24.	M. Masaryk	Analysis of Decision Rules Algorithm	Assoc. Prof. Ing. E. Zaitseva , PhD.
25.	Ľ. Michal	Model of the automatic addition of the waypoints to the goal destination into the pedestrian's path	Ing. M. Varga
26.	E. Nemergutoá	Visualization of sorting methods for teaching	RNDr. M. Benedikovič
27.	H. Neuschl	Student information system for operating system Android	Assoc. Prof. Ing. P. Martincová , PhD.
28.	T. Páchnik	Survey system	Ing. Ľ. Takáč , PhD.
29.	M. Polakovič	Application of classes associated with data transfer between memory and disk.	RNDr. M. Benedikovič
30.	J. Remenec	Protected object security assessment	Assoc. Prof. Ing. K. Grondžák , PhD.
31.	M. Sivák	Resource planning application	Assoc. Prof. Ing. K. Grondžák , PhD.
32.	T. Smädo	Information system for time sheet reporting	Ing. M. Šajna
33.	J. Szabo	Reliability analysis of electrical circuits by Binary decision diagrams	Ing. J. Kostolný
34.	Z. Takáč	Generating a word search puzzle	Ing. Ľ. Takáč , PhD.
35.	D. Tužinský	Web application for papers review	Assoc. Prof. Ing. E. Zaitseva , PhD.

MASTER THESIS

No.	Student	Theme	Supervisor
1.	A. Bella	Detecting potential deadlocks	Ing. B. Čonto
2.	J. Brtiš	Calculator enabling execution of mathematic operations with various data types.	RNDr. Š. Kovalík, PhD.
3.	M. Bulík	Investigation of discretion algorithms	Assoc.Prof. Ing. E. Zaitseva, PhD.
4.	P. Červienka	Attendance system	Ing. T. Gatial
5.	M. Dreveňák	Design and implementation of company business cycles as a part of ERP	Ing. P. Troják
6.	J. Gabčík	Load balancing in parallel and distributed systems	Assoc.Prof. Ing. K. Grondžák, PhD.
7.	K. Haršányi	Integrated planning system for radio broadcasting	Prof. Ing. K. Matiaško, PhD.
8.	M. Jánis	Parking Service Information System	Prof. Ing. K. Matiaško, PhD.
9.	Z. Janigová	Workflow support in an information system for energy commodity trading	Ing. D. Novotný
10.	M. Kamenský	Multi-State System Reliability Analysis	Assoc.Prof. Ing. E. Zaitseva, PhD.
11.	M. Klačko	Optimization of cloud storage service	Assoc.Prof. Ing. P. Martincová, PhD.
12.	L. Klimčíková	Internal Tool for SQAP management and support of FCS projects management Scheidt und Bachmann, Ltd. – Ddepartment of Fare Collection Systems	Ing. M. Schiffer
13.	J. Nemeč	Spatial databases	Prof. Ing. K. Matiaško, PhD.
14.	J. Pakosová	Information system for DNA analysis	Prof. Ing. K. Matiaško, PhD.
15.	R. Piška	Implementation of tool SAP Toolkit.	Assoc.Prof. Ing. E. Zaitseva, PhD.
16.	A. Putera	Data access system and cryptography for The Hospital information system	Prof. Ing. K. Matiaško, PhD.
17.	P. Rau	Intelligent system for support of decision making in medicine	Assoc.Prof. Ing. E. Zaitseva, PhD.
18.	P. Repán	Module for graphical data presentation in the information system	Ing. V. Pšenák, PhD.
19.	V. Ružička	Implementation of the synchronous API of IndexedDB database.	Ing. J. Varga
20.	I. Sopoliga	Web application for support of scientific papers review	Assoc.Prof. Ing. E. Zaitseva, PhD.
21.	J. Šipikal	Design and implementation of embedded application for fare collection system in public transport vehicles.	Ing. S. Piecka, PhD.

COOPERATION

Cooperation with Institutes and Enterprises in Slovakia

- Slovak Technical University, Faculty of Electrical Engineering and Informatics, Bratislava
- Technical University, Faculty of Electrical Engineering and Informatics, Košice
- Slovak Telecom
- Slovak Railways
- Ipesoft Žilina
- Elanor Žilina
- KROS Žilina
- S&T Žilina
- University Matej Bell, Banská Bystrica
- Technical University, Košice

Cooperation with Foreign Institutes and Enterprises

- State Economic University, Minsk, BLR
- University of Pardubice, Faculty of Transport, Pardubice, CZ
- University of Ostrava, Faculty of Natural Sciences, Ostrava, CZ
- Scheidt und Bachman, Ltd. D
- Siemens Österreich, A
- Technical University of Sofia, BG
- Trakia university, Yambol, Bulgaria
- United Institute of Informatics Problems of the National Academy of Sciences of Belarus Minsk, BLR

Sojourns of Pedagogical Staff at Foreign Institutions in 2013
(Except for Czech Republic)

<i>Name</i>	<i>Country</i>	<i>Institute</i>	<i>Date</i>
Assoc.Prof.Ing. M. Zábovský , PhD.	PL - Lomza	PWSP	9. – 13. 1. 2013
Assoc.Prof.Ing. V. Levashenko ,PhD.	BL - Minsk	BSUIR	10. 2. – 18. 2. 2013
Assoc.Prof.Ing. M. Zábovský , PhD.	PL - Lomza	PWSP	27. 1. – 29. 1 2013
RNDr. P. Varša , PhD.	SF - Helsinky	HERSC/ETUCE	14. 4. – 17. 4. 2013
Assoc.Prof.Ing M. Zábovský , PhD.	PL -Lomza	State College	21. 4. – 28. 4. 2013
Ing. A. Lieskovský , PhD.	Sri Lanka	Colombo, SLIT	25. 4. – 29. 4. 2013
Assoc.Prof.Ing M. Zábovský , PhD.	PL -Lomza	State College	19. 5. – 19. 5. 2013
Assoc.Prof.Ing. V. Levashenko , PhD.	UA - Sevastopol	NA University	22. 5. – 25.5. 2013
Assoc.Prof.Ing. E. Zaitseva , PhD.	UA - Sevastopol	NA University	22. 5. – 25.5. 2013
Assoc.Prof.Ing. E. Zaitseva , PhD.	HR - Zagreb	University	30. 6. – 4. 7. 2013
Ing. M. Kvet	I – Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Ing. M.. Vajsová	I – Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Prof.Ing. K. Matiaško , PhD.	I – Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Assoc.Prof.Ing. V. Levashenko , PhD.	UA - Sevastopol	Banking Institute	7. 7. – 14.7. 2013
Assoc.Prof.Ing. E. Zaitseva , PhD.	UA - Sevastopol	Banking Institute	7. 7. – 14.7. 2013
Ing. A. Lieskovský , PhD	F - Nice	AIRA	20. 7. – 27. 7. 2013
Ing. M. Kvet	H - Budapest	Ö. Lorand Uni	22. 7. – 25. 7. 2013
Assoc.Prof.Ing. E. Zaitseva , PhD.	PL - Krakow	University AGH	8. 9. – 11. 9. 2013
Ing. J. Kostolný	PL - Krakow	University AGH	8. 9. – 11. 9. 2013
RNDr. P. Varša , PhD.	S - Stockholm	Swedish Council for High Educ.	13.10. – 9.10. 2013
Assoc.Prof.Ing. P. Marticová , PhD.	BG - Sofia	Tech. University	27. 10.- 4. 11. 2013
Assoc.Prof.Ing. V. Levashenko ,PhD.	BL - Minsk	State University	2. 11. - 8. 11. 2013
Assoc.Prof.Ing. V. Levashenko ,PhD.	D - Aachen	RWTH Uni.	13.11. – 7.11. 2013
Assoc.Prof.Ing. E. Zaitseva , PhD.	D - Aachen	RWTH Uni.	13.11. –17.11.2013
Ing. M. Kvet	GB - Manchester	Conference Centre	19.11. –24.11.2013
Prof.Ing.. K. Matiaško , PhD.	D - Leipzig	HFTL	25.10. –26.10.2013
Assoc.Prof.Ing. M. Zábovský , PhD.	D - Leipzig	HFTL	25.10. –26.10.2013

Membership in International Organizations and Societies

- Prof. Ing. Karol **Matiaško**, PhD.
 - National Evaluation and Foresight Agency, SPAIN
 - Czech Society for System Integration
 - IEEE
 - ACM

- Assoc.Prof.Ing. Penka **Martincová**, PhD
 - Member of Editorial board in Journal Information Technologies and Security.
BULGARIA
 - Member of steering committee of International conference InfoTech, Bulgaria, member of editorial board “Information technologies and Security” journal

- Assoc. Prof. Ing. Michal **Zábovský**, PhD. - Czech Society for System Integration

- Assoc. Prof. Ing. Elena **Zaitseva**, PhD. - Member of International Association for Pattern recognition (IAPR)

- Assoc. Prof. Ing. Vitaly **Levashenko**, PhD. - Member of International Association for Pattern recognition (IAPR),

Other activities

Members of the Department took part in the project **FP7 ICT -2013.5.2, No 610425 Regional Anaesthesia Simulator and Assistant (RASimAs)** as participants of consortium compound 10 countries (BE, F, D, GR, IR, N, SK, E, S, GB). The goal of the Project is a quality enhancement in welfare of patients together with present reduction of expenses in medical system.



Department of Macro and Microeconomics

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e-mail: maria.durisova@fri.uniza.sk

Teaching Staff:

Assoc. Prof. Ing. Alžbeta **Kucharčíková,**

Ing. Juraj **Dubovec,** PhD.

Ing. Beata **Holková,** PhD.

Ing. Anna **Jacková,** PhD.

Ing. Zuzana **Kozubíková,** PhD.

Ing. Lucia **Pančíková,** PhD.

Ing. Zuzana **Staníková,** PhD.

Ing. Emese **Tokarčíková,** PhD.

Ing. Katarína **Zábovská,** PhD.

PhD.JUDr. Margita **Beháňová**

Administrative Department: Eva **Maťková**

PhD Students

Ing. Lukáš **Falát**

EQUIPMENT



PhD.-Programme

<i>Theme</i>	<i>Student</i>	<i>Supervisor</i>
Data of Temporal Series : Search of Dependences and Prediction by Means of UNS and Progressive Statistical Methods	Ing. L. Falát	Prof. Ing. D. Marček, PhD.

BACHELOR THESIS

<i>No.</i>	<i>Student</i>	<i>Theme</i>	<i>Supervisor</i>
1.	M. Balážiková	Formation of evaluation system of financial situation of company.	Assoc.Prof. Ing. M. Ďurišová, PhD.
2.	M. Duláková	Creating management system of Intellectual Property in the company	JUDr. M. Beháňová
3.	P.Gruchaláková	Financial and economic analysis of the business entity.	Ing. Z. Kozubíková, PhD.
4.	L. Konštiak	Consumer Decision in the Selection from Excess	Ing. J. Dubovec, PhD.
5.	V. Malíková	Long-term unemployment and measures for its reduction	Ing. L. Pančíková, PhD.
6.	T. Michálek	Assessment of financial effectiveness of the use of FOSS in public administration.	Ing. Z. Kozubíková, PhD.
7.	L. Odelgová	Assessment of financial effectiveness of the use of FOSS in public administration.	Ing. Z. Kozubíková, PhD.
8.	M. Stašáková	Market analysis of corporate information systems	Ing. J. Dubovec, PhD.
9.	T. Šildeková	Analysis and design of improving economy of the selected municipality	Ing. E. Tokarčíková, PhD.
10.	M. Vnučáková	The impact of corruption on economic decision-making actors	Ing. J. Dubovec, PhD.
11.	S. Vrabcová	The investments of the company with the support of EU funds	Ing. Z. Kozubíková, PhD.

MASTER THESIS

No.	Student	Theme	Supervisor
1.	Š. Barta	Enterprise liquidity management	Ing. A. Jacková, PhD.
2.	J. Branický	Integration of services by ESB according to principles of the SOA on IBM Web Sphere Message Broker platform	Ing. K. Zábovská, PhD.
3.	B. Bučko	Implementation BPM on IBM Web Sphere	Ing. K. Zábovská, PhD.
4.	V. Dolinajcová	Comparison of the impact of foreign direct investment on the economic performance of selected regions of Slovakia	Assoc.Prof. Ing. A. Kucharčíková, PhD.
5.	M. Fridrich	Effect of a loan and amount of money in economy on the economic cycle	Ing. J. Dubovec, PhD.
6.	V. Hanušniak	Implementation BPM on IBM Web Sphere	Ing. K. Zábovská, PhD.
7.	M. Hovanec	Time series modelling and forecasting based on soft learning methods	Prof. Ing. D. Marček, PhD..
8.	J. Kalafut	Design and development of software to improve the employment of graduates of secondary schools and universities in the selected region	Assoc.Prof. Ing. A. Kucharčíková, PhD.
9.	L. Kováčová	Increasing the efficiency of human capital in the chosen enterprise	Assoc.Prof. Ing. A. Kucharčíková, PhD.
10.	Ž. Kuzmická	Regional development in terms of potential of population	Ing.E.Tokarčíková, PhD.
11.	G. Kuzníková	Location decisions of selected consumer cooperative	Ing.E.Tokarčíková, PhD.
12.	J. Letavaj	Model of node in the economic system - Small enterprise	Ing. J. Dubovec, PhD.
13.	E. Masár	Influence of company's property structure to its profitability	Ing. A. Jacková, PhD.
14.	I. Mäsiar	Implementation BRMS on IBM Web Sphere ILOG	Ing. K. Zábovská, PhD.
15.	J. Piecka	Econometric modelling of the Yield Curve in the Open-Source	Ing. Z. Staníková, PhD.
16.	L. Sekelský	Predictive modelling of the Yield Curve	Ing. Z. Staníková, PhD.
17.	V. Smataník	Integration of services by ESB according to principles of the SOA on IBM Web Sphere Message Broker platform	Ing. K. Zábovská, PhD.

No.	Student	Theme	Supervisor
18.	P. Ševčíková	Creation system of quantification value of the company assets	Assoc.Prof. Ing. M. Ďurišová, PhD.
19.	N. Tóthová	Enterprise risk management assets	Ing. A. Jacková, PhD.
20.	L. Turčanová	Rationalisation of transport traces of selected firm	Ing. E. Tokarčíková, PhD.
21.	J. Vacko	Determination the value of the property and its business components	Assoc.Prof. Ing. M. Ďurišová, PhD.
22.	L. Zvalo	Model of node in the economic system - Large enterprise	Ing. J. Dubovec, PhD.

Scientific orientation of the Assoc. Professors at the Department

1. Assoc.Prof.Ing. Mária **Ďurišová**, PhD.

Enterprise theory, Management theory of transformation process in enterprise leading to application research of efficiency measuring in enterprise, as well to influence of management to its achievement in enterprise conditions.

2. Assoc.Prof.Ing. Alžbeta **Kucharčíková**, PhD.

Establishment and improvement of human capital as a one from the factors of the economic growth. Determination of evaluation possibilities in efficiency of investments to the human capital realized about all in the form of company education.

Cooperation

Co-operation with Institutes and Enterprises in Slovakia

- Faculty of Economy UMB, Banská Bystrica,
- University of Economics, Bratislava
- Slovak University of Technology, Bratislava
- Office of Industrial Property, Banská Bystrica
- Adviser of Entrepreneur, Žilina
- Slovak Chamber of Commerce, Žilina
- Information Centre of Entrepreneurs, Žilina
- Slovak Statistic Office
- Institute of Transport Research Žilina
- SAEF - Slovak American Enterprise Fund
- Science and Technology Park Žilina
- Science Park Žilina

Co-operation with Foreign Institutes and Enterprises

- VŠB-TU Ostrava, Institute of Computer Science Opava, CZ
- VŠE Praha, CZ
- Institute of Computer Science Opava, CZ
- ČVUT Praha, CZ
- Academy of Sciences, CZ
- Silesian University in Opava, School of Business Administration in Karviná, CZ
- University of Pardubice, CZ
- VŠTE České Budejovice, CZ
- Ural State Economic University in Jekaterinburg, RSFR
- HTW Dresden

Membership in Slovak Organisations and Societies

- Assoc. Prof. Ing. Alžbeta **Kucharčíková**, PhD.:
 - Member of The Management Trainers Association
 - Member of Council for Higher Education
- :
- Ing. Katarína **Zábovská**, PhD.: Slovak Association for System Integration

Sojourns of Pedagogical Staff at Foreign Institutions in 2013

(Except for Czech Republic)

<i>Name</i>	<i>Country</i>	<i>Institute</i>	<i>Date</i>
Assoc. Prof. Ing. A. Kucharčíková , PhD.	I - Roma	Sakarya University	24. 6. – 28. 6. 2013
Ing. E. Tokarčíková , PhD.	I - Roma	Sakarya University	24. 6. – 28. 6. 2013
Assoc. Prof. Ing. M. Đurišová , PhD.	I - Roma	Sakarya University	24. 6. – 28. 6. 2013
Ing. J. Dubovec , PhD.	SL - Portoroz	STA Conference	25. 5. – 28. 5. 2013

Other Activities

Members of the Department are involved in these projects:

Innovation and internationalization of education - an instrument for increasing the quality of the University of Žilina in the European educational space, ITMS: 26110230079

Quality education with the support of innovative forms, high-quality research and international cooperation-the successful graduate for practice. ITMS: 26110230090

Broker center of air transport for technology transfer and knowledge in transport and transport infrastructure, ITMS: 26220220156

Interactive logistics planning system based on virtual reality technologies, ITMS: 26220220100

Creating a new diagnostic algorithm for selected cancers, ITMS: 26220220022

Centre of excellence for systems and services of intelligent transport II., ITMS: 26220120050

VEGA 1/0526/13 Modelling multilateral relations of economic entities and improving the quality of their decision-making processes with ICT

VEGA 1/0421/13 Attributes of Effectivity and Human Capital

The Members of Department organized educational activities in the field of information systems:

Training IBM DB 2, 6. – 7. 2. 2013,

Training IBM BigData, 24. 10. 2013.

Department of Technical Cybernetics

Head of department: Prof. Ing. Juraj M i ě k, PhD.

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Teaching Staff:

Prof..Ing. Ivan **Hanuliak**, PhD.

Ing. Adam **Jaroš**, PhD.

Assoc.Prof.Ing. Peter **Gubiš**, PhD.

Ing. Jozef **Juríček**, PhD.

Assoc.Prof.Ing. Ondrej **Karpiš**, PhD.

Ing. Oldřich **Kovář**, PhD.

Assoc.Prof.Ing. Ján **Kapitulík**, PhD.

Ing. Matúš **Jurečka**, PhD.

Assoc.Prof.Ing. Peter **Ševčík**, PhD.

Ing. Michal **Hodoň**, PhD

Ing. Jana **Púchyová**, PhD.

Ing. Martin **Húdik**, PhD.

Andrej **Holúbek**, PhD.

Ing. Ján **Repka**

Ing. Julius **Mlich**

Ing. Lukaš **Čechovič**

Researcher: Ivana **Hodasová**

Administrative Department: Mgr. Viera **Černeková**

PhD Students:

Ing. Martin **Hyben**

Ing. Michal **Kochláš**

Ing. Michal **Chovanec**

PhD.-Programme

Theme	Student	Supervisor
1. Voice Recognition Systems	Ing. M. Hyben	Prof.Ing. J. Miček, PhD.
2. Event's Driven Dynamic Systems	Ing. M. Kochláň	Prof.Ing. J. Miček, PhD.
3. Design of Methods for Collaborate Information Processing in WSN Networks	Ing. M.Chovanec	Prof.Ing. J. Miček, PhD.

EQUIPMENT

Teaching and Research Laboratories.

- Laboratory of Digital Control.
- Laboratory of Digital Signal Processing
- Laboratory of Electronics
- Laboratory of Design of the Customers Integrated Circuits (XILINX)
- Laboratory of Digital Computer
- Laboratory of Automatic Control
- Laboratory of HPC and Grid computing
- Laboratory of Embedded systems
- Laboratory of Technical equipments of automatic control

Special Measuring Instruments and Computers.

Analogy models for real time simulation experiments of digital control algorithms.

- Models SISO (Single input and single output).
- Models MIMO (Multiple input, multiple output- 2 input and output)

The model can be used as a MIMO plant or SISO plant first to sixth - order. The gain of the plants (step response) can be continuously or by step change (0.1, 1, 2, 5).

There is also possibility to change magnitude of disturbance and step switch of output disturbance.

- Models SISO with non-linear gain, transport delay and no minimal phase.

8x workstation on the base of the PC, A/D and D/A converters, starter kit TMS 320x54, evolution kit MSP 430xxx, 8x evolution development kit ATMEL AVR

10x evolution kit ARM7TDI

10x evolution kit STM32F2

5x workstation on the base of the PC (K6-233 Mhz)

Workstation on the base PC (1,3 GHz, 19" monitor)

Programming board for circuits GAL 16V8, GAL20V8, CPLD 9500, FPGA 4000

Programming board 2S100 fy INSIGHT (FPGA SPARTAN II)
Programming board DIGILAB XLA5 fy DIGILENT (FPGA SPARTAN II)
Programming board V2LC1000 fy INSIGHT (FPGA VIRTEX II)
Programming board ANADIGM (FPAA)
Programming board FPGA SPARTAN 3
ML YO3 VIRTEX-4 FX Evaluation Platform
7x Measurement System (Digital Oscilloscope, Logical Analyst, Waveform Generator)
3x Oscilloscope Tektronix TPS2024B
3x Oscilloscope Tektronix AVG3021B
Spectral analyser Rhode&Schwarz FSH8 (9kHz – 8GHz)
Circuit board plotter for in-house rapid PCB prototyping



Cooperation

Cooperation with Institutes and Enterprises in Slovakia

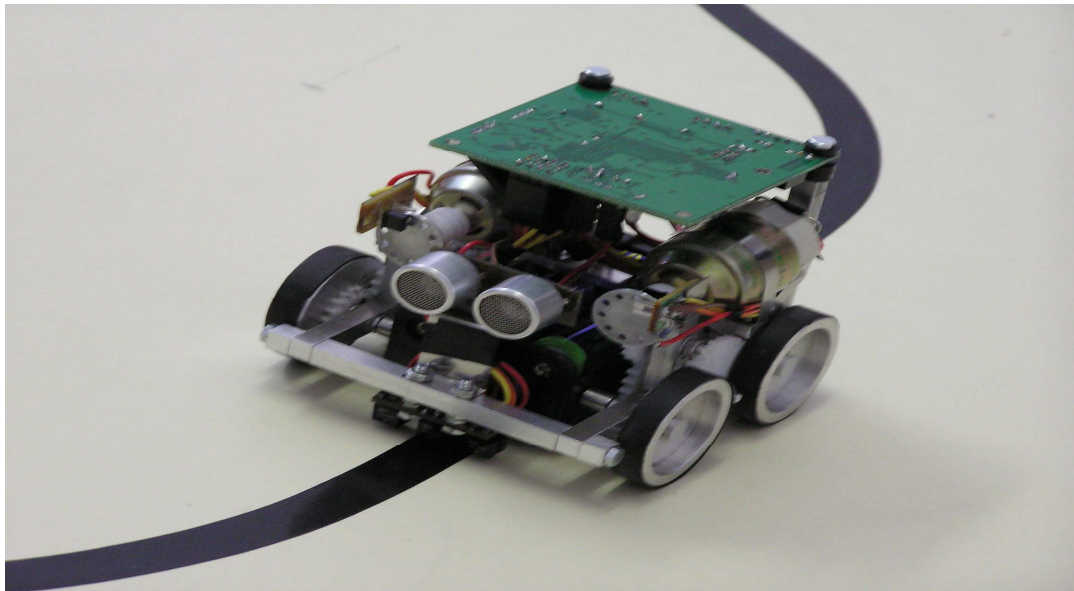
- Slovak Technical University, Bratislava - Faculty of Electrical Eng. & Informatics, Faculty of Mechanical Engineering, Faculty of Material-Technological Engineering
- Transportation Systems Scheidt & Bachmann Ltd., Žilina.
- SAE Control, Joint –Stock-Comp. Žilina, URAP Automation Žilina.
- HMM Ltd. Bratislava
- ETC.Ltd. Žilina, VUVT Eng., Joint –Stock-Comp. Žilina,
- ZS-VTS Bratislava
- Economic University Bratislava
- University Matej Bell Banská Bystrica
- University “Pavol Jozef Šafárik”, Košice
- Technical University Košice
- ABB Joint –Stock-Comp., Žilina
- EMTEST Joint –Stock-Comp., Žilina
- VÚD (Transport Research Institution) Žilina
- AŽD (Automation of Railway Transport) Žilina

Cooperation with Foreign Institutes and Enterprises.

- UTIA -Institute of Information Theory and Automation, Academy of Sciences of the CZECH REPUBLIC
- Universities-Plzen, Liberec, Praha, Brno, CZECH REP
- ARGE Simulation , Vienna University of Technology, AUSTRIA
- Dutch Benelux Simulation Society, Technische Universiteit Delft, NEDERLAND
- EPCC (Edinburgh Parallel Computing Centre), UK
- TU – VŠB, Faculty of mechanical Engineering, Ostrava, Project 72/114, CZECH REP.
- VÚT Brno, Institute of Computing Engineering and Informatics, CZECH REP.
- EUROSIM Federation of European Simulation Societies
- IFAC International Federation of Automatic Control
- Thomas Bata University in Zlin, Faculty of Applied Informatics, CZECH REP.
- UK Sim – United Kingdom Simulation Society UK
- Scheidt&Bachmann, Mönchengladbach, GERMANY
- Freescale, Rožnov p. Radh., CZECH REP.

Membership in Slovak Organizations and Societies

- Prof. Ing. Juraj **Miček**, PhD.: Member of Scientific Board of the Faculty of Management Science and Informatics, University of Žilina
- Ing. Adam **Jaroš**, PhD.: Czech & Slovak Simulation Society – member
- Ing. Adam **Jaroš**, PhD.: Slovak Society for Cybernetics and Informatics by Slovak Academy of Science, Bratislava
- Ing. Adam **Jaroš**, PhD.: The Slovak Society for Applied cybernetics and Informatics by ZSVTS Bratislava



BACHELOR THESIS

No.	Student	Theme	Supervisor
1.	M. Brezoňák	Solar Panel Rotation Mechanism following the Sun	Ing. M. Kochláš
2.	M. Cabuk	Robo George's WEB site	Ing. M. Húdik
3.	T. Čaniga	Interactive LED RGB bulb	Assoc.Prof. Ing. P. Gubiš, PhD.
4.	J. Franko	Information www page for PHPM project.	Ing. L. Čechovič
5.	L. Galadík	Control unit for sensor network.	Ing. L. Čechovič
6.	T. Isteník	Acoustic command recognition	Assoc.Prof. Ing. P. Gubiš, PhD.
7.	P. Kincel	Internet gate for sensory network	Ing. M. Húdik
8.	M. Kopkáš	Autonomous robot MiniSumo	Prof. Ing. J. Miček, PhD.
9.	J. Košíková	Software for communication system	Prof. Ing. J. Miček, PhD.
10.	M. Kováčik	Electronic indicator of score	Ing. O. Kovář, PhD.
11.	J. Lovás	Automatic intelligent irrigation	Ing. L. Čechovič
12.	V. Lupták	System for Temperature Measurement	Prof. Ing. J. Miček, PhD.
13.	A. Piš	Program for Android to control a robot George	Assoc.Prof. Ing. O. Karpíš, PhD.
14.	J. Pojezdala	Unit for humidity monitoring	Ing. L. Čechovič
15.	M. Revák	Hardware and basic software of electronic scales	Assoc.Prof. Ing. P. Gubiš, PhD.
16.	M. Šamaj	Remote control of devices	Prof. Ing. J. Miček, PhD.
17.	R. Uhrina	Wind speed and direction measurement unit.	Ing. L. Čechovič
18.	M. Ukušová	LED Cube Light Effect	Ing. M. Kochláš
19.	M. Vorčák	Design of communication modul RF-KTK	Prof. Ing. J. Miček, PhD.
20.	S. Žák	Bluetooth information point	Prof. Ing. J. Miček, PhD.

MASTER THESIS

No.	Student	Theme	Supervisor
1.	S. Bartoš	Control a robot over the wifi network	Prof. Ing. J. Miček, PhD.
2.	P. Gula	Design of Logical system kit	Ing. A. Jaroš, PhD.
3.	J. Habovštiak	System for recording and acoustic signal transmission	Prof. Ing. J. Miček, PhD.
4.	M. Hatňančík	Ensuring interference-free broadcast by switching channels within electronic fare-collection system esprit@.	Ing. M. Fülöp
5.	M. Hríň	Automatic dozer for a solid substrate	Ing. J. Juríček, PhD.
6.	M. Chovanec	Operation system for single-chip microcontrollers with Cortex-M3 core	Assoc.Prof.Ing. J. Kapitulík, PhD.
7.	A. Jurech	Sample laboratory tasks	Assoc.Prof. Ing. P. Gubiš, PhD.
8.	D. Juščák	Design and implementation of pulse controlled source module which is controlled by a digital system implemented in the FPGA circuit.	Ing. O. Kovář, PhD.
9.	A. Kilvády	Design and realization of application using Raspberry Pi computer	Assoc.Prof.Ing. J. Kapitulík, PhD.
10.	M. Krkoš	FPGA implementation of the traffic signs recognition system	Assoc.Prof.Ing. P. Ševčík, PhD.
11.	M. Kužmová	Simulation of terrain exploration using Multi-agent system	Assoc.Prof.Ing. J. Kapitulík, PhD.
12.	J. Lališ	Design and implementation of a server for processing acoustic signal in the internet	Prof. Ing. J. Miček, PhD.
13.	T. Motlo	System for targeting of parabolic dishes	Assoc.Prof.Ing. O. Karpíš, PhD.
14.	J. Múčka	Energy management design of sensor node	Assoc.Prof.Ing. J. Kapitulík, PhD.
15.	A. Piták	Implementation of driver I2S Audio in Free-scale MQX RTOS.	Ing. J. Vančo
16.	L. Riho	Control system for cursor navigation on a wall	Assoc.Prof.Ing. O. Karpíš, PhD.
17.	Ľ. Rychnavský	FPGA development board LAN interface	Assoc.Prof.Ing. P. Ševčík, PhD.
18.	J. Spuchľák	Design and implementation of the waveform generator based on direct digital synthesis	Ing. O. Kovář, PhD.
19.	T. Šabík	Remote control for dozer solid substrate	Ing. J. Juríček, PhD.
20.	M. Švančárek	Thermo-generator like unconventional source of electric energy	Ing. O. Kovář, PhD.
21.	M. Zatl'ko	Parallel algorithm for optimal configuration searching in Karnaugh map	Ing. A. Jaroš, PhD.

Students participation in the Professional Competitions:

Department of Technical Cybernetic gained in the year 2013 financial support from **Volkswagen Foundation** for two projects in the frame of programme “*Students and Technology*”. Project 050/12 “**Development of specific Body Area Network for patient monitoring in domestic condition by using of Smart-Phone as a control unit and network coordinator**” was appreciated as a best project in mentioned Programme.

Researchers – Doctoral students at the Department:

Ing. Michal **Hodoň**,

Ing. Jana **Púchyová**,

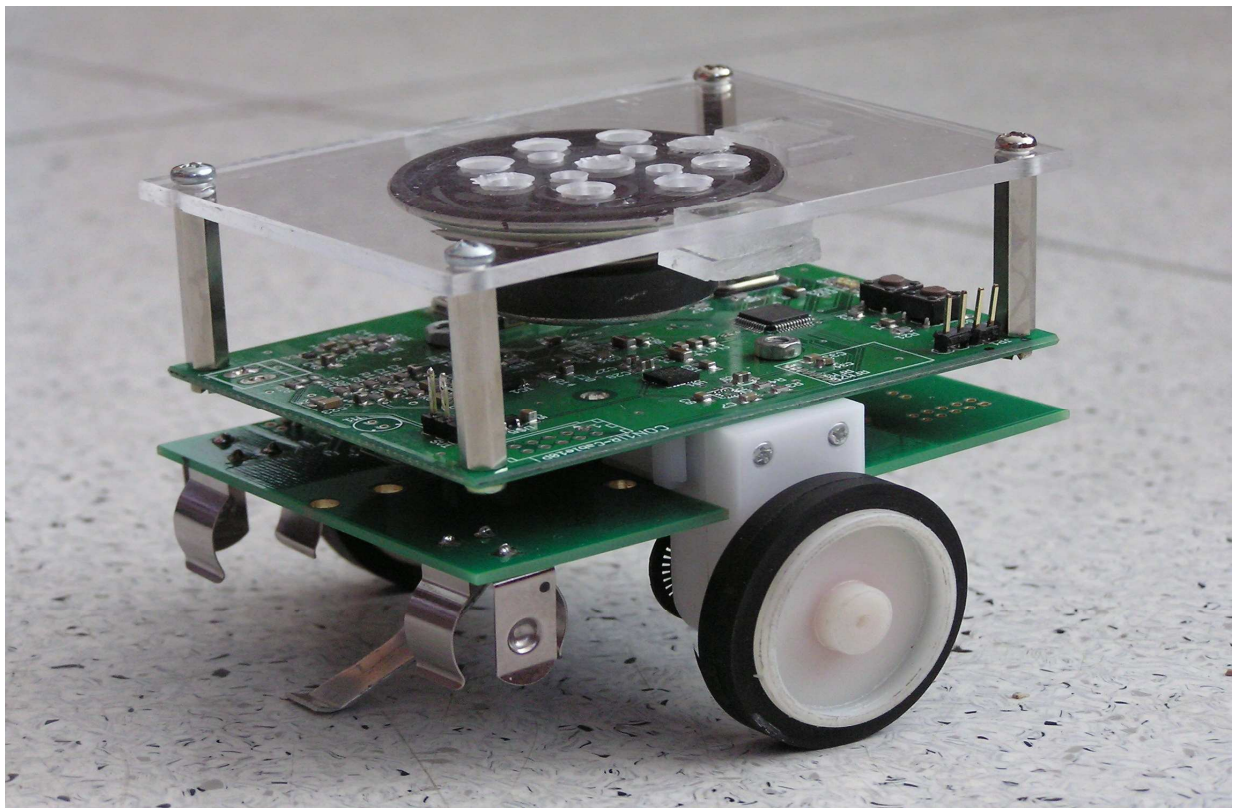
Ing. Michal **Kochláň**

Project 051/12 “Intelligent/Interactive Menu Card

Researchers – Doctoral students at the Department:

Ing. Martin **Húdik**,

Ing. Martin **Hyben**



Other activities of the Department

- Department of Technical Cybernetics has signed the **European Road Safety Charter** and thereby commits to share the responsibility for road safety in Europe.
- **Project TOP 20 Team - Texas Instruments Analogy Design Contest 2013**
Project has been classified to one of the TOP 20 teams from the first round of judging in Texas Instruments Analogy Design Contest 2013, and is therefore awarded with **1,000\$**

▪ **First LEGO League** – education by play and experience
This global competition is one of the biggest for the schoolboys in the age of 10 – 16 years.

Participants construct robots from the LEGO-kit, make a programme using the base sensors and standard software. Presentation was made in front of the professional commission and the best teams are proceeding to semi-final and final competitions and the best one to global festival. Competition was organized by the Department of Technical Cybernetics in November 2013 with about 100 participants from many schools of Slovakia.



Department of Transportation Networks

Head of Department: Assoc. Prof. Ing. Ľudmila **J á n o š í k o v á**, PhD.

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Fax: +421-41-565 10 15

e-mail: ludmila.janosikova@fri.uniza.sk

Teaching Staff:

Prof. RNDr. Jaroslav **Janáček**, PhD.

Assoc. Prof. Ing. Ľuboš **Buzna**, PhD.

Assoc. Prof. Ing. Peter **Fabián**, PhD.

Assoc. Prof. Ing. Norbert **Adamko**, PhD.

RNDr. Alžbeta **Szendreyová**, PhD.

Ing. Michal **Lekýr**, PhD.

Ing. Peter **Márton**, PhD.

Ing. Michal **Žarnay**, PhD.

Ing. Michal **Koháni**, PhD.

Ing. Peter **Tarábek**, PhD.

Ing. Peter **Jankovič**, PhD.

Administrative Department: Elena **Rohrböcková**

PhD students: Mgr. Ellen **Molitorisová**

Ing. Michal **Kocifaj**

Ing. Anna **Kormanová**

Ing. Miroslav **Mintál**

Ing. Matej **Cebecauer**

Ing. Ján **Bendík**

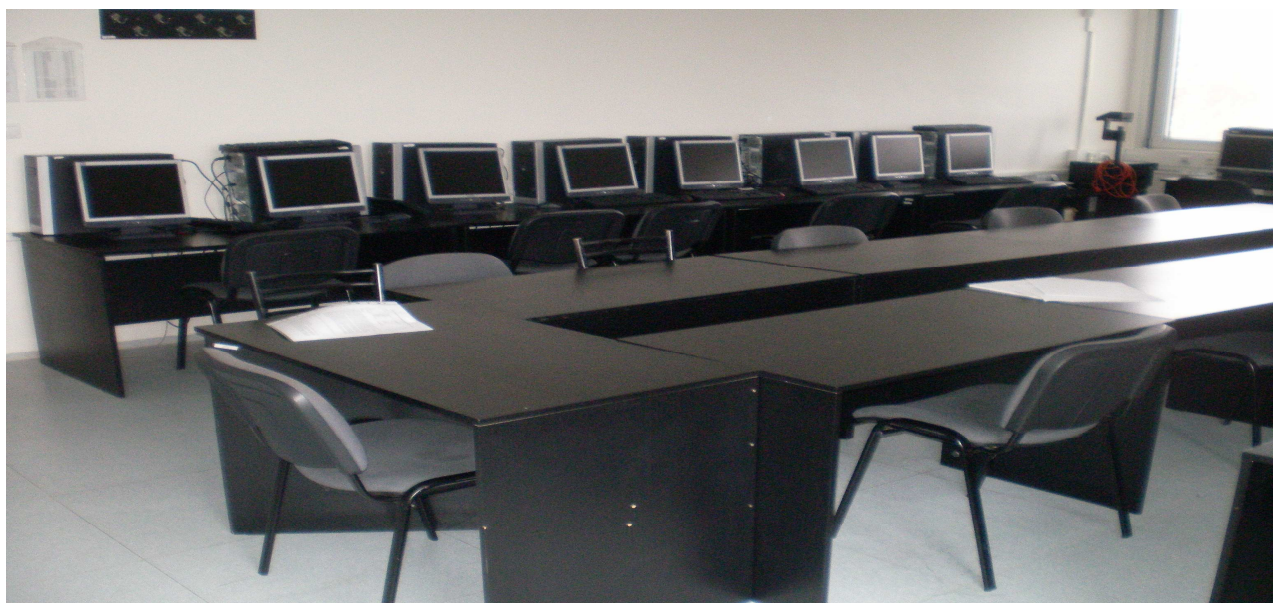
Mgr. Rastislav **Briestenský**

PhD. - Programme

<i>Theme</i>	<i>Student</i>	<i>Supervisor</i>
1. Retrieval and Storage of Relevant Information in Knowledge Management Systems	Ing. E. Molitorisová	Assoc.Prof.Ing. P. Fabián , PhD.
2. Modelling Movement of Autonomous Mobile Equipment in the Complex Stochastic Environment of Transport Terminals	Ing. M. Kocifaj	Assoc.Prof.Mgr. V. Klima , PhD.
3. Hybrid Simulation Models of Pedestrians' Behaviour with Non-homogeneous Granularity	Ing. A. Kormanová	Assoc.Prof.Mgr. V. Klima , PhD.
4. Platform for Support the Use of Computing Power of Graphic Cards in Multi-agent Simulation Models	Ing. M. Mintál	Assoc.Prof.Ing. L. Jánošíková , PhD.
5. Design of Service Systems with fair play Mediums Distribution	Ing. M. Cebecauer	Assoc.Prof. Ing. L. Buzna , PhD.
6. Design of Public Service Systems with Exact Optimization Core	Ing. J. Bendík	Prof. RNDr. J. Janáček , PhD.
7. Use of Game Theory in Managerial Decision-Making	Mgr. R. Briestenský	Assoc.Prof.Ing. P. Fabián , PhD.

Equipment

- Laboratory of GIS
- Laboratory of Discrete Simulation Methods
- Laboratory of Multimedia Information Systems



Scientific orientation of the Assoc. Professors at the Department

1. Assoc.Prof.Ing. Ľudmila **J á n o š í k o v á** , PhD.

Research interests include strategic planning, transportation planning, and travel behaviour. She focuses on the development of mathematical models and application of operations research methods

2. Assoc.Prof.Ing. Ľuboš **B u z n a** , PhD.

Application of optimization methods to transportation systems, distribution logistics and complex systems. Projects addressing the civil protection against natural disaster, and protection of critical infrastructures.

3. Assoc.Prof.Ing. Peter **F a b i á n** , PhD.

Applied informatics oriented to Multimedia information systems, Geographic information systems, Applied artificial intelligent in transport. Participation in many international projects EU as researcher and coordinator.

4. Assoc.Prof.Ing. Norbert **A d a m k o** , PhD.

Scientific activities are focused on computer simulation of transportation logistic systems and agent based simulation architectures. Design and development of simulation tools for microscopic modelling of transportation terminals (e.g. railway yards, production facilities, container terminals, etc.).

Membership in Slovak Organizations and Societies

Prof. RNDr. Jaroslav J a n á č e k , PhD:

- Member of committee SSOV (Slovak Society for Operations Research)
- Member of Scientific Board of the University of Žilina
- Member of Scientific Board of the Faculty of Management Science and Informatics, ŽU
- Member of Board for Doctoral Study for Applied Informatics at the Faculty
- Member of Board for Doctoral Study for Informatics tools for decision support at the Faculty

Assoc.Prof. Ing. Ľudmila J á n o š í k o v á , PhD.

- Member of Editorial Board, Journal of Information, Management and Control Systems, FMSI, University of Žilina
- Member of Scientific Board of Faculty of Management Science and Informatics, ŽU
- Member of Board for Doctoral Study for Informatics tools for decision support at the Faculty of Management Science and Informatics, ŽU

Assoc. Prof. Ing. Peter F a b i á n , PhD.

- Member of Scientific Board of Faculty, University of Žilina
- Member of Scientific Board, University of Zilina
- Member of Board of Advisors, Virtual University Conference, STU Bratislava

Membership in International Organizations and Societies

- **JANÁČEK, J.:** Reviewer of Zentralblatt für Mathematik, D; Member of Board for Doctoral Study for Transport technique and technology, VSB-TU Ostrava, CZ
- **FABIÁN, P.:** Member of Executive Committee of GISIG, Genoa, I
- **JÁNOŠÍKOVÁ, L.:** Member of Scientific Board and member of Board for Doctoral Study for Electrical Engineering and Informatics at the Faculty of Electrical Engineering and Informatics, University of Pardubice, CZ
- **ADAMKO, N.:** Member of European Simulation Society
- **MÁRTON, P.:** Member of International Association of Railway Operation Research

Cooperation with Foreign Institutions and Enterprises

University of Pardubice, Czech Republic

VŠB-TU Ostrava, Czech Republic

TU Dresden, Germany

TU Berlin, Germany

TU Braunschweig, Germany

HTW Dresden, Germany

Molde University College, Norway

TU Wien, Austria

Univerzitet u Beogradu, Republic of Serbia

ETH Zurich, Switzerland

GISIG, Genova, Italy

JRC Ispra, Italy

Queen Mary University of London, Great Britain

BACHELOR THESIS

No.	Student	Theme	Supervisor
1.	Š. Ďaďo	Simulation model of railway station operation using simulation tool AnyLogic	Ing. P. Márton, PhD.
2.	M. Gál	Dynamic web presentation of cars	Ing. M. Lekýr, PhD.
3.	M. Haviar	Simulation model of container terminal in AnyLogic simulation tool	Ing. M. Kocifaj
4.	M. Hlinková	Intelligent editor for scheduling of services in community centre	Ing. M. Žarnay, PhD.
5.	P. Hodás	Extending the infrastructure editor of the simulation tool for the work with areas	Ing. M. Mintál
6.	J. Majšniar	Optimization of vehicle routing and fuel refilling strategy	Assoc.Prof. Ing. Ľ. Buzna, PhD.
7.	L. Mat'okár	Data mining and processing from the map server OpenStreetMap.org with estimation of population	Ing. M. Cebecauer
8.	P. Melicherík	Interactive web application for learning of optimization algorithms	Ing. M. Cebecauer
9.	M. Mičo	Tool for assignment of bus connections to courses	Ing. M. Koháni, PhD.
10.	E. Michaličková	Design of a subnetwork with limited lengthening of important routes with IP solver	Assoc.Prof. Ing. Ľ. Jánošíková, PhD.
11.	J. Mokrý	Artificial Intelligence for managing tactical conflicts in StarCraft: Brood War	Ing. P. Tarábek, PhD.
12.	Š. Molnár	Simulation model of logistics warehouse in a general simulation tool	Ing. A. Kormanová
13.	P. Orság	Artificial intelligence for Reversi	Ing. P. Tarábek, PhD.
14.	M. Pecho	Verification of optimization results from IP-solver using AnyLogic simulation tool	Ing. P. Márton, PhD.
15.	M. Pitel	Chess artificial intelligence	Ing. P. Tarábek, PhD.
16.	J. Putala	Software for wagon sorting scheme calculation	Ing., P. Márton PhD.
17.	J. Slivka	Performance comparison of tree structures	Ing. P. Jankovič, PhD.
18.	M. Štofanič	Simulation model of railway station in Arena simulation tool	Ing. P. Márton, PhD.
19.	V. Židek	Experimental comparison of performance database system and data structure	Ing. P. Jankovič, PhD.

MASTER THESIS

No.	Student	Theme	Supervisor
1.	V. Baranová	Decision Support Application for finance	Ing. M. Fedorková
2	J. Bendík	Exact algorithm for Location Problem Solving in Public Service System Design	Prof. RNDr. J. Janáček, PhD.
3.	P. Bergmann	Tool supporting preparation of transportation networks for use in the optimisation	Assoc.Prof. Ing. Ľ. Buzna, PhD.
4.	V. Ďurech	Tool supporting OpenStreetMap data processing and its utilization in optimization	Assoc.Prof. Ing. Ľ. Buzna, PhD.
5.	M. Jurčo	Interactive editor of rail yard	Assoc.Prof. Ing. Ľ. Buzna, PhD.
6.	M. Kuchčák	Optimisation of the track occupation plan at a passenger railway station	Assoc.Prof. Ing. Ľ. Jánošíková, PhD.
7.	M. Mačura	Constraint programming for the Vehicle Assignment Problem	Assoc.Prof. Ing. Ľ. Jánošíková, PhD.
8.	M. Matejov	Simulation model of a road traffic - resolution of vehicle conflicts	Prof. Ing. P. Cenek, PhD.
9.	P. Truska	Decision support tool for the design of city bus routes - visualization of network and routes	Ing. M. Koháni, PhD.
10.	M. Vážan	Simulation model of a road traffic - vehicle models	Prof. Ing. P. Cenek, PhD.

Cooperation with Institutions and Enterprises in Slovakia

University of Matej Bel, Banská Bystrica

University of Pavel Jozef Šafárik, Košice

Railways of Slovak Republic

Railway Society Cargo Slovakia, join stock company.

Slovak Environment Agency

Slovak Post, join stock company.

CORAGEO, Ltd..

Transportation Enterprise of Žilina, Ltd..

Sojourns of Pedagogical Staff at Foreign Institutions in 2013

(except for Czech Republic)

<i>Name</i>	<i>Country</i>	<i>Institute</i>	<i>Date</i>
Ing. P. Márton, PhD.	D - Munich	DB Netz, A.G.	30. 1. – 1. 2. 2013
Ing A. Kormanová	S - Orebro	MSCR Erasmus	1. 2. – 1. 8. 2013
Assoc.Prof.Ing. Ľ. Buzna, PhD.	CH - Zurich	ETH Zurich	17. 3.- 20. 3. 2013
Assoc.Prof.Ing. Ľ. Buzna, PhD.	CH - Zurich	ETH	15. 4. – 18. 4. 2013
Assoc.Prof.Ing. Ľ. Buzna, PhD.	CH - Zurich	ETH	11. 6. – 14. 6. 2013
Ing. P. Márton, PhD.	D - Dresden	HTW	17. 6. – 21.6. 2013
Ing. M. Koháni, PhD.	I - Roma	University	23. 6. – 6. 7. 2013
Prof. RNDr. J. Janáček, PhD.	I - Roma	University	23. 6. – 6. 7. 2013
Ing. M. Kvet	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Asso.Prof.Ing. Ľ. Jánošíková, PhD.	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Ing. Ľ. Toman, PhD	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Assoc.Prof.Ing. Ľ Buzna, PhD	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Ing. P. Tarábek, PhD.	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
RNDr. A. Szendreyová, PhD.	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Ing. M. Cebecauer	I - Roma	Uni. Sapienza	30. 6. – 5. 7. 2013
Prof.RNDr. J. Janáček, PhD.	PT - Porto	Uni. do Porto	15. 9. – 22. 9. 2013
Ing. M. Koháni, PhD.	PT - Porto	Uni. do Porto	15. 9. – 22. 9. 2013
Prof.RNDr. J. Janáček, PhD.	TR - Antalya	Selcuk Uni.	7.10. –11.10.2013
Assoc.Prof.Ing. Ľ. Buzna, PhD.	CH - Zurich	ETH Zurich	4. 11. – 7. 11. 2013
Ing. P. Márton, PhD.	SB - Beograd	University	13.11.-16.11.2013
Ing. P. Tarábek, PhD.	PL - Krakow	Competition	15.11. –18.11.2013
Ing. M. Koháni, PhD.	PL - Krakow	Competition	15.11. –18.11.2013

Other Activities

Assoc.Prof.Ing. Ľuboš Buzna, PhD. gained 3rd place in the competition “**Premium in Three-Years Scientific Respons**” advertised by committee of **Section for Scientific and Professional Literature** from **Literature Foundation** in 2013

Department of Information Networks

Head of Department: Assoc. Prof. Ing. Pavel Segeč, PhD

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e-mail: pavel.segec@fri.uniza.sk

Teaching Staff:

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Prof. Ing. Matilda **Drozdová**, PhD.

Prof. Ing. Tatiana **Kováčiková**, PhD.

Assoc. Prof. RNDr. Katarína **Bachratá**, PhD.

Ing. Petr. **Ivaniga**, PhD.

Ing. Štefan **Bad'ura**, PhD.

Ing. Ľudovít **Mikuš**, PhD.

Ing. Peter **Palúch**, PhD.

Mgr. Juraj **Smieško**, PhD.

Ing. Ondrej **Škvarek**, PhD

Mgr. Jana **Uramová**, PhD.

Administrative Department: Mária **Liskayová**

Technical Staff: Vladimír **Frnčo**

PhD students

Ing. Lucie **Žoltá**

Ing. Milan **Frátrik**

Ing. Michal **Srnec**

Ing. Boris **Bučko**

Mgr. Renáta **Tóthová**

Mgr. Iveta **Jančigová**

Ing. Jozef **Papán**

PhD.-Programme

<i>Theme</i>	<i>Student</i>	<i>Supervisor</i>
1. Model driven architecture and ontology	Ing. Boris Bučko	Prof. Ing. M. Drozdová , PhD.
2. Optimal Implementation of System in Text-to-Speech	Ing. M. Frátrik	Prof. Ing. M. Klím , PhD.
3. Design and Implementation of Algorithm for Context Aware Routing in Hybrid Networks for Support QoS End-End	Ing. M. Srnc	Prof. Ing. T. Kováčiková , PhD.
4. Navigating Fuzzy Logical System	Ing. L. Žoltá	Prof. Ing. M. Klím , PhD.
5. Optimization of Micro Fluidic Equipments with Application in Medicine	Mgr. I. Jančigová	Assoc. Prof. Ing. K. Bachratá , PhD.
6. Formalization of Selected Tasks by Design of Information Systems	Ing. J. Papán	Assoc. Prof. Ing. P. Segeč , PhD
7. Development and Implementation of Biomedicine Models Suitable to Modelling of Micro-Fluidic Equipments	Mgr. R. Tóthová	Assoc. Prof. Ing. K. Bachratá , PhD.

EQUIPMENT

B301 Laboratory of Networking



B303 Cisco Networking Academy Laboratory



Teaching and Research Laboratories.

- B 03 Laboratory of Communication Technology
- B 301 Laboratory of advanced networking
- B302 Laboratory of Applications Development
- B303 Cisco Networking Academy Laboratory
- B356 ECDL lab

COOPERATION

Cooperation with Institutes and Enterprises in Slovakia

- Cisco Slovakia
- Siemens Programs and Systems Engineering
- Slovak Telecom

Cooperation with Foreign Institutes and Enterprises

- Telecom SudParis Evry, FRANCE
- ENST Paris, FRANCE
- University of Technology Dresden, GERMANY
- ETSI Sophia Antipolis, FRANCE
- INNO, Sophia Antipolis, FRANCE
- University of Zagreb, CROATIA

BACHELOR THESIS

No.	Student	Theme	Supervisor
1.	M. Babiak	Web portal of the Department of InfoComm Networks in the CMS Joomla!.	Assoc.Prof.Ing. P. Segeč, PhD
2.	M. Baláž	Desktop virtualization	Mgr. M. Baláž
3.	V. Bartošík	Recognition of a robot position	Prof. Ing. M. Klimo, PhD.
4.	P. Brigant	Diskless Booting of Workstations using Network Boot	Ing. P. Palúch, PhD.
5.	J. Dančík	Authentication, authorization and accounting in SIP	Assoc.Prof.Ing. P. Segeč, PhD
6.	M. Gažica	Possibilities of the Kamailio SIP server DoS protection	Assoc.Prof.Ing. P. Segeč, PhD
7.	P. Handlovský	Implementation of QoS Tools in a Production Network	Ing. M. Ország
8.	S. Hopko	Testing of the SIP media server and B2BUA performance	Assoc.Prof.Ing. P. Segeč, PhD
9.	M. Horčíčková	System for IP addresses management for Department of Information Networks	Mgr. J. Uramová, PhD.
10.	M. Hujo	Virtual Private Network Protocols	Ing. P. Palúch, PhD.
11.	L. Jankura	Web page of MIST conference (Mathematics for Science and Technologies)	Assoc.Prof. RNDr. K. Bachratá, PhD.
12.	J. Janovic	Implementation of External Prefix Summarization in Quagga OSPF	Ing. P. Palúch, PhD.
13.	P. Jonašík	Software tool for insurance risk's evaluation	Ing. Š. Bad'ura, PhD.
14.	M. Korenčíak	Karhunen-Loev transformation of video used for number recognition	Assoc.Prof. RNDr. K. Bachratá, PhD.
15.	T. Kozoň	The IPv6 Protocol on Linux-based Servers	Ing. P. Palúch, PhD.
16.	M. Krška	SIP and XMPP gateway solution.	Assoc.Prof.Ing. P. Segeč, PhD
17.	M. Kuzma	Mental map of a humanoid robot	Prof. Ing. M. Klimo, PhD.
18.	P. Lakošík	Layout for a university text book	Mgr. J. Uramová, PhD.
19.	M. Líner	XMPP and Jingle protocol for instant messaging and presence services	Assoc.Prof.Ing. P. Segeč, PhD
20.	P. Lučivjanská	Implementation of Configuration Management Database on Department of InfoCom Networks	Mgr. J. Uramová, PhD.

MASTER THESIS

No.	Student	Theme	Supervisor
1.	M. Galovič	Statistical Estimation of Effective Bandwidth of measured IP traffic	Mgr. J. Smieško, PhD.
2.	F. Glemba	Use the computer to grasp the concept of number in children's thinking	Assoc.Prof. RNDr. K. Bachratá, PhD.
3.	J. Hrnko	High availability platforms for real-time services	Assoc.Prof.Ing. P. Segeč, PhD
4.	P. Hruška	High Availability in Complex IP Networks	Ing. P. Palúch, PhD.
5.	I. Hujo	The WebRTC technology and its implementation for an SIP environments.	Assoc.Prof.Ing. P. Segeč, PhD.
6.	T. Jacko	Design and implementation of an „Action Manager“ function in a system of autonomous network management.	Prof. Ing. T. Kováčiková, PhD.
7.	M. Jančo	Recommendations how to set the parameters of RED mechanism on Cisco routers	Mgr. J. Uramová, PhD.
8.	M. Javorka	SIP application layer firewall	Assoc.Prof.Ing. P. Segeč, PhD.
9.	L. Kadlec	Implementing Network Algorithms in User-Space under Linux	Ing. P. Palúch, PhD.
10.	F. Mandúch	The OpenFlow and Software Defined Networking Technologies	Ing. P. Palúch, PhD.
11.	M. Papučík	Model of IP Traffic using On/Off sources	Mgr. J. Smieško, PhD.
12.	M. Paulík	Network Infrastructure Monitoring	Ing. P. Palúch, PhD.
13.	M.Pohančeník	Design and implementation of a system to interconnect VoIP services and CERN's telephony network	Mr. Rodrigo Sierra
14.	R. Sládek	Communication Security in SIP Solutions	Ing. P. Palúch, PhD.
15.	L. Ševčík	Methods and Comparison of Disk Arrays, Data Backup, Archiving and De-Duplication	Ing. M. Ludvik, PhD.
16.	M. Šušal	Improving design, quality and maintainability of a testing equipment control software	Dipl.Ing. S. Krannich
17.	T. Završan	Security Network Probe – Software Equipment	Ing. P. Palúch, PhD.

Sojourns of Pedagogical Staff at Foreign Institutions in 2013

(Except for Czech Republic)

Name	Country	Institute	Date
Prof. Ing.T, Kováčiková , PhD	F - Sophia Antipolis	ETSI	14. 1. – 17. 1 2013
Prof.Ing.T, Kováčiková , PhD.	A - Viena	Tech. Gate	4. 2. – 6. 2. 2013
Prof.Ing.T, Kováčiková , PhD.	B - Brussel	EC, DG.INFSOC	24.2 – 2. 3. 2013
Prof.Ing.T, Kováčiková , PhD.	B - Brussel	EC, DG, CONNECT	10. 3. – 16. 3. 2013
Ing. I. Jančígová	D - Stuttgart	University	25.3. - 28.3.2013
Assoc.Prof.Ing.K. Bachratá ,PhD.	GB - Oxford	University	3. 5. – 6. 5. 2013
Ing. P. Palúch , PhD.	H - Debrecen	University	6. 5. – 11. 5. 2013
Prof.Ing. T. Kováčiková , PhD.	F – Sofia Antipolis	ETSI	7. 5. – 16. 5. 2013
Prof.Ing. T. Kováčiková , PhD.	B - Brussel	Cable Europe	20. 5. – 25. 5. 2013
Prof.Ing. M. Klím , PhD.	B - Brussel	EC DC INF SO	5. 9. – 5. 9. 2013
Ing. O. Škvarek , PhD	I - Torino	Politechnica	14. 9. – 17. 9. 2013
Mgr. I. Jančígová	D - Stuttgart	University	17. 9. – 20. 9. 2013
Prof.Ing. M. Klím , PhD.	B - Brussel	EC DC INF SO	22. 9. – 23. 9. 2013
Ing. M. Frátrik	RO - Bucurest	IMT Bucurest	14.10. –17.10.2013
Prof.Ing. M. Klím , PhD.	B - Brussel	EU Commission	21.10. –22.10.2013
Prof.Ing. M. Klím , PhD.	LI - Vilnius	EU Commission	5. 11.- 8. 11. 2013

Membership in International Organizations and Societies

Prof. Ing. Martin **Klím**:

- IEEE, ACM,
- ICTC European Commission

Prof. Ing Tatiana **Kováčiková**

- ETSI, EC – FP7 ICT projects reviewer
- Cost - Head of Science Operations

Other Activities

Ing. Peter **Palúch**, PhD.

- Activities esteemed for the third time in world wide **Cisco Designated VIP program**
 - The Cisco Designated VIP program recognizes the top external individual contributors in Cisco's online communities, including the Cisco Support Community (CSC), Cisco Learning Network (CLN) and the Cisco Developers Network (CDN). With this program, Cisco formally recognizes the positive, valuable influence our top individual members exert on the communities overall.

- Award for significant contribution NetAcad program
 - 15 year anniversary – held under the auspices of Mr. Rober Fico, the prime minister of Slovakia



Cisco Designated VIP program (Peter Palúch 2nd from left)

Department of Management Theories

Head of Department: Prof. Ing. Štefan H i t t m á r , PhD.

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Teaching Staff:

Prof. Ing. Josef **Vodák**, PhD.

Assoc. Prof. Ing. Martina **Blašková**, PhD.

Assoc. Prof. Ing. Jaroslav **Král**, PhD.

Assoc. Prof. Ing. Milan **Kubina**, PhD

Assoc. Prof. Mgr. Jakub **Soviar**, PhD.

Ing. Radoslav **Jankal**, PhD.

Ing. Viliam **Lendel**, PhD.

Ing. Jana **Magdolenová**, PhD.

Ing. Michal **Varmus**, PhD.

Ing. Jozef **Gajdošík**

Administrative Department: Oľga Doricová

PhD Students:

Ing. Miroslav **Pet'o**

Ing. Michal **Bízik**

Ing. Katarína **Púčková**

Ing. Lenka **Kocifajová**

Ing. Jozef **Šarlay**

PhD.-Program

<i>Theme</i>	<i>Student</i>	<i>Supervisor</i>
1. Application of Knowledge Management Elements in Strategic Management	Ing. K. Púčková	Prof. Ing. Š. Hittmár , PhD.
2. Investment Influence of Human Capital to Efficiency, Profitability and Competitive Ability of Enterprise	Ing. L. Kocifajová	Prof. Ing. J. Vodák , PhD.
3. Information-Communication Perspectives of Logistics Operations and their Implication for Decision-Making in Business Process Management	Ing. M. Pet'o	Assoc. Prof. Ing. J. Král , PhD.
4. Elements Applying of Knowledge Management in Strategic Management	Ing. M. Bízik	Prof. Ing. Š. Hittmár , PhD.
5. Using of Scenario in Enterprise Planning	Ing. J. Šarlay	Prof. Ing. Š. Hittmár , PhD.

COOPERATION

Cooperation with Institutes and Enterprises in Slovakia

- Railways of the Slovak Republic
- Slovak Rail
- Slovak Rail CARGO
- Tendo, Zilina
- MASM, Zilina
- KROS, Zilina
- COLUMBEX International, Bratislava
- SAP Slovakia, Bratislava
- Microsoft Slovakia, Bratislava
- IPA Slovakia, Žilina
- Slovak Post
- VW Slovakia Bratislava
- CEIT, a.s. Žilina
- Swedwood Bratislava
- Technical University in Zvolen
- University of Matej Bell in Banska Bystrica
- University of Economics in Bratislava
- Slovak University of Technology in Bratislava

- University of Presov in Presov
- School of Economics and Management in Public Administration in Bratislava

Cooperation with Foreign Institutes and Enterprises

- University of Pardubice, CZECH REPUBLIC
- OSŹD Warszawa, POLAND
- ŠKODA AUTO - University, CZECH REPUBLIC
- BOC Unternehmensberatung GmbH, Wien, AUSTRIA
- European Polytechnic Institute, LLC., Kunovice, CZECH REPUBLIC
- Faculty of Public Administration of Mykolas Romeris University, LITHUANIA
- Częstochowa University of Technology, POLAND
- Higher Hanseatic School of Management in Slupsk, POLAND
- University of Szczecin, POLAND
- Aalborg University, DENMARK
- University of Salford, Manchester, UNITED KINGDOM
- University of technology, Espoo, FINLAND
- Estonian Agricultural University, Tartu, ESTONIA
- Masaryk University Brno, CZECH REPUBLIC
- VŠB - TU Ostrava, CZECH REPUBLIC
- University of Parma, ITALY
- Silesian University in Opava, CZECH REPUBLIC
- University of Rzeszów, POLAND
- Academy of business in Dabrowa Górnicza, POLAND

BACHELOR THESIS

No.	Student	Theme	Supervisor
1.	J. Abaffy	Process Improvement by the Tools of Kaizen Methodist in Selected Firm	Ing. M. Peťo
2.	L. Blašková	The proposal of the effective usage of marketing tools to support the visit of company	Ing. V. Šramová
3.	J. Brisuda	Changes in motivation and its influence on employee's job performance	Ing. L. Kocifajová
4.	P. Čiernik	Improvement of Marketing Communications for Business Solík SK, Ltd.	Ing. M. Varmus, PhD.
5.	I. Dobišová	Customer satisfaction measuring in business company	Assoc. Prof. Mgr. J. Soviar, PhD.
6.	I. Dudková	Branding development of the Liptov region	Assoc. Prof. Mgr. J. Soviar, PhD.
7.	V. Ďurkech	Improvement of Marketing Communications for Business MIROCOMPUTERS	Ing. M. Varmus, PhD.
8.	D. Filip	Design of the promotion for discount portal based on the survey of B2B and B2C relationships	Ing. M. Bízík
9.	S. Fratriková	Corporate social responsibility in conditions of selected firm	Ing. R. Jankal, PhD.
10.	M. Garčeková	Suggestion of the motivational actions on protecting against frauds of employees	Ing. M. Bízík
11.	P. Getler	Use the Packet Tracer for teaching computer networks.	Assoc. Prof. Ing. M. Kubina, PhD.
12.	D. Hluško	Proposal of Communications Mix for Business SSiM, Ltd.	Ing. M. Varmus, PhD.
13.	M. Holubčík	Proposal of marketing activities of company SIPE, Ltd.	Ing. K. Púčková
14.	D. Hulín	Proposal of Strategy of Product Introduction	Ing. M. Varmus, PhD.
15.	L. Kacová	Increasing effectiveness internal processes in the real company Techberg Ltd by Theory of Constrains	Prof. Ing. J. Vodák, PhD.
16.	J. Káčer	Analysis of manufacturing and support processes of the HASTRA construction business	Assoc. Prof. Ing. J. Král, CSc.
17.	M. Kavalčíková	Proposal of improving marketing mix instruments of selected company	Ing. V. Šramová
18.	A. Kmotorka	Internet marketing communication of non-profit organization	Assoc. Prof. Mgr. J. Soviar, PhD.
19.	A. Kochanová	Process Improvement by the Tools of Kaizen Methodist in Selected Firm	Ing. M. Peťo
20.	Z. Kopáčová	The ethical handling and solution of stress situations in conditions of selected firm	Ing. R. Jankal, PhD.
21.	A. Krajčovič	Marketing communication for selected company	Ing. V. Lendel, PhD.

No.	Student	Theme	Supervisor
22.	R. Kristín	Leading of employees in selected company	Ing. L. Kocifajová
23.	A. Kubinec	Development of Small and Medium Enterprises through Structural Funds in the chosen Company.	Prof. Ing. J. Vodák, PhD.
24.	J. Kuzma	Customer satisfaction measurement of selected firm	Ing. R. Jankal, PhD.
25.	M. Latka	Motivation and motivating of employees and managers at INA Kysuce	Assoc. Prof. Ing. M. Blašková, PhD.
26.	I. Mariják	Personal and Information and communication support selected consulting company.	Ing. J. Gajdošík
27.	A. Moller	Inventory Planning and Control of a Selected Logistics Segment in the Daffer Trading Company	Ing. L. Richter, PhD.
28.	M. Motyčáková	Proposal of Integrated Marketing Communications for Firm MONTANA	Ing. M. Varmus, PhD.
29.	L. Múdra	The process of development and education of employees in selected company	Ing. L. Kocifajová
30.	V. Ondrúšková	Propose of Theory of Constraints utilization in a chosen company	Prof. Ing. J. Vodák, PhD.
31.	M. Pagáčová	Proposal of marketing communication with emphasis on customers satisfaction	Ing. K. Púčková
32.	J. Poliak	Work Efficiency Improvement in Operations of Selected Firm	Ing. M. Peťo
33.	V. Prusák	Proposal of marketing mix for a selected small business.	Assoc. Prof. Ing. M. Kubina, PhD.
34.	M. Rückschloss	Design of marketing activities for the tourism development in conditions of selected region	Ing. R. Jankal, PhD.
35.	V. Sekerášová	Marketing communication for selected business	Ing. V. Lendel, PhD.
36.	D. Stencláková	The use of information systems in small enterprises.	Assoc. Prof. Ing. M. Kubina, PhD.
37.	N. Svoboda	Draft marketing activities for small business	Assoc. Prof. Ing. M. Kubina, PhD.
38.	M. Šarlák	Marketing communication for company STaS, Ltd.	Ing. V. Lendel, PhD.
39.	M. Šlapková	The motivation and motivating of employees and managers at chosen organization	Assoc. Prof. Ing. M. Blašková, PhD.
40.	M. Štrocholec	Measurement of customer satisfaction company WALMARK, Ltd.	Ing. V. Lendel, PhD.
41.	L. Tadiálová	Motivation program of "Hornonitrianske bane Prievidza"	Assoc. Prof. Ing. M. Blašková, PhD.
42.	L. Valek	Corporate web site as a marketing communication tool	Assoc. Prof. Mgr. J. Soviar, PhD.
43.	J. Vasilovský	Proposal marketing tools to support educational activities RCNA at University of Žilina.	Assoc. Prof. Ing. M. Kubina, PhD.
44.	L. Vojtašáková	Proposal of application of learning organization principles to chosen company	Ing. A. Závodská

MASTER THESIS

No.	Student	Theme	Supervisor
1.	M. Bačíková	The Rationalization of Selected Logistics Processes of Company	Prof. Ing. Š. Hittmár, PhD.
2.	M. Cíba	Inventory Planning and Control in a Selected Logistics Segment of Metsä Tissue Manufacturing Business	Assoc. Prof. Ing. J. Král, PhD.
3.	E. Čavošová	Corporate marketing strategy in cooperation environment	Assoc. Prof. Mgr. J. Soviar, PhD.
4.	E. Dulovcová	Increase of competitiveness through innovations	Ing. R. Jankal, PhD.
5.	A. Gužiniaková	Corporate social responsibility in conditions of elementary school	Ing. R. Jankal, PhD.
6.	K. Handzušová	Innovation in conditions of service firm	Ing. R. Jankal, PhD.
7.	M. Hradský	Information providing of selected business processes	Ing. V. Lendel, PhD.
8.	P. Hrin	Evaluation of Training Programmes in the Company.	Prof. Ing. J. Vodák, PhD.
9.	I. Klučiarová	Information providing of selected business innovation processes	Ing. V. Lendel, PhD.
10.	M. Kocifaj	Proposal of cooperation strategy for ŽILPO, Ltd.	Assoc. Prof. Mgr. J. Soviar, PhD.
11.	K. Kojtalová	The Rationalization of Selected Processes of Galimex, Ltd.	Prof. Ing. Š. Hittmár, PhD.
12.	K. Kontrošová	Innovation marketing strategy of selected company	Ing. V. Lendel, PhD.
13.	M. Kostolná	Innovation in conditions of selected firm	Ing. R. Jankal, PhD.
14.	M. Kubík	Finding of motivation climate and the proposal of motivation program of employees and managers in secondary schools in Martin	Assoc. Prof. Ing. M. Blašková, PhD.
15.	M. Pálffyová	The Proposal of Motivation Program of Employees and Managers at the enterprise	Assoc. Prof. Ing. M. Blašková, PhD.
16.	A. Pallová	Proposal of motivation program for chosen organization	Assoc. Prof. Ing. M. Blašková, PhD..
17.	L. Rumanová	The Rationalization of Personal Processes of Selected Company	Prof. Ing. Š. Hittmár, PhD.
18.	I. Sahin	Modelling and optimization of selected business processes using tool Adonis.	Assoc. Prof. Ing. M. Kubina, PhD.
19.	K. Spuchľáková	Application of Quality Management Methods and Tools in Manufacturing Business	Assoc. Prof. Ing. J. Král, PhD..
20.	P. Struhárová	Application of Quality Management Methods and Tools in the Plakor Czech Manufacturing Business	Assoc. Prof. Ing. J. Král, PhD..
21.	V. Sýkora	Use Adonis tool for mapping and optimization of the selected company.	Assoc. Prof. Ing. M. Kubina, PhD.

No.	Student	Theme	Supervisor
22.	M. Šimo	Application of Bar Coding, RFID and QR Coding in Materials Management of Scheidt und Bachmann, Monchengladbach (D)	Assoc. Prof. Ing. J. Král, PhD..
23.	B. Vakulová	Information providing of selected innovation processes for REC SLOVAKIA, Ltd.	Ing. V. Lendel, PhD.
24.	L. Volnová	The Rationalization of Selected Processes of Company	Prof. Ing. Š. Hittmár, PhD.
25.	K. Žat'ková	Effectiveness of investments in human capital in selected company	Prof. Ing. J. Vodák, PhD.

Other activities of department

Prof. Ing. Štefan HITT MÁR, PhD.

- Member of Scientific Board of Faculty of Management Sciences and Informatics, University of Zilina,
- Member of Scientific Board of Faculty of Special Engineering, University of Zilina, Zilina,
- Member of Scientific Board of University of Trencin AD, Trencin,
- Member of Scientific Board of Faculty of Economics and Administration, University of Pardubice, Pardubice, Czech Republic,
- Member of Scientific Board of Faculty of economics, Matej Bel University of Banská Bystrica, Banská Bystrica,
- Member of Editorial Board EDIS University of Zilina,
- Member of work unit No 8 of Accreditation Committee,
- Member of Committees for Preparing Conferences (EU - opportunities for develop.of transport).

Prof. Ing. Josef VODÁK, PhD.

- Member of Editorial Board of Scientific Journal “Nierównosci społeczne a wzrost gospodarczy”, Poland.

Assoc. Prof. Ing. Martina BLAŠKOVÁ, PhD.

- Co-founder, the first vice-president and coordinator for Slovak Republic of International Academic Network HPD CEEUS – Human Potential Development in Central and Eastern EU States,
- Co-founder, Editor-in-chief and Member of Scientific Committee of the Scientific Journal Human Resources Management & Ergonomics,
- Member of Editorial Board of Scientific Journal “Public Administration Research”, Canada,
- Member of Editorial Board of Scientific Journal “Social Sciences”, USA,
- Member of Editorial Board of Scientific Journal “Public Security and Public Order”, Lithuania,
- Member of Editorial Board of Scientific Journal “Journal of Information, Controls and Management Systems”, University of Zilina,

- Scientific guarantee of International Scientific Conference Human Potential Development (held in Žilina 19th-20th June),
- Member of Scientific Committee of the International Scientific Conference Toyotarity in the Context of European Enterprises Improvement (held in Poland, 6th-8th December),
- Member of Scientific Committee of the International Scientific Conference QUAERE (online 20. – 24 May 2013 a held in presentation form in June 2013 at HUB in Prague),
- Member of Scientific Committee of the International Scientific Conference Present and Future Social Policy (held 18th –19th April 2013 in Czestochowa, Poland),
- Member of Academic Senate Faculty of Management Sciences and Informatics,
- Member of Scientific Council of Faculty of Management Sciences and Informatics.

Assoc. Prof. Ing. **Jaroslav KRÁL**, PhD.

- Member of EDEN - European Distance and E-learning Network (EU network of academics and professionals),
- Member of CEDEFOP - European Centre for the Development of Vocational Training,
- Member of Aberdeen Group Research Associates.

Ing. **Radoslav JANKAL**, PhD.

- Member of Editorial Board of Scientific Journal “International Business Research” (Canadian Centre of Science and Education), Canada,
- Member of Editorial Board of Scientific Journal “International Journal of Business and Management” (Canadian Centre of Science and Education), Canada,
- Member of Editorial Board of Scientific Journal “Business and Management Research” (Sciedu Press), Canada,
- Member of Editorial Board of Scientific Journal “The GSTF Journal on Business Review” (The Global Science and Technology Forum), Singapore,
- Member of Scientific Committee of the International Scientific Conference Human Potential Development (held in Žilina 19th-20th June).



Management laboratory

Department of Software Technologies

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Ing. Ján **Ružbarský**, PhD.

Ing. Patrik **Hrkút**, PhD.

Ing. Marek **Tavač**, PhD

Ing. Ján **Janech**, PhD.

Ing. Štefan **Toth**, PhD

Researchers:

Assoc. Prof. Ing. Miroslav **Hrnčiar**, PhD.

RNDr. Hynek **Bachratý**, PhD.

Assoc. Prof. Mgr. Ivan **Cimrák**, Dr.

Ing. Miroslav **Gábor**, PhD.

Administrative Department: Mgr. Iveta **Belošovičová**

PhD Students:

Mgr. Peter **Madzík**

Ing. Matej **Meško**

Ing. Zuzana **Fabiánová**

Ing. Zuzana **Škutchanová**

PhD-Programme

<i>Theme</i>	<i>Student</i>	<i>Supervisor</i>
Decision-Making Model in Management Services	Mgr. P. Madzík	Assoc.Prof.Ing.M. Hrnčiar , PhD.
Identification and Monitoring of Mobile Objects	Ing. M. Meško	Assoc.Prof.Ing. E. Kršák , PhD.
Quality of Public Administration – Management System of Organization and Individual Efficiency	Ing. Z. Fabiánová	Assoc.Prof.Ing.M. Hrnčiar , PhD.
Product and process innovation in the service sector	Ing. Z. Škutchanová	Assoc.Prof.Ing.M. Hrnčiar , PhD.

EQUIPMENT

Teaching and Research Laboratories

Laboratory of Object Technologies

Laboratory of Control Process Developing

Servers:

ZEUS Fedora Core, VAII Gentoo, HERMES Gentoo. ATLAS Gentoo

TITAN MS Windows 2008 Server

JASON MS Windows 2003 Server

PERSEUS MS Windows 2003 Server

POSEIDON MS Windows 2003 Server



Laboratory of Control Process Developing

Scientific orientation of the Assoc. Professors at the Department

1. Assoc.Prof.Ing. Emil **K r š á k** , PhD.

Research and development in information-communication systems, intelligent transport systems, information systems for basic and dispatching control of transport, distributed information systems, security of information systems, object-oriented programming, advanced object technology

2. Assoc.Prof.Ing. Miroslav **H r n ě i a r** , PhD.

Specific areas of management science. Principal research domains are services, in which is focus to research of Service Quality, Process Management, Project Management and using standardised managerial approaches supported by information and communication technology

3. Assoc.Prof.Mgr. Ivan **C i m r á k** , Dr.

Developing of models for elastic objects immersed in fluids. Analysis of developed models with respect to scalability, accuracy, efficiency. Implementation of models into scientific software and running large-scale simulations. Application of results in the design and development of micro-fluidic devices used in biomedicine.

BACHELOR THESIS

No.	Student	Theme	Supervisor
1.	D. Barborík	Improvement of effectiveness of preparation and realization internal audits	Mgr. P. Madzík
2.	M. Bros	Web application control by motion sensing input device	Ing. P. Hrkút, PhD.
3.	T. Hariň	Webpage development for the research group cell-in-fluid	Assoc.Prof Mgr. I. Cimrák, Dr.
4.	T. Hudec	Improvement of a selected business process	Assoc.Prof. Ing. M. Hrnčiar, PhD.
5.	D. Hurtuk	Rationalization of processes of forwarding company	Mgr. P. Madzík
6.	A. Kmetík	Application data integrity verifying system	Ing. V. Tavač, PhD.
7.	T. Kuba	Internet application for bike rides management	Ing. P. Hrkút, PhD.
8.	M. Kusenda	Calendar and task scheduler for Android	Ing. M. Gábor, PhD.
9.	M. Lörinc	Web application for displaying Web service metadata	Ing. V. Tavač, PhD.
10.	M. Louma	Computer Game Localisation Management System	Ing. J. Janech, PhD.
11.	R. Obžerová	Rationalization of business processes	Mgr. P. Madzík
12.	J. Olos	Video and data collecting application development for Android platform	Ing. M. Meško

13.	M. Potkan	Internet application for driving school	Ing. P. Hrkút , PhD.
14.	L. Sivčák	Mobile RSS reader	Assoc.Prof. Ing. E. Kršák , PhD.
15.	R. Šušuk	Interactive teaching aid for subject Informatics I	Ing. Mgr. Ľ. Sadloň , PhD.
16.	M. Turčáni	Time and attendance system with task planner	Ing. Š. Toth

MASTER THESIS

No.	<i>Student</i>	<i>Theme</i>	<i>Supervisor</i>
1.	L. Babečka	Application for collection and object recognition in traffic	Assoc.Prof. Ing. E. Kršák , PhD.
2.	M. Blaňar	Elimination of waste through Lean management tools in Seidel Slovakia	Assoc.Prof. Ing. M. Hrnčiar , PhD.
3.	R. Dérer	Tool for enhancing effectiveness of creating games in Unity3D engine.	Ing. J. Baráth
4.	D. Dragula	Mobile client - server application built on the architecture WinRT	Assoc.Prof Mgr. I. Cimrák , Dr.
5.	L. Ecker	Basic computer skills teaching software	Ing. V. Tavač , PhD.
6.	T. Holúbek	Server part of learning system for foreign languages with assisted support of new lectures creation	Ing. P. Hrkút , PhD.
7.	T. Jakubčín	Search engine for public transport	Ing. J. Falát
8.	J. Juroško	Mining of secondary sources of information	Assoc.Prof. Ing. M. Hrnčiar , PhD.
9.	T. Kriška	Performance comparison of the .NET object – relational mapping tools	Ing. M. Tavač , PhD.
10.	P. Margetiak	UniApps - university student application for OS Android	Ing. M. Chovanec
11.	V. Póčík	Mobile client-server application with features self-adaptive software	Assoc.Prof. Ing. E. Kršák , PhD.
12.	T. Selyem	Triangulation of implicitly or parametrically given surfaces	Assoc.Prof Mgr. I. Cimrák , Dr.
13.	M. Sluka	Mobile reader of NFC tag and online application for presentation of smartcard content	Ing. J. Janda
14.	Ľ. Šimun	Mobile application „Where is my bus“ for Android OS	Ing. T. Bruna
15.	L. Vaško	Face recognition from an IP camera	Assoc.Prof. Ing. E. Kršák , PhD.
16.	M. Vrabcová	Evaluation of approaches to gather information about costumers	Assoc.Prof. Ing. M. Hrnčiar , PhD.
17.	M. Vrtiak	Dependency Injection Design Pattern	Ing. J. Janech , PhD.

COOPERATION

Cooperation with Institutes and Enterprises in Slovakia

- University of Matej Bel, Banská Bystrica
- Railways of Slovak Republic
- Slovak Society for Quality
- Slovak Post
- Hewlett Packard Slovakia, Ltd.
- Scheidt & Bachmann
- Transport Research Institute
- Slovak Telekom
- Ministry of Education, Science, Research and Sport

Cooperation with Foreign Institutes and Enterprises

- University of Pardubice, The Jan Perner Transport Faculty, Department of Informatics in Transport, Czech Republic
- TUD - University of Technology Dresden, Germany
- Czech Railways
- AŽD Prague, Czech Republic
- Administration of Railways Transportation Roads, Czech Republic
- Dep. of Industrial Simulation, Fachhochschule St. Poelten, Austria
- Institute of Computational Physics, University of Stuttgart, Germany
- Institute of Chemical Biology, Imperial College, London

Membership in Slovak Organizations and Societies

Assoc.Prof.Ing. E. Kršák, PhD.:

- SANET – Slovak Academic Network

Assoc.Prof.Ing. M. Hrnčiar, PhD.:

- Slovak Society for Quality

Ing. M. Gábor, PhD.

- Intelligent Transport Systems Association Slovakia

RNDr. H. Bachratý, PhD.:

- Union of Slovak Mathematicians and Physicists

Membership in International Organizations and Societies

Assoc.Prof.Ing. M. Hrnčiar, PhD.:

- Austrian Society for Process Management

Ing. Ján Janech, PhD.

- IEEE: Advancing Technology for Humanity

Contracts with Slovak and Foreign Institutions

- Railways of Slovak Republic
- Czech Railways
- Slovak Post
- Slovak Society for Quality
- Hewlett Packard
- AŽD Prague, Ltd. (Automation of Czech Railways)
- Union Insurance
- Research Executive Agency, FP7 framework

Other activities:

Assoc.Prof.Ing. E. Kršák, PhD.:

- Administrator of Certificate Authority Faculty of Management Science and Informatics
- Registrar of internet domains TLD sk

Assoc.Prof.Ing. M. Hrnčiar, PhD.:

- President of Slovak Society for Quality
- Member of the Slovak Technical Committee TK22 – Quality
- Member of the Workgroup CAF and Education (EIPA – European Institute for Public Administration)
- Member of the EQAVET – European Quality Assurance in Vocational Education
- Member of the Accreditation Committee for Vocational Education of the Slovak Republic

RNDr. H. Bachratý, PhD.:

- Governor of foundation “Ingenium”
- Member of the regional committee of Union of Slovak Mathematicians and Physicists
- Activities in mathematical talents education

Ing. J. Ružbarský, PhD.:

- Coordinator of Partnership among University of Applied Sciences Dresden, and Faculty of Management Science and Informatics, University of Žilina
- LBMS Graduation Certificate: Object Analyse and Desing in UML

Ing. M. Tavač, PhD.:

- Oracle Database: SQL Certified Expert

Ing. J. Janech, PhD.:

- IEEE member
- IEEE Computer Society member
- IEEE Intelligent Transportation Systems Society member
- ACM member

Assoc.Prof Mgr. I.Cimrák, Dr.:

- Slovak Committee for Mathematical Olympiad member
- Head of Regional Committee for Mathematical Olympiad



Opening Day at the Faculty - Information for perspective students

Photo-Gallery



Faculty of Management Science and Informatics



Scientific Board of the Faculty



Entrance hall of the Faculty



Permanent photo exhibition in the corridor of the Faculty



Atrium



WiFi in the corridors



Dining-Room at the Faculty



First LEGO League Competition at the Faculty