FACULTY OF MANAGEMENT SCIENCE AND INFORMATICS

ANNUAL REPORT 2012

UNIVERSITY OF ŽILINA

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Content

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, which 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 12 000 students on the University of Žilina, including 1 400 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 acceptation 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 2012, our Faculty ranked second among the top 20 faculties whose graduates were most in demand (in 2010 we were in first place; and in 2011 we also ranked second.)**

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 that our Faculty's activities are helping our present and future students to be fully valuable individuals, capable of using their knowledge, skills and experiences in the conditions of the new millennium.

<div align="right">

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

</div>

Presidium of the Faculty:

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

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Vice-Deans: RNDr. Ida **S t a n k o v i a n s k á** , PhD.
Vice-Dean for Education

Tel.: +421-41- 513 40 72
e-mail: ida.stankovianska@fri.uniza.sk

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Vice-Dean for Science

Tel.: +421-41- 513 40 71
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Vice-Dean for Science (from November 1st, 2012)

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e-mail: emil.krsak@fri.uniza.sk

Assoc.Prof.Ing. Michal **Z á b o v s k ý** , PhD.
Vice-Dean for International Affairs

Tel.: +421-41-513 40 53
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Faculty Registrar: Ing. Beata **H o l k o v á ,** PhD.

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

Departments of the Faculty:

The Faculty of management Science and Informatics involves eight Departments and one Sub-Campus. They are:
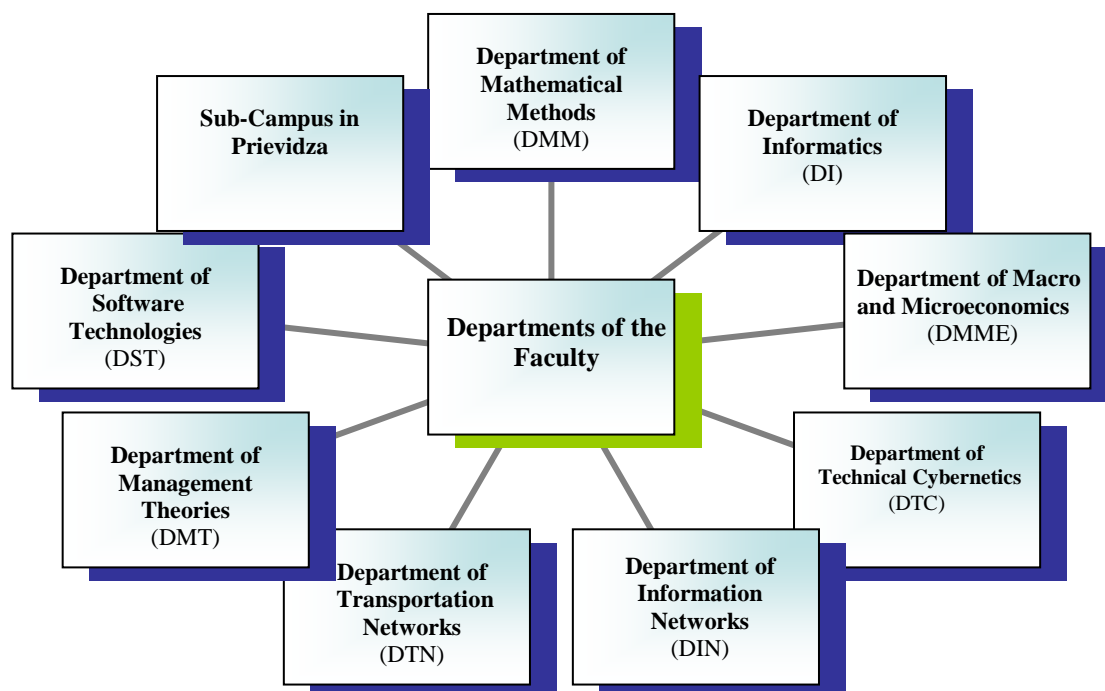
Educational Activities

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

At the present Faculty provides educational programmes in following accredited programmes of study:

Full time 3–year **Bachelors Degree** programme in:

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

The programme is a well-rounded higher education in the 1st degree.
Goal of the **Bachelors level** consists in preparation of experts for application of acquired knowledge in their professional life and at the same time to be able for study in the higher levels (MSc., PhD).

Additional 2 years **Masters Degree** programmes of study are in the following accredited fields:

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

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

- o **Data Processing**
- o **Decision Support Systems**
- o **Information-Communication Networks**
- o **Business Informatics**
- o **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

Doctoral Programme
The Doctoral Programme at the Faculty involves the following scientific disciplines:

- ➢ *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:

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

Further Faculty orientation are connected not only to traditions in the area 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.

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

Teachers and scientific workers of the Faculty are active in lot of scientific and education projects in the whole sum more than 1, 300 000 EUR.

The scientific orientations of the Faculty's Professors and Associated .Professors are in following part:

Professors:

1. Prof.Ing Karol M a t i a š k o , 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.Ing. Matilda D r o z d o v á , PhD.
Prof. Ing. 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 M*odel 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.

3. Prof.Ing. Martin K l i m o , 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

4. Prof.Ing. Juraj M i č e k , 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.

 5.   Prof.RNDR. Jaroslav J a n á č e k , 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. He started this period with study of distribution system design and associated solving techniques of incapacitated facility location problem based on branch-and bound principle. 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.

 6.   Prof.Ing. Petr C e n e k , PhD.

Prof. Petr **Cenek**´s main professional interests are Computer science and *Transportation science*, especially *Computer graphics, modelling, optimization and simulation of transportation processes on microscopic* as well as on *macroscopic level*. In 1992 he was appointed a professor and served two terms as the university vice rector for research and international affairs. His major involvement in industrial projects were several *simulation and optimization projects* for Swiss railways including humping, train sorting and traffic simulation all of them supported by graphical interface. He coordinated Tempus projects and is a university representative with Transportation Research Board, National Council, U.S.A.

 7.   Prof.Ing. Štefan H i t t m á r , 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 be 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.

8. Prof.Ing. Mikuláš A l e x í k , PhD.

Prof. Mikuláš **Alexík** is engaged in the field of *Information and Control Technique* His research interests include *self tuning control algorithm, continuous identification of dynamics processes parameters, modelling and simulation of transportation means and processes*, especially searching of *optimal trajectory of underground vehicles* and *modelling and identification of driver in the car dynamics behaviours*. He is worked a long time in national and international boards and societies (SSAKI, CSSS, ECCAI, IFAC, EUROSIM) and is member of the editorial boards of several journals.

Associated Professors:

Department of Informatics:

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.

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 š 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 j t s e v a , PhD.

Reliability Analysis. The preferred areas of investigation is 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.

Department of Mathematical Methods:

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

Department of Macro and Micro Economy:

1. Assoc.Prof.Ing. Mária Ď u r i š o v á , 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 K u c h a r č í k o v á , 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.

Department of Transportation Networks:

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.

Department of Information Networks:

1. Assoc.Prof.Ing. Tatiana K o v á č i k o v á , PhD.

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.

2. Assoc.Prof.Ing. Katarína B a c h r a t á , PhD.

Mathematics and applied mathematics, member of the Cell-in-fluid research group, member of the VoIP and Text to speech research teams in the Department of InfoCom Networks, collaboration with Comenius University of Bratislava and Charles university of Prague in the area of the Theory of Mathematics Education.

Department of Technical Cybernetics:

1. Assoc.Prof.Ing. Peter G u b i š , PhD.

Research and development of computer controlled measuring and communication systems. Digital and analogue electronics

Department of Management Theories:

1. Assoc.Prof.Ing. Martina B l a š k o v á , PhD.

Guarantor of the bachelor degree program Management. Primarily is engaged in scientific research and pedagogical activities in the field of Human resource management / human potential and organizational behaviour, especially in these topics: motivation, leadership, effectiveness in management, modelling of interpersonal processes.

2. Assoc.Prof.Ing. Josef V o d á k , PhD.
Scientific activities are oriented to enterprise and to attributes which are necessary for successful management and achievement of requirement results. Modern methods of management with emphasis to human capital (Performance Management). Activities in domestic and international projects oriented to enhancement of concurrence ability and efficiency of enterprises.

3. Assoc.Prof.Ing. Jaroslav K r á l , PhD.
Operations management, Business strategy & Competitiveness, Business logistics & Supply chain management, Total quality management, Management decision-making & Problem solving

Department of Software Technologies:
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 č 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

Scientific activities of the Faculty:

Projects supported by European Union Founds:

<u>**International Science and Technology Cooperation**</u>

1. ETSI STF 440: "*Cable Network Transition to IPv6*",
                        project funded by ETSI
                        Assoc.Prof.Ing. Tatiana **Kováčiková**, PhD.

2. ETSI STF 448: "*Local Dynamic Map (LDM) Standardisation for vehicle ITS Station*"
                        project funded by EC
                        Assoc.Prof.Ing. Tatiana **Kováčiková**, PhD.

3.ECP-2007-GEO_317007 *NATURE-SDIplus Use of the Spatial Data Infrastructure for Nature Protection*
Project in the EU program e-Content Plus.
Local coordinator: Assoc.Prof.Ing. Peter **Fabián**, PhD.

4. 2008-2458/001-001 MUN-MUNATT *EMA-4-MOODLE- Enhancing the Attractiveness – Development of Intercultural and Language Course for ERASMUS students*
Project in the EU program ERASMUS Mundus Action 4.
Local coordinator: Assoc.Prof.Ing. Peter **Fabián**, PhD.

5. 265610 7.FP   ***VEL-Wagon- Versatile, Efficient and Longer Wagon for European Freight Rail***

Cooperation project in the EU FP7 program,
Local coordinators: Assoc.Prof.Ing. Peter **Fabián**, PhD., Ing. Peter **Márton**, PhD.

6. 265841 7.FP   ***MARKET UP - Market uptake of research results***
Support action project in the EU FP7 program.
Local coordinator: Assoc.Prof.Ing. Peter **Fabián**, PhD.

7. 203-01201315 ***Micro-fluidic Simulations with Biomedical Applications***
International research project
Coordinator: Mgr. Ivan **Cimrák**, PhD.

8. FP7-PEOPLE-2011-01206 ***Biomed Micro-fluidics***
Support action project in the EU FP7 program.
Coordinator: Mgr. Ivan **Cimrák**, PhD.

Centres of Excellence

1. 26220120028 ***Centres of Excellence for Systems and Services of Intelligent Traffic IDS1***
        Faculty is a University Coordinator
        Leader of project: Prof.Ing. Karol **Matiaško**, PhD.

2. 26220120050 ***Centres of Excellence for Systems and Services of Intelligent Traffic IDS2***
        Faculty is a University Coordinator
        Leader of project: Prof.Ing. Karol **Matiaško**, PhD.

3. 26220220022 ***Design of New Diagnostic Algorithm in Selected Tumour Illnesses***
        Faculty is a Partner of Comenius University, Medical Faculty, Bratislava

4. 26220220021 ***Centre of Translation Medicine***
        Faculty is a Partner of Comenius University, Medical Faculty, Bratislava

5. 26220120007 ***CaKS – Centre of Excellence in Informatics Sciences and Knowledge Systems***
        Faculty is a Partner of University "Pavol Jozef Šafarik" Košice and
        University "Matej Bell" Banská Bystrica

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. 1/0758/11 ***Algorithms for Knowledge Discovery in Otoneurological Database***
        Ing. Ján **Boháčik**, PhD.

3. 1/0374/11 ***Modelling and Optimization of Mobility and Infrastructure in Logistic Networks***
        Assoc.Prof.RNDr. Stanislav **Palúch**, PhD.

4. 1/0888/11 ***Knowledge Management – Models and Applications***
    Prof.Ing. Štefan **Hittmár**, PhD.

5. 1/0495/08 ***Dynamic and Decision-Making Content of Processes in Human Potential Motivation***
    Assoc.Prof.Ing. Martina **Blašková**, PhD.

    .

7. 1/1099/11 ***Modelling and Simulation of Dynamic Interaction in environment driver/automobile/traffic situation***
    Prof.Ing. Mikuláš **Alexík**, PhD.

8. 1/1099/11 ***Cooperation Management – Effective Approach for Profit of Competitive Advantage***
    Assoc.prof.Ing. Jozef **Strišš**, PhD.

9. 1/0935/11 ***New Methods and Algorithms for Reliability Analysis of Multi-State Systems***
    Assoc.Prof.Ing. Elena **Zaitseva**, PhD.

10. 1/0597/11 ***Software Systems Supporting Decisions in Large-Scale Networks***
    Assoc.Prof.Ing. Ľuboš **Buzna**, PhD.

11. 1/0843/11 ***Mathematical Models of Uncertainty***
    Assoc.Prof.Mgr. Marián **Grendár**, PhD., Ing. Ján **Boháčik**, PhD.

12. 1/0720/11 ***Development of new Multi-channel Signals Processing Methods for the Intelligent Transport Systems***
    Prof.Ing. Juraj **Miček**, PhD.

13. 1/1135/11 ***Methods of Automatic Pattern Recognition Used in Transport Systems Modelling***
    Prof.Ing. Petr **Cenek**, PhD.

14. 1/0919/11 ***Creating Algorithms for Decision-Making Support Based on Fuzzy Data***
    Assoc.Prof. Vitaly **Levashenko**, PhD.

15. 1/052/11 ***Study of Fuzzy Flip-Flop Networks for Speech Recognition***
    Prof.Ing. Martin **Klimo**, PhD.

16. 1/0017/11 ***Performance Modelling and Optimization of Parallel Algorithms***
    Prof.Ing. Ivan **Hanuliak**, PhD.

17. 1/0981/11 ***Model of Integrated Security System Optimization Framework for Protection of Specific Objects Realised by means of Expert Systems***
    Prof.Ing. Jozef **Reišpís**, PhD., Assoc.Prof.Ing. Penka **Martincová**, PhD.

18. 1/0457/11 ***Determinants and Factors of the Management Decision-Making with Emphasis on the Period of the Current Economic Recession***
    Assoc.Prof.Ing. Alžbeta **Kucharčíková**, PhD.

Scientific Board:

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

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

Assoc.Prof.Ing. Pavel **Čičák**, PhD.

Prof.Ing. Milan **Dado**, PhD.

Prof.Ing. Matilda **Drozdová**, PhD.

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

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

Assoc.Prof.RNDr. Elena **Gramatová**, PhD.

Assoc.Prof. Zdeněk **Havlice**, PhD.

Prof. Ing. Štefan **Hittmár**, PhD.

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

Assoc. Prof. Ing. Vladimír **Jamrich**, PhD.

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

Assoc.Prof.Ing. Ľudmila **Jánošíková**, PhD.

Prof. Ing. Martin **Klimo**, PhD.

Prof.Ing. Milan **Kolesár** PhD.

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

Assoc.Prof.Ing. Emil **Kršák**, PhD.

Assoc.Prof.Ing.. Penka **Martincová**, PhD.

Prof. Ing. Juraj **Miček**, PhD.

Assoc. Prof. Ing. Vladimír **Mlynarovič**, PhD.

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

Prof. Ing. Ladislav **Šimák**, PhD.

Prof. Ing. Karel **Šotek**, PhD.

Prof.Dr.Ing. Róbert **Štefko**, PhD.

Prof.Ing. Liberios **Vokorokos**, PhD.

Prof.Ing. Peter **Závodný**, PhD.

In the procedure to be appointed as a *Professor* in 2012 was successful

Name of candidate	*Title of inauguration work*
Assoc.Prof.Ing. Jozef **Vodák**, PhD.	Application of Performance Management in Market Value Enhancement of Enterprise

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

Name of candidate	*Title of habilitation work*
Mgr. Jakub **Soviar**, PhD.	Cluster Access in Cooperation Management
Wlodzimierz **Sroka**, PhD.	Process Approach to the Management of Alliance Networks
RNDr. Martin **Malčík**, PhD.	Semantic Web and Data Web in the Light of Knowledge Presentation

Scientific Board of the Faculty, after successful defence of Dissertation Thesis, has appointed in 2012 with title **PhD**. following graduates of Doctoral Programme:

1	Ing. Karolína Mužíková	Game Using Theory in Managerial Decision-Making	Assoc.Prof. Ing. Peter Fabián, PhD.
2	Ing. Lukáš Richter	Knowledge Creation about Invention in Supplies Chain Management in Condition of System Dynamics	Assoc.Prof. Ing. Jaroslav Král, PhD.
3	Ing. Matej Uram	Quality Service Enhancement through Control of Specific Service Attributes	Assoc.Prof. Ing. Miroslav Hrnčiar, PhD.
4	Ing. Marek Tavač	Databases Transformation Object	Prof. Ing. Karol Matiaško, PhD.
5	Ing. Tomáš Bača	Optimization of Data Transmission in Ad-hoc Networks	Assoc.Prof. Ing. Emil Kršák, PhD.
6	Ing. Anton Lieskovský	Replication of Data in Ad-hoc Networks	Prof. Ing. Karol Matiaško, PhD.
7	Ing. Stanislav Foltán	Voice Recognition by Fuzzy Logic Circuits	Prof. Ing. Martin Klimo, PhD.
8	Ing. Štefan Baďura	Learning of Fuzzy Logic Networks with Memory for Speech Recognition from Video	Prof. Ing. Martin Klimo, PhD.
9	Ing. Alexandra Kotillová	Econometric Modelling with Selected Artificial Intelligent Methods	Prof. Ing. Dušan Marček, PhD.
10	Ing. Peter Jankovič	Support for Design of Robust Planes and Schedules	Assoc.Prof. Mgr. Valent Klima, PhD.
11	Ing. Stanislav Piecka	Parallel Solving Methods of Supplies Problems by means of Ants Colony	Assoc.Prof. RNDr. Mária Lucká, PhD.
12	Dipl. Ing. Marija Kopf	Contribution to Traffic State Estimation by means of Image Processing Methods	Prof. Ing. Petr Cenek, PhD.

Publication Activities:

Members of the Faculty of Management Science and Informatics have published in the year 2012 results of research activity in **213** publications. Some of the more significant titles there are in the following list.

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JANECH, J., LIESKOVSKY, A., KRSAK, E.: *Comparison of strategies for data replication in VANET environment*.
In: WAINA 2012: 26th IEEE international conference on Advanced information networking and applications workshops: 26-29 March 2012, Fukuoka Institute of Technology, Fukuoka, JAPAN. - [S.l.]: IEEE, 2012. - ISBN 978-0-7695-4652-0.

HODOŇ, M., MÖLLER, G.: *Investigation of RTK initialization times during simulation of the GSM signal lost*
In: MEMSTECH´ 2012 : perspective technologies and methods in MEMS design : proceedings of the VIIIth international conference in MEMS design: Lviv - Polyana, UKRAINE, Lviv Polytechnic, 2012. - ISBN 978-617-607-229-4. - pp. 129-132.

PUCHYOVA, J.: *Exploration algorithm with shortened return for group of mobile robots*
In: MEMSTECH´ 2012 : perspective technologies and methods in MEMS design : proceedings of the VIIIth international conference in MEMS design: Lviv - Polyana, UKRAINE 18-21 April 2012. – Lviv Polytechnic, 2012. - ISBN 978-617-607-229-4. - pp. 77-80.

Academic Senate of the Faculty:

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

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

Chamber of Employees:

Ing. Norbert **Adamko**, PhD.

RNDr. Hynek **Bachratý**, PhD.

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

Ing. Juraj **Dubovec**, PhD.

Mgr. Lýdia **Gábrišová**, PhD.

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

Ing. Jozef **Juríček**, PhD.

RNDr. Štefan **Kovalík**, PhD.

Assoc.Prof. Ing. Emil **Kršák**, PhD.

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

Ing. Peter **Márton**, PhD.

Ing. Peter **Palúch**, PhD.

Ing. Peter **Ševćík**, PhD.

Ing. Michal **Žarnay**, PhD.

Chamber of Students:

Bc. Miroslav **Cibuľa**

Bc. Róbert **Ďurec**

Jakub **Kordiak**

Pavol **Getler**

Lukáš **Lehota**

Ing. Marek **Šajna**

Michal **Krupka**

Abroad stays of the Faculty staff and Doctoral Students:
In the 1ˢᵗ Quarter 2012

	Name	*Institute - Country*	*from*	*to*
1	Ľ. Buzna, Assoc.Prof. Ing. PhD.	Queen Marry University London, (GB)	10.1.2012	14.1.2012
2.	I. Cimrák Ing.	Dep.Industrial Simulations, Sankt Poelten, (A)	16.1.2012	17.1.2012
3.	T. Kováčiková, Assoc.Prof. Ing.PhD.	ETSI Sofia Antipolis (F)	16.1.2012	18.1.2012
4.	T. Kováčiková, Assoc.Prof. Ing.PhD.	Cisco Berlin, (D)	19.1.2012	21.1.2012
5.	M. Zábovský, Assoc.Prof. Ing. PhD.	Institute ITIA, Milano, (I)	31.1.2012	1.2.2012
6.	M. Rusin Ing.	University of Tromso, (N)	1.2.2012	25.4.2012
7.	M. Hodoň Ing.	Glasgow University, (GB)	5.2.2012	9.2.2012
8.	M. Jurečka Ing. PhD.	Glasgow University, (GB)	5.2.2012	9.2.2012
9.	E. Zaitseva, Assoc.Prof. Ing. PhD.	ISEU and BSUIR Minsk, (BY)	12.3.2012	30.3.2012
10.	M. Alexík, Prof. Ing., PhD.	TU Wien, (A)	14.2.2012	18.2.2012
11.	M. Zábovský, Assoc.Prof. Ing. PhD.	Dabrowa Gornicza, (PL)	16.2.2012	17.2.2012
12.	M. Hodoň Ing.	IPID Ilmenau, (D)	18.2.2012	15.3.2012
13.	I. Cimrák Ing.	Dep.Industrial Simulations, Ghent, (B)	6.3.2012	11.3.2012
14.	E. Kršák, Assoc.Prof. Ing., PhD.	AINA 2012 Fukuoka, (JAP)	24.3.2012	30.3.2012
15.	J. Janech Ing., PhD.	AINA 2012 Fukuoka, (JAP)	24.3.2012	30.3.2012
16.	Anton Lieskovský	AINA 2012 Fukuoka, (JAP)	24.3.2012	30.3.2012
17.	M. Zábovský, Assoc.Prof. Ing. PhD.	University of Seinäjoki, (FIN)	24.3.2012	29.3.2012
18.	P. Hrkút Ing. PhD.	Intertrafic Amsterdam 2012, (NL)	26.3.2012	30.3.2012
19.	V. Tavač Ing. PhD.	Intertrafic Amsterdam 2012, (NL)	26.3.2012	30.3.2012

In the 2ⁿᵈ Quarter 2012

	Name	*Institute - Country*	*from*	*to*
1	P. Márton Ing., PhD.	Wien Zvbf,TU Wien, (A)	13.4.2012	13.4.2012
2.	M. Jurečka Ing. PhD.	University of Polyana, (UE)	17.4.2012	21.4.2012
3.	J. Púchyová, Ing.	University of Polyana, (UE)	17.4.2012	21.4.2012
4.	M. Zábovský, Assoc.Prof. Ing. PhD.	Univ. of. Toronto, (CAN)	19.4.2012	29.4.2012
5.	H. Bachratý RNDr., PhD.	Oxford University, (GB)	25.4.2012	30.4.2012
6.	K. Bachratá, Assoc.Prof.. RNDr., PhD.	Oxford University, (GB)	25.4.2012	30.4.2012
7.	M. Klimo, Prof. Ing. PhD.	University of Valencia, (E)	7.5.2012	11.5.2012
8.	K. Matiaško, Prof.Ing.PhD.	EBC Centrum Microsoft Brussels, (BE)	8.5.2012	9.5.2012
9.	M. Zábovský, Assoc.Prof. Ing. PhD.	Politechnica de Valencia (E)	10.5.2012	13.5.2012
10.	M. Klimo, Prof. Ing. PhD.	TU Ilmenau, (D)	16.6.2012	21.6.2012

	Name	*Institute - Country*	*from*	*to*
11.	J. Vodák, Assoc.Prof. Ing. PhD.	Centrum Szkoleniowo-Wypoczynkowe, Naleczow (PL)	20.5.2012	23.5.2012
12.	T. Kováčiková, Assoc.Prof. Ing.PhD.	ETSI Sofia Antipolis (F)	21.5.2012	23.5.2012
13.	T. Majer Ing.	Silesian Univ. of Technology, Katowice (PL)	27.6.2012	29.6.2012
14.	S.Palúch, Assoc.Prof. RNDr., PhD.	Silesian Univ. of Technology, Katowice (PL)	27.6.2012	29.6.2012
15.	J. Rebo RNDr., PhD.	Silesian Univ. of Technology, Katowice (PL)	27.6.2012	29.6.2012

In the 3rd Quarter 2012

	Name	*Institute - Country*	*from*	*to*
1	T. Kováčiková, Assoc.Prof. Ing., PhD.	ETSI Sofia Antipolis (F)	2.8.2012	20.8.2012
2.	T. Kováčiková, Assoc.Prof. Ing., PhD.	ETSI Sofia Antipolis (F)	27.8.2012	7.9.2012
3.	K. Matiaško, Prof. Ing., PhD.	Hochschule fur Telek.Leipzig (D)	3.9.2012	7.9.2012
4.	Ľ. Buzna, Assoc.Prof. Ing., PhD.	Leibniz Universitat Hannover (D)	19.8.2012	8.9.2012
5.	M. Koháni, Ing., PhD.	Leibniz Universitat Hannover (D)	19.8.2012	8.9.2012
6.	J. Janáček Prof. RNDr., PhD.	Leibniz Universitat Hannover (D)	19.8.2012	8.9.2012
7.	M. Hodoň , Ing.	TU Wroclav (PL)	8.9.2012	13.9.2012
8.	P. Tarábek, Ing., PhD.	TU Wroclav (PL)	8.9.2012	13.9.2012
9.	M. Rusin, Ing.	TU Wroclav (PL)	8.9.2012	13.9.2012
10.	J. Kapitulík, Ing., PhD.	TU Wroclav (PL)	10.9.2012	13.9.2012
11.	M. Jurečka, Ing., PhD.	TU Wroclav (PL)	10.9.2012	13.9.2012
12.	Z. Kurilová, Ing., PhD.	Man.SudParis, Evry (F)	10.9.2012	14.9.2012
13.	P. Hrkút, Ing. PhD.	TU Wroclav (PL)	11.9.2012	12.9.2012
14.	P. Ševčík, Ing. PhD.	TU Wroclav (PL)	11.9.2012	13.9.2012
15.	O. Karpiš, Ing. PhD.	TU Wroclav (PL)	11.9.2012	13.9.2012
16.	P. Martincová, Assoc.Prof.Ing. PhD.	TU Sofia (BG)	12.9.2012	22.9.2012
17.	J. Janáček, Prof. RNDr., PhD.	Molde University College (N)	15.9.2012	24.9.2012
18.	M. Koháni, Ing., PhD.	Molde University College (N)	15.9.2012	24.9.2012
19.	P. Márton, Ing., PhD.	TU Berlín INNOTRANS (D)	17.9.2012	21.9.2012

	Name	*Institute - Country*	*from*	*to*
20.	N. Adamko, Ing., PhD.	TU Berlín INNOTRANS (D)	17.9.2012	21.9.2012
21.	Š. Hittmár, Prof. Ing., PhD.	WZOWL Wroclav (PL)	19.9.2012	20.9.2012
22.	J. Vodá,k, Assoc.Prof.Ing., PhD.	Univ. Rzeszowie (PL)	19.9.2012	22.9.2012
23.	M. Zábovský, Assoc.Prof.Ing., PhD	REHAU Wien (A)	26.9.2012	26.9.2012
24.	M. Hodoň, Ing.	EU Commission Warsovie (PL)	24.9.2012	28.9.2012
25.	M. Klimo, Prof. Ing., PhD.	Expocentre Warsovie (PL)	26.9.2012	28.9.2012
26.	T. Kováčiková, Assoc.Prof. Ing., PhD.	EC Brussels (B)	30.9.2012	5.10.2012
27.	P. Márton, Ing., PhD.	University of Beograd (SB)	22.10.2012	26.10.2012
28.	T. Bača, Ing., PhD.	University of Applied Sciences St. Polten (A)	25.9.2012	26.9.2012
29.	I. Cimrák, Dr.	University of Applied Sciences St. Polten (A)	25.9.2012	26.9.2012
30.	I. Jančigová, Mgr.	University of Applied Sciences St. Polten (A)	25.9.2012	26.9.2012

In the 4th Quarter 2012

	Name	*Institute - Country*	*from*	*to*
1	T. Kováčiková, Assoc.Prof. Ing., PhD.	ETSI Sophia Antipolis (F)	5.10.2012	13.10.2012
2.	T. Kováčiková, Assoc.Prof. Ing., PhD.	Kapsch Austria (A)	16.10.2012	17.10.2012
3.	Š. Baďura, Ing., PhD.	TSU-I.J.Tbilisy State University (GRZ)	16.10.2012	22.10.2012
4.	M. Zábovský, Assoc.Prof.Ing., PhD.	Robert Morris University Pittsburg (USA)	19.10.2012	29.10.2012
5.	T. Kováčiková, Assoc.Prof. Ing., PhD.	Congress Center Vienna (A)	22.10.2012	24.10.2012
6.	M. Alexík, Prof. Ing., PhD.	Frauenhofer FOKUS Institute, Berlin (D)	9.12.2012	11.12.2012
7.	T. Kováčiková, Assoc.Prof. Ing., PhD.	Holografica Budapest (H)	7.11.2012	9.11.2012
8.	T. Kováčiková, Assoc.Prof. Ing., PhD.	ETSI Sophia Antipolis (F)	16.12.2012	20.12.2012

Official guests from foreign institutions accepted by Deans Office in 2012:

1. Mrs. Irina **Pticina**, Transport and Telecommunication Institute, Riga (LT)

2. Dipl.Ing. Birgit **Graf**, Hochschule für Telekomunikation, Leipzig, (D)

3. Prof. Klaus **Baderscheider**, Hochschule für Telekomunikation, Leipzig, (D)

4. Prof. Wojciech **Korneta**, College of Computer Science and BA, Lomža, (PL)

5. Dr. inž. Ryszard. **Szcebiot**, College of Computer Science and BA, Lomža, (PL)

6. Prof. Ewa **Matuska**, Hanseatic Academy of Management, Slupsk (PL)

7. Mrs, Irena **Figurska,** Hanseatic Academy of Management, Slupsk (PL)

Turnover of staff in 2012

Within the space of year **2012** the Faculty has accepted into pedagogical and scientific staff following members:

1. Ing. Tomáš B a č a , PhD.
2. Ing. Anton L i e s k o v s k ý , PhD.
3. Ing. Štefan B a ď u r a , PhD.
4. Ing. Michal H o d o ň

In the same period following members left the Faculty:

1. Ing. Ondrej B a r t l , PhD.
2. Ing. Mária Č e r ň a n s k á , PhD.
3. Ing. Eva V a l e n t í k o v á , PhD.

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 2008-2012.

CATEGORY/YEAR	2008	2009	2010	2011	2012
Professors	11	10	9	9	8
Guest Professors	1	1	-	-	-
Assoc. Prof.	12	15	16	17	18
Senior Lecturers PhD.	45	58	56	52	58
Senior Lecturers	16	13	9	9	7
Assistants	1	-	-	-	-
Lectors	6	5	4	4	3
Research staff	9	6	8	6	5
Tech. Admin. Staff	52	47	44	44	44
Total	**153**	**155**	**146**	**141**	**143**

Programmes of Study:

**Bachelors Degree Programme*: INFORMATICS*

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		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
1		**OPTIONAL**			
	5BI011	Practice of Programming 1	0-0-2	1	DI
	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
		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
2	5BE002	Microeconomics	2-2-0	6	DMME
		OPTIONAL			
	5BI036	Practice of Programming 2	0-0-2	1	DI
	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

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

2nd year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		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
3		**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

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		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
4		**OPTIONAL**			
	5BE008	Macroeconomics	2-2-0	5	DMME
	5BE014	Small and Medium Entrepreneurship	2-2-0	6	DMME
	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
		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
5	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
		COMPULSORY			
	5BZ001	Bachelors Project	0-0-8	12	G
	5BL040	English Language 1	0-0-0	3	FHSc_DL
6		**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
	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
Autumn		COMPULSORY OPTIONAL			
	5BE007	Finance of Enterprise	2-0-2	6	DMME
Spring		COMPULSORY OPTIONAL			
	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
Autumn		COMPULSORY OPTIONAL			
	5US009	Internet and Intranet Application Development	2-0-2	4	DST
Spring		COMPULSORY OPTIONAL			
	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
Autumn		COMPULSORY OPTIONAL			
	5BN003	Computer Networks 1	2-0-4	6	DIN
	5BN011	Computer Networks 3	2-0-2	6	DIN
Spring		COMPULSORY OPTIONAL			
	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
Autumn		OPTIONAL			
	5BF019	Mathematical Analysis 3	2-2-1	6	DMM
Spring		COMPULSORY OPTIONAL			
	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
	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
		COMPULSORY			
	5BF007	Electronics	2-0-2	6	DTC
	5BI039	Informatics 3	2-1-2	5	DST
	5BH001	Logical Systems	2-0-2	6	DTC
3		**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

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

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		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
4		**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			
	5BF010	Complex Variable and Integral Transformation	2-1-1	4	DMM
	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
	5UE004	Basics of Electronic Business	2-0-2	6	DIN
	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
	5BL014	Physical Education 6	0-0-2	1	IPE

From the group of Compulsory optional courses student has to choose courses, so that to obtain 15 credits in Bachelors Programme of study.
Minimum number of credits to conclude the Bachelors Programme of study: 180

Bachelors Degree Programme*: MANAGEMENT*

1ˢᵗ year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		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
1		**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
		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
2	5BE002	Microeconomics	2-2-0	6	DMME
	5BE016	Business Economy	3-2-0	6	DMT
		OPTIONAL			
	5BI036	Practice of Programming 2	0-0-2	1	DI
	5BL016	Foreign Language 2	0-2-0	3	FHSc-DL
	5BL010	Physical Education 2	0-0-2	1	IPE

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

2ⁿᵈ year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		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
3		**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

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			
	5BA008	Numerical Methods	2-0-2	3	DMM
	5BI044	Computers Graphic and Animation	1-0-3	4	DIN
	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			
	5BM017	Management 2	1-2-0	4	DMT
	5BI031	Database Systems – MS Access	2-0-2	4	DI
	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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Masters Degree Programme: *INFORMATION SYSTEMS*

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	COMPULSORY				
	5IN017	Architecture of Networks	2-0-2	5	DIN
	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
	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	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				
	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	G

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

Decision Support Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY OPTIONAL			
Autumn	5II001	Fuzzy Sets and Neural Networks	2-0-2	5	DTN
	5IE001	Theory of Enterprise	2-2-0	5	DMME

Semester		COMPULSORY OPTIONAL			
	5US005	GIS Application in the Management	2-0-2	5	DTN
Spring	5IN008	Communication Systems	2-0-2	5	DTN
	5IA006	Mathematical Programming	2-0-2	5	DTN

Applied Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester		COMPULSORY OPTIONAL			
Autumn	5II013	Advanced Object Technologies	2-0-2	5	DTS
	5IE001	Theory of Enterprise	2-0-2	5	DMME

Semester		COMPULSORY OPTIONAL			
	5II028	Database Languages	2-0-2	5	DI
Spring	5II012	Data Mining	2-0-2	5	DI
	5IS006	Geographic Information Systems	2-0-2	5	DTN

Information-Communication Networks

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester		COMPULSORY OPTIONAL			
Autumn	5IN007	Signal Transmissions	2-0-2	5	G-FEE
	5IP007	Design of Networks	2-0-2	5	G-FEE

Semester		COMPULSORY OPTIONAL			
Spring	5IN003	Integration of Networks	2-0-2	5	DIN
	5IN010	Theory of Information Networks	2-0-2	5	DIN

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

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester		**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

Semester		**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

Decision Support Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		OPTIONAL			
Autumn	5IS007	Distributed Systems	2-0-2	5	DTC
	5IS009	Expert Systems	2-0-2	6	DTN
	5II032	Design Patterns	2-0-2	5	DI
	5IN005	Architecture of Networks	2-0-2	5	DIN

Semester		**OPTIONAL**			
Spring	5US04	Analysis of Processes	2-0-2	5	DIN
	5II028	Database Languages	2-0-2	5	DI
	5IA010	Implementation of Optimization Algorithms	2-0-2	5	DTN
	5IM012	Quantitative Methods in Logistics	2-0-2	5	DMM
	5IA008	Metaheuristics	2-0-2	5	DTN
	5IE012	Prognostics	2-0-2	6	DMME
	5IS002	Real Time Systems Programming	2-0-2	5	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

Applied Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester		OPTIONAL			
Autumn	5IS009	Expert Systems	2-0-2	6	DTN
	5IS011	HPC and Grid computing	2-0-2	5	DTC
	5II032	Design Patterns	2-0-2	5	DI
	5IN005	Architecture of Networks	2-0-2	5	DIN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester		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

Information Communication Networks

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester		OPTIONAL			
Autumn	5IS009	Expert Systems	2-0-2	6	DTN
	5IS011	HPC and Grid computing	2-0-2	5	DTC
	5II032	Design Patterns	2-0-2	5	DI
	5IS013	Developing Standards Open MP and MPI	2-0-2	5	DTC

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester		OPTIONAL			
Spring	5IS006	Geographical Information Systems	2-0-2	5	DTN
	5IA010	Implementation of Optimization Algorithms	2-0-2	5	DTN
	5IA008	Metaheuristics	2-0-2	5	DTN
	5IE012	Prognostics	2-0-2	6	DMME
	5IS002	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

Business Informatics

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester	OPTIONAL				
Autumn	5IE005	Management Accounting	2-2-0	6	DMME
	5II032	Design Patterns	2-0-2	5	DI
	5II013	Advanced Object Oriented Technologies	2-0-2	5	DI
	5IN005	Architecture of Networks	2-0-2	5	DIN
	5II023	Artificial Intelligence	2-0-2	5	DTN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester	OPTIONAL				
Spring	5II003	Database Languages	2-0-2	5	DI
	5IA010	Implementation of Optimization 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

Distributed and Parallel Systems

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	OPTIONAL				
	5IS009	Expert Systems	2-0-2	6	DTN
	5IA009	Mathematical Aspects of Efficient Counting	2-0-2	5	DTC
	5II032	Design Patterns	2-0-2	5	DI
	5IN005	Architecture of Networks	2-0-2	5	DIN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Semester	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

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

Masters Degree Programme: COMPUTER ENGINEERING

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1		COMPULSORY			
	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			
	5IN005	Networks Architecture	2-0-2	5	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			
	5IZ001	Diploma Thesis	0–0-20	30	G
	5IL004	English Language 2	0-0-0	3	DL

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**			
	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

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: MANAGEMENT

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY			
1	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
		COMPULSORY			
2	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
		COMPULSORY			
3	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
		COMPULSORY			
4	5IZ001	Diploma Thesis	0–0-20	30	G
	5IL006	Foreign Language 2	0-0-0	3	DL

52

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY OPTIONAL			
Autumn	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
		COMPULSORY OPTIONAL			
Spring	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
		OPTIONAL			
Autumn	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		**OPTIONAL**			
Spring	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
	5UE004	Basics of Electronic Business	2-0-2	6	DIN

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

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

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

Master Degree Programme: **APPLIED NETWORK ENGINEERING**

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY			
1	5IN025	Communication Technologies 2	2-0-2	6	DIN
	5IH017	Interconnected Implemented 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
	5IP0SI	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY			
2	5IN018	Theory of Communication	2-0-2	6	DIN
	5IP0S2	Project 2	0-2-4	6	G
		Compulsory for orientation Implemented Systems			
	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
		Compulsory for orientation Network Infrastructure			
	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

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

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY			
3	5IP0S3	Project 3	0-2-4	6	G
	5IP005	Internship	0-0-0	0	G
		Compulsory for orientation Implemented Systems			
	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
		Compulsory for orientation Network Infrastructure			
	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
		COMPULSORY			
4	5IZ001	Diploma Thesis	0–0-20	30	G
	5IL006	English Language 2	0-0-0	3	DL

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

1st year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY			
1	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
	5IP001	Design of Networks	0-2-4	6	G
	5IP0R1	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY			
2	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
		COMPULSORY			
3	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

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		COMPULSORY			
4	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
		COMPULSORY OPTIONAL			
Autumn	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
		COMPULSORY OPTIONAL			
Spring	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
		OPTIONAL			
Autumn	5IN017	Architecture of Networks	2-0-2	5	DIN
	5IS009	Expert Systems	2-0-2	6	DTN
	5BI025	Assemblers	2-0-2	6	DTN

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
		OPTIONAL			
Spring	5II028	Database Languages	2-0-2	5	DT
	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

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

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

Students with excellent results:

Excellent Masters Thesis:

Student Name	Thesis Title	Supervisor
Michal **Kvet**	Data transformation from the magnetic resonance imaging of the head for 3D visualisation	Prof.Ing. K. **Matiaško**, PhD.
Antónia **Kľučková**	Image recognition using neural networks	Prof.Ing. M. **Klimo**, PhD.
Michal **Brezani**	Wireless ISP Programmer	Prof.Ing. J. **Miček**, PhD.
Tomáš **Pšenák**	Home multimedia centre using DLNA	Assoc.Prof.Ing. E. **Kršák**, PhD.
Alexandra **Bullová**	Evaluation of chosen tool effectiveness of labour market active policy in three Slovak regions	Assoc.Prof.Ing. A. **Kucharčíková**, PhD.
Zdenko **Graňák**	Propagation support on internet	Mgr. J. **Soviar**, PhD.
Ladislav **Jurák**	SIP denial of service attacks	Ing. P. **Segeč**, PhD.
Samuel **Brezani**	Layout Manager	Ing. S. **Kopinec**
Michal **Kochláň**	Radio Signal Energy Harvesting	Prof.Ing. J. **Miček**, PhD.
Lenka **Kocifajová**	Motivation Program and Learning System of Scheidt&Bachmann	Assoc.Prof.Ing. M. **Blašková**, PhD.
Ján **Kubacka**	Colouring of graphs with parallel Nešetřil algorithm	Mgr. P. **Czimmermann**, PhD.
Miroslav **Kvaššay**	Importance Analysis of Multi-State System in Reliability Engineering	Assoc.Prof.Ing. E. **Zaitseva**, PhD.
Roman **Bednárik**	The Proposal of Motivation Program of Employees and Managers in Conditions of IT Company	Assoc.Prof.Ing. M. **Blašková**, PhD.
Mária **Maciaková**	A non-profit organisation activity proposal in the area of corporate social responsibility	Ing. E. **Tokarčíková**, PhD.
Daša **Matúšová**	Application of Quality Management Methods and Tools in a Manufacturing Business	Assoc.Prof.Ing. J. **Král**, PhD.
Michal **Mruškovič**	Design and Implementation of a VoIP System Interconnected with the Company CRM System	Ing. M. **Matuška**
Michal **Paulus**	Solutions supporting mechanisms of SIP NAT traversal	Ing. P. **Segeč**, PhD.
Jakub **Berthoty**	Software module to read quantity from the project documentation	Ing. M. **Mrázek**
Katarína **Púčková**	Business marketing communication strategy	Mgr. J. **Soviar**, PhD.
Martin **Rádik**	Strategy Map Creating with Using of The Balanced Scorecard methodology.	Assoc.Prof.Ing. J. **Vodák**, PhD.

Veronika **Soboňová**	The Quality of Informational and Communicational Relations of the Motivating in Strengthening of Employees' High Performance and Loyalty	Assoc.Prof.Ing. M. **Blašková**, PhD.
Marián **Švalec**	Control Tool for Advanced Information Board	Ing. T. **Gatial**
Ján **Vresilovič**	Generating of versioned relational database schema	Ing. J. **Janech**, PhD
Jolana **Zúbeková**	Increasing of the employee's participation rate in corporate social responsibility projects of selected company	Ing. E. **Tokarčíková**, PhD.

Excellent Bachelors Thesis:

Student Name	Thesis Title	Supervisor
Kristína **Holbičková**	Using possibilities of telemarketing of call centre	Ing. V. **Lendel**, PhD.
Jakub **Hrabovský**	SIP and IPv6	Ing. P. **Segeč**, PhD.
Jana **Klučková**	Influence of Inequality in Incomes to Consumption and Savings	Ing. J. **Dubovec**, PhD.
Jana **Kundríková**	Quantification of Costs and Revenues from Consumption of Alcoholic Beverages in Slovakia	Ing. J. **Dubovec**, PhD.
Martin **Mičiak**	Productivity of production inputs in the enterprise	Assoc.Prof.Ing. A. **Kucharčíková**,PhD.
Jozef **Paľa**	Intelligent house GUI for mobile devices	Ing. T. **Mikluščák**
Marián **Polťák**	Plotter	Ing. O. **Kovář**, PhD.
Ľudmila **Závodská**	Selected components of LEAN manufacturing in small business	Ing. L. **Richter**

Students participation at the Professional Competitions:

International competition **„Robot challenge 2012" Wien,** March 9th, - 11th 2012
Michal **Brezani**   Line Follower - 0x49
Mário **Korčák**   Line Follower
Daniel **Pastorek**   Line Follower
Tomáš **Jančoška**   Line Follower Enhanced
Michal **Kochláň**   Mega Sumo
Ingrid **Piterová**   Technical Service

International competition of autonomy robots **„Istrobot 2012" Bratislava,** April 21st, 2012
Marcel **Jokel**   in category " Mouse in Labyrinth"

International programming competition of software robots **RedBot** in November 2012
Anton **Chromjak**   1st, place
Michal **Chovanec**   4th, place

ACM International Collegiate Programming Contest (ACM ICPC) - Central European
Programming Contest, Jagellonian University Krakow (PL), November 16th, - 18th, 2012
1. Rudolf **Grigeľ**,
2. Tomáš **Isteník**,
3. Martin **Olešnaník**

Czech Technical University Open 2012, October 26th, - 27th, 2012
1. Martin **Bros**,
2. Matej **Isteník**,
3. Jozef **Štaffen**

Students

In November 2012, there were at the Faculty in Bachelors degree programme **1011** students, in
Masters Degree programme **380** students and **43** 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:

	2008	2009	2010	2011	2012
Bc.	961	890	872	996	1011
MSc.	402	392	363	351	380
PhD.	60	66	67	66	55
Total	1429	1348	1302	1413	1438

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

In June 2011 participated in the Entrance exams **750** candidates for the study at the Faculty. From
this number **635** were successful and **409** students were enrolled. They started in September 2011
their Programmes of study at the Faculty

Number of Applications submited for the Study at the Faculty

Number of Participants in the Entrance Examination

Number of Succesful Students in the Entrance Examination

Year	Value
2008	626
2009	532
2010	612
2011	635
2012	619

Number of Students Enroled at the Faculty

Year	Value
2008	398
2009	332
2010	433
2011	409
2012	434
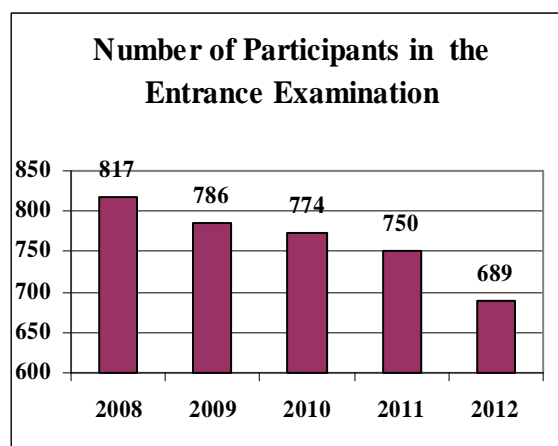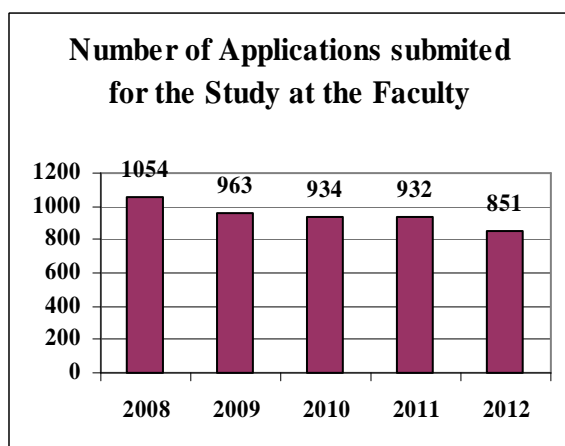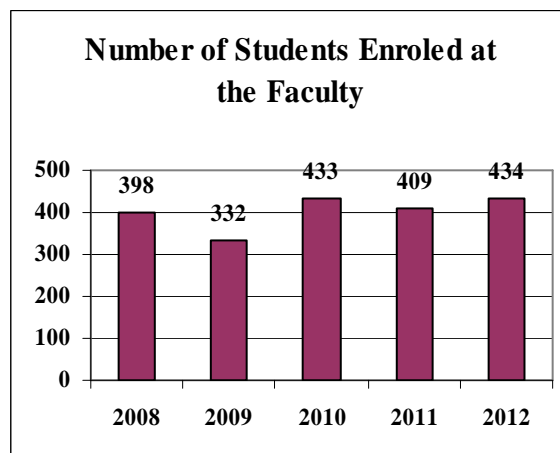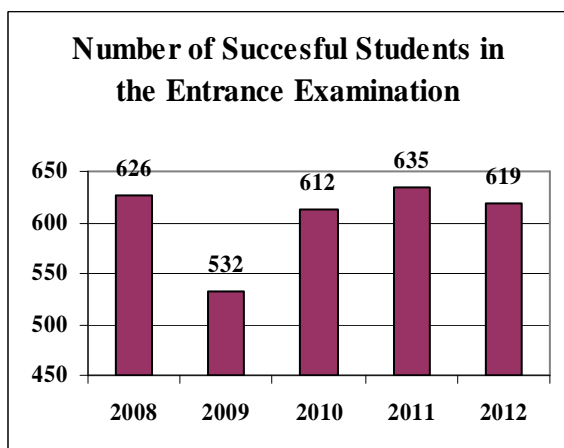
The survey of graduates from the last 5 years is on the following graphs:

Number of Graduates in the Bachelors Programme

Year	Value
2008	213
2009	222
2010	218
2011	203
2012	181

Number of Graduates in the Masters Programme

Year	Value
2008	213
2009	181
2010	181
2011	131
2012	136
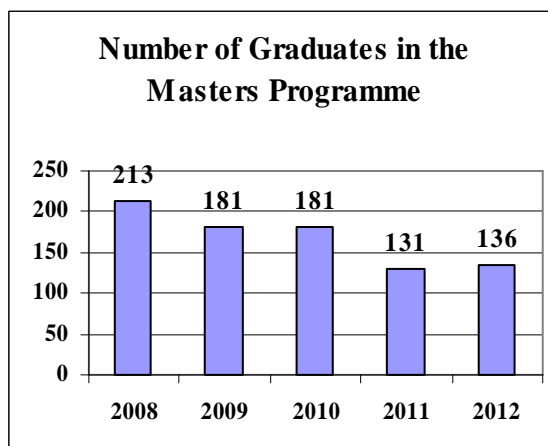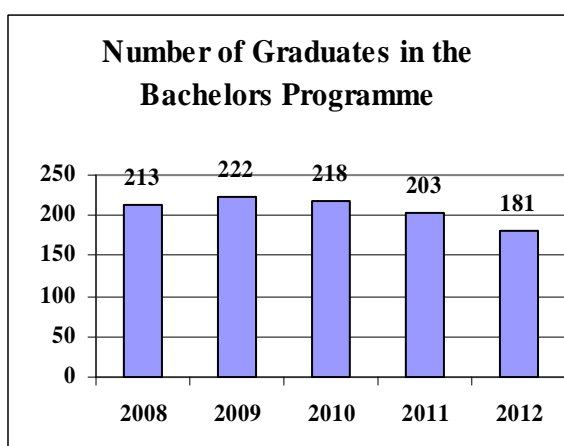
Programme ERASMUS and other international activities of the Faculty

There are following bilateral agreements in 2011 for the exchange of students and pedagogical staffs in the frame of the programme ERASMUS with the following institutes and schools:

- Technische Universität Dresden, (D)
- Technische Universität Braunschweig, (D)
- Hochschule für Telekommunikation Leipzig (D)
- Hochschule für Technik und Wirtschaft, Dresden, (D)
- Telecom SudParis, Evry, (F)
- Telecom and Management SudParis, Evry, (F)
- Université de Poitiers, (F)
- University of Science and Technology, Telecom Lille, (F)
- Utrecht University (NL)
- Linköping University, (S)
- University of Vaasa, (FIN)
- JAMK University of Applied Sciences Jyväskylä, School of Information Technology, (FIN)
- Seinäjoki University of Applied Sciences, (FIN)

- University College of Molde, (N)
- Universidad Politechnica de Valencia, Facultat d´Informatica, (E)
- Universidad Politechnica de Valencia, Escuela Technica Superior deTelecomunicacion, (E)
- University of Porto (P)
- Mikolas Romeris University, Vilnius   (LT)
- Széchenyi István University, Györ, (H)
- Technical University of Sofia, (BG)
- College of Telecommunications and Posts, Sofia, (BG)
- University of Pardubice   (CZ)
- College of Computer Science and Business Administration, Lomža (PL)
- Technical University, Radom (PL)
- Kielce University of Technology (PL)

In the academic year **2012** followed or will follow (in the Spring semester) **19** students in the frame of the programmes ERASMUS the programme of study at the partner's Universities and Institutions of the Faculty.

Foreigner Students at the Faculty in 2012

In the frame of Student Training Agreement with Telecom SudParis Evry, FRANCE, 3 students took part in 2012 two months internship at the Faculty and in the frame of the programmes ERASMUS 1 student from University of Porto, 1 student from University of Zagreb and 7 students from partners Universities in Poland..

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:

Architecture of Intranet FMSI
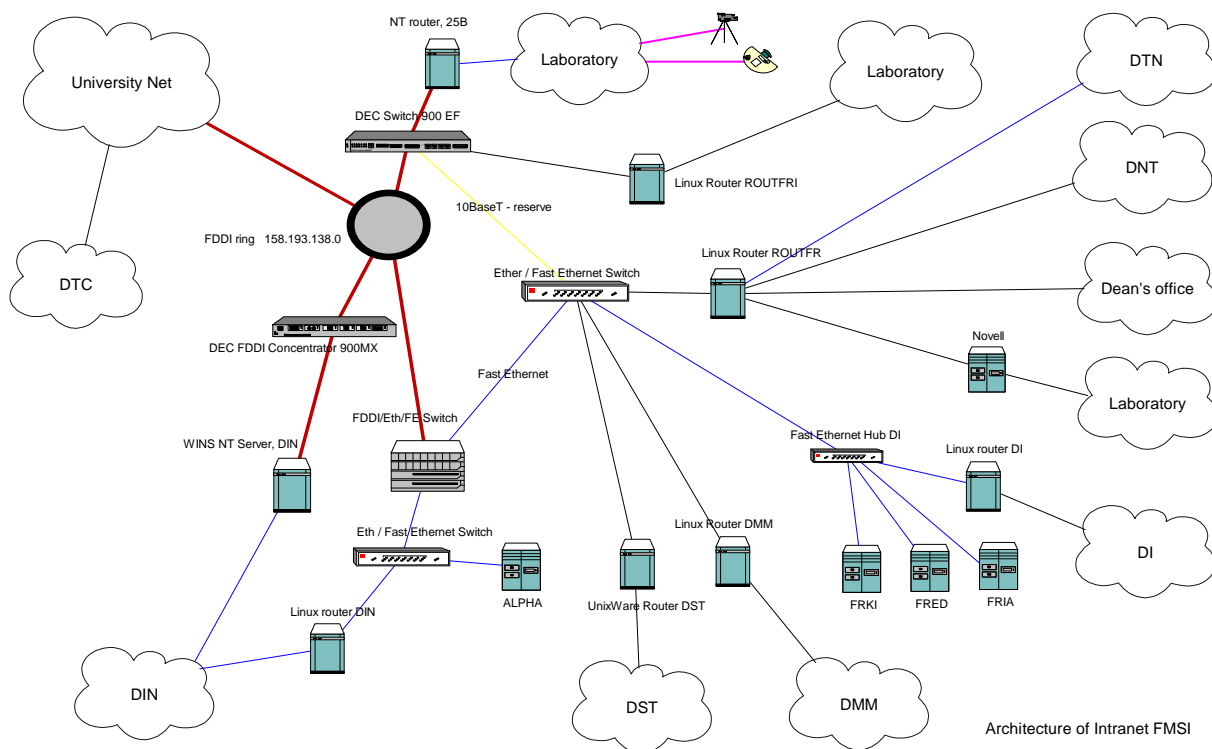
Abbreviations of Departments:

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

Schema of the Faculty Computers network and its connection to the University Network is on the following picture:

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. Alžbeta **Klaudinyová**

RNDr. Aleš **Kozubík**, PhD.

Ing. Tomáš **Majer**

Mgr. Eduard **Omasta**

RNDr. Július **Rebo**, PhD.

Administrative Department: Ing. Ľubica Michálková   Tel.:+421-41-513 4251

PhD students   Ing. Tomáš Majer
Mgr. Marian Kováč
Ing. Tomasz Kanik

PhD.-Programme

Theme	Student	Supervisor
1. Optimum Route Problems in Large Transportation Networks	Ing. T. Majer	Assoc.Prof.RNDr. S. Palúch, PhD.
2. Possibilities of Parallel Calculations in Solving Discreet Optimization Problems	Mgr. M. Kováč	Assoc.Prof.RNDr. S. Palúch, PhD.
3. Decision-Making Models in Diagnose Determination in Veterinary Medicine	Ing. T. Kanik	Assoc.Prof.RNDr. Š. Peško, PhD.

EQUIPMENT

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

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

BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Travel agency - online	F. Barta	Mgr. M. Kaukič, PhD.
2.	Procedure Demonstration of Some Selected Graph Theory Algorithms	Z. Beharková	Assoc.Prof.RNDr. S. Palúch, PhD.
3.	Open Source systems for Optical Character Recognition.	M. Bunčák	Mgr. M. Kaukič, PhD.
4.	Tools for automatic control of manual pages	M. Husár	Ing J. Hutař
5.	Project Planning Program	M. Skovajsa	Assoc.Prof.RNDr. S. Palúch, PhD.
6.	The display unit for graphical games	P. Šarafín	RNDr. R. Blaško, PhD.
7.	Uniqueness of solution puzzle Sudoku and its generalizations	Ľ. Teniak	Assoc.Prof.RNDr. Š. Peško, PhD.
8.	Program equipment for display unit for graphical games	R. Žalman	RNDr. R. Blaško, PhD.
9.	Minimal cost paths in graphs and digraphs	P. Žuffa	Mgr. P. Czimmermann, PhD.

MASTER THESIS

No.	Theme	Student	Supervisor
1.	Creation of digital signature for use in electronic filing room	I. Bílek	Ing. T. Majer
2	Textual strings distance	F. Franc	Ing. T. Majer
3.	Digital signature verification in electronic filing room	J. Kňažko	Ing. T. Majer
4.	Colouring of graphs with parallel Nešetřil algorithm	J. Kubacka	Mgr. P. Czimmermann, PhD.

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 members 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

***Head of Department*:**   **Assoc. Prof. Ing. Penka M a r t i n c o v á , PhD.**

Tel.:+421-41-513 41 50
Fax: +421-41-513 40 55
e-mail: penka.martincova@fri.uniza.sk

Teaching Staff:

Prof. Ing. Karol **Matiaško**, PhD

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

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

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

RNDr. Peter **Varša**, PhD.

RNDr. Miroslav **Benedikovič**

RNDr. Štefan **Kovalík**, PhD.

Ing. Ján **Boháčik**, PhD.

Ing. Zuzana **Kurillová**, PhD.

Ing. Matúš **Chochlík**, PhD.

Ing. Iveta **Nedeljaková**, PhD

Ing. Monika **Václavková,** PhD**.**

Ing. Anton **Lieskovský**. PhD.

Ing. Josef **Kopecký**

Ing. Miroslav **Faktor**

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

Administrative Department: Anna Ilovská

Doctoral full-time students:

Ing. Ľuboš Takáč	Ing. Miroslav Rusín
Ing. Michal Varga	Ing. Jozef Kostolný
Ing. Slavomír Kavecký	Ing. Michal Kvet
Ing. Marek Šajna	Ing. Marián Švalec
Ing. Miroslav Kvaššay	Ing. Michal Joštiak
Ing. Martin Antal	

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
fra203a	WIN2000 server
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. Data Processing in Extensive Databases	Ing. Ľ. Takáč	Assoc.Prof.Ing. M. Zábovský, PhD.
8. Evaluation of Risk and Reliability in Medical Support Decision-making Systems	Ing. M. Rusín	Assoc.Prof.Ing. E. Zaitseva, PhD.
9. Modelling of Data Mining and Using by Intelligent Decision-Making in Agent Oriented Simulation Models	Ing. M. Varga	Prof.Ing. K. Matiaško, PhD.
10. Management of Grids Resources	Ing. S. Kavecký	Assoc.Prof.Ing. P. Martincová, PhD.
11. Analysis of Systems Reliability	Ing. J. Kostolný	Assoc.Prof.Ing. E. Zaitseva, 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
- Softip, Banská Bystrica
- 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, D
- Siemens Österreich, A
- Technical University of Sofia, BG
- United Institute of Informatics Problems of the National Academy of Sciences of Belarus Minsk, BLR

Membership in Slovak Organizations and Societies

Prof. Ing. Karol **Matiaško**, PhD.
  - Slovak Society for System Integration (SSSI)
  - Academic Board of the Faculty of Management science and Informatics of University of Žilina - President
  - Scientific Board of the University of Žilina
  - Scientific Board of the Faculty of Electrical Engineering and Informatics of University of Ostrava
  - Scientific Board of the Faculty of Natural Sciences, University Matej Bell, Banská Bystrica
  - Slovak Informatics Society
  - Advice Council of Ministry of Transport and Communications Advice Council of Ministry of Education for Informatics
  - Council of Ministry of Transport and Communications for Informatics
  - Slovak Informatics Society (ACM) - Chairman of University Žilina group
  - Advice Council of Mayor of Prievidza
  - Group for Informatics in Accreditation Board of Government

Assoc.Prof.Ing. Michal **Zábovský**, PhD.
- Slovak Information Society – Member of steering committee

Membership in International Organizations and Societies

- Prof. Ing. Karol **Matiaško**, PhD. - National Evaluation and Foresight Agency, SPAIN
- Prof. Ing. Karol **Matiaško**, 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),
- Assoc.Prof.Ing. Penka **Martincová**, PhD - Member of Editorial board in Journal Information Technologies and Security. BULGARIA
- Assoc.Prof.Ing. Penka **Martincová**, PhD - 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

BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Navigation in buildings - design routes towards to objects	M. Bencúr	Prof.Ing. K. Matiaško, PhD.
2.	Application for mobile devices (smart-phones) to support work of manager with ERP	J. Brablec	Ing. P. Troják
3.	Application for registration of the positioning of security components in place	J. Burgel	Ing. M. Václavková, PhD.
4.	Personal data information system	M. Čaplár	Prof.Ing. K. Matiaško, PhD.
5.	Web application for creating question forms.	D. Červenka	Ing. M. Václavková, PhD.
6.	Software for social network implementation	M. Dérer	Assoc.Prof. Ing. P. Martincová, PhD.
7.	A communication platform for multiplayer gaming over the network	J. Ďurana	Assoc.Prof.Ing. E. Zaitseva, PhD
8.	Mobile application for Personal diet assistant system	T. Gatial	Ing. M. Rusin
9.	PDF protection module for LMS Moodle	P. Haspra	Assoc.Prof.Ing. K. Grondžák, PhD.
10.	Software solution for Internet commerce	R. Holetschke	RNDr. P. Varša, PhD.
11.	Reservation system for accommodation in web interface.	M. Husák	RNDr. P. Varša, PhD.
12.	Client application for Euro notes tracking system (eurobilltracker.com) for mobile devices with Android OS.	M. Ivaniš	Ing. J. Bobek
13.	Software module for importing of unstructured documents	J. Janus	Ing. M. Mrázek
14.	Information system for the Management buildings	P. Kermaschek	Prof.Ing. K. Matiaško, PhD.
15.	Mobile Devices in Rescue Systems	M. Klátik	Assoc.Prof. Ing. M. Zábovský, PhD.
16.	Software application for support of the teaching the theory in driving schools	L. Kováčiková	Ing. I. Nedeljaková, PhD.
17.	The comparison of binary trees balancing methods	J. Kubica	RNDr. P. Varša, PhD.
18.	Web application for Personal diet assistant system	M. Kurilla	Ing. M. Rusin
19.	Decision support tool in prognosis of sport event	M. Kurtulík	Assoc.Prof.Ing. E. Zaitseva, PhD.
20.	Rendering of the building footprint from given data and identification of the shortest path to the protected object	M. Laco	Assoc.Prof. Ing. P. Martincová, PhD.

21.	The application for centralized management of the Internet advertising systems using available API	R. Lajdová	Ing. M. Matuška
22.	Application for invoicing internet shop	L. Lehota	RNDr. P. Varša, PhD.
23.	Construction management application for small companies	B. Lupták	Ing. J. Kopecký
24.	Software proposal of booking system for truck parking	N. Máhriková	Ing. D. Kucharik, PhD.
25.	Online chat application in ASP.NET	M. Majerský	RNDr. P. Varša, PhD.
26.	Web application for a sports club	R. Masarovič	Ing. M. Šajna
27.	Software application for the management the library collection	P. Motyčák	Ing. I. Nedeljaková, PhD.
28.	Dynamic web application for fitness centre	M. Oravec	Ing. I. Nedeljaková, PhD.
29.	Application for adaptability testing of learning algorithms for eating habits	M. Oravec	Ing. M. Rusin
30.	Intelligent house GUI for mobile devices	J. Paľa	Ing. T. Mikluščák
31.	Software application for managing library stock of the village Lednické Rovne	I. Pavlík	Ing. I. Nedeljaková, PhD.
32.	Mobile application for Personal diet assistant system	T. Prítrský	Ing. M. Rusin
33.	Discussion forum as an internet application\r\n	M. Rábek	Ing. J. Kopecký
34.	Shortest path search for the object safety purposes.	R. Roháček	Assoc.Prof.Ing. K. Grondžák, PhD.
35.	Visualization of Composite Data Structure with Hierarchical Pattern	M. Rybárik	RNDr. M. Benedikovič
36.	Navigation in buildings - presentation	M. Sagan	Prof.Ing. K. Matiaško, PhD.
37.	Web application for fitness centre	M. Solárik	Ing. M. Rusin
38.	Software for managing of small engineering firm	A. Svetlošák	RNDr. M. Benedikovič
39.	Application to identify the cities and zip code for mobile devices (smart-phones)	M. Špalek	Ing. M. Janžo
40.	Production environment for Ruby on Rails applications	J. Štaffen	Ing. M. Šajna
41.	Reservation system of tire services in system iOS	M. Štefanec	RNDr. M. Benedikovič
42.	Application for mobile devices (smart-phones) to support work of seller with ERP.	I. Tomašec	Ing. P. Troják
43.	Web application for the library registration system	I. Uhrín	RNDr. P. Varša, PhD.
44.	Application for the operating and management of coffee-house	J. Verníček	RNDr. P. Varša, PhD.
45.	Web applications to support joinery firm business Avitus, Ltd.	M. Vlček	Ing. I. Nedeljaková, PhD.
46.	Calendar and time-planner as a web application	T. Zorvan	Ing. J. Kopecký

MASTER THESIS

No.	Theme	Student	Supervisor
1.	Project Information system - data management	E. Baraniak	Prof.Ing. K. Matiaško, PhD.
2.	Software module to read quantity from the project documentation	J. Berthoty	Ing. M. Mrázek
3.	Using Application Cloud for Web Application Development	P. Bučka	Assoc.Prof. Ing. M. Zábovský, PhD.
4.	Distributed application for credibility of risks evidence and manipulation.	M. Genšor	Ing. M. Václavková, PhD.
5.	Database synchronization and comparison too	M. Gmuca	Assoc.Prof.Ing. K. Grondžák, PhD.
6.	Functionality and performance application testing	R. Hablák	Ing. R. Gaňa
7.	Software application for evaluation of timetable support .	J. Hovančík	Assoc.Prof.Ing. V. Levashenko, PhD.
8.	Database benchmarking for Information systems	D. Chovan	Prof.Ing. K. Matiaško, PhD.
9.	Database support for data mining	I. Janic	Assoc.Prof.Ing. E. Zaitseva, PhD.
10.	Analysis and implementation fuzzy c-mean clustering algorithms\r\n	M. Kavecký	Assoc.Prof.Ing. V. Levashenko, PhD.
11.	Vehicle Routing Problem Parallelization	M. Korenčiak	Assoc.Prof. Ing. P. Martincová, PhD.
12.	Harvesting and Analysis of User Specific Data from Mobile Devices.	P. Krajčír	Assoc.Prof. Ing. M. Zábovský, PhD
13.	Importance Analysis of Multi-State System in Reliability Engineering	M. Kvaššay	Assoc.Prof.Ing. E. Zaitseva, PhD.
14.	Data transformation from the magnetic resonance imaging of the head for 3D visualisation	M. Kvet	Prof.Ing. K. Matiaško, PhD.
15.	Parallelization of signal classification algorithms	M.Martinkovič	Assoc.Prof.Ing. K. Grondžák, PhD.
16.	3D visualization brain of the man	J. Mešina	Prof.Ing. K. Matiaško, PhD.
17.	System for reliability analysis and risk estimation of system failure	J. Páleník	Assoc.Prof.Ing. E. Zaitseva, PhD.
18.	Project Information system - report management	I. Palkechová	Prof.Ing. K. Matiaško, PhD.
19.	Information Extraction and Visualization from Internet Documents	S. Piták	Assoc.Prof. Ing. M. Zábovský, PhD.
20.	Laboratory information system	Z. Tomašák	Prof.Ing. K. Matiaško, PhD.
21	E-Health system - Multimedia data management	Ľ. Trubač	Prof.Ing. K. Matiaško, PhD.
22.	Web application for e-auctions	J.Žigmund	Ing. M. Šuták, PhD.

Department of Macro and Microeconomics

*Head of Department***:   Assoc.Prof. Ing. Mária Ď u r i š o v á , PhD.**

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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

Theme	Student	Supervisor
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.

BACHELORS THESIS

No.	Theme	Student	Supervisor
1.	Financial forecast of selected economic entity	M. Babinský	Ing. A. Jacková, PhD.
2.	Financial and economic analysis of the use of FOSS in healthcare facilities	J. Bulejčík	Ing. Z. Kozubíková, PhD.
3.	Computer Simulation of Economic Event	M. Fronk	Ing. J. Dubovec, PhD.
4.	Optimization of Selected Enterprise Processes	J. Hodoň	Ing. J. Dubovec, PhD.
5.	Influence of Inequality in Incomes to Consumption and Savings	J. Klučková	Ing. J. Dubovec, PhD.
6.	Development of unemployment in the selected region of the SR and the possibility of its eliminating	V. Krasulová	Ing. Z. Staníková, PhD.
7.	Quantification of Costs and Revenues from Consumption of Alcoholic Beverages in Slovakia	J. Kundríková	Ing. J. Dubovec, PhD.
8.	Evaluation of the financial situation of Coba-plastics Ltd.	E. Malichová	Ing. E. Tokarčíková, PhD.
9.	Productivity of production inputs in the enterprise	M. Mičiak	Assoc.Prof.Ing. A. Kucharčíková, PhD.
10.	Evaluation of financial management of enterprise Eurodesign Ltd.	J. Mičietová	Ing. E. Tokarčíková, PhD.
11.	The importance of cost breakdown and their influence on decision making in selected company.	M. Václaviková	Ing. K. Zábovská, PhD.
12.	Creating the system of financial planning in a company according to financial analysis	J. Valchárová	Assoc.Prof. Ing. M. Ďurišová, PhD.

MASTER THESIS

No.	Theme	Student	Supervisor
1.	Statistical/econometric time series models vs. models based on RBF NNs with applications to economic quantities	T. Antal	Prof.Ing. D. Marček, PhD.
2.	Machine learning in modelling of economic time series	M. Antal	Ing. L. Pančíková, PhD.
3.	Creation of evaluation model of inputs productivity in the select region	M. Bednár	Assoc.Prof.Ing. A. Kucharčíková, PhD.
4.	Evaluation of chosen tool effectiveness of labour market active policy in three Slovak regions	A. Bullová	Assoc.Prof.Ing. A. Kucharčíková, PhD.
5.	Forecasting modelling in management decision-making with Open Source	M. Čaučík	Ing. L. Pančíková, PhD.
6.	The creation of application to manage the economic agenda in business	L. Grobarčík	Ing. A. Jacková, PhD.
7.	Dynamic modelling, co-integration in Open Source	L. Hano	Ing. L. Pančíková, PhD.
8.	Creation of inventory management in the company aimed to reduce the company's capital commitment	M. Košťálová	Assoc.Prof. Ing. M. Ďurišová, PhD.
9.	System for Management of Corporate Social Responsibility Project Activity in State Services	A. Lechmanová	Ing. E. Tokarčíková, PhD.
10.	A non-profit organisation activity proposal in the area of corporate social responsibility	M. Maciaková	Ing. E. Tokarčíková, PhD.
11.	Creating the system of utilization and commitment of labour as a production factor.	J. Maslaňáková	Assoc.Prof. Ing. M. Ďurišová, PhD.
12.	Predictions and spectral analysis in Open Source	M. Matloň	Ing. L. Pančíková, PhD.
13.	Seasonality in the economic time series and predictive models	J. Mažgút	Ing. L. Pančíková, PhD.
14.	Selected resources of econometric modelling in an enterprise with R software environment	J. Skladányi	Ing. L. Pančíková, PhD.
15.	Time series modelling and forecasting with soft commuting methods	R. Šišmič	Prof.Ing. D. Marček, PhD.
16.	Forecasting models in quality management	S. Škrtelová	Ing. L. Pančíková, PhD.
17.	Advanced statistical methods in predictions of selected economic indicator	R. Urban	Ing. L. Pančíková, PhD.
18.	Application of advanced forecasting methods in enterprise with software environment	Ľ. Višňovský	Ing. L. Pančíková, PhD.
19.	Increasing of the employee's participation rate in corporate social responsibility projects of selected company	J. Zúbeková	Ing. E. Tokarčíková, PhD.

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

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
- European Polytechnic Institute, Kunovice, CZ
- OPF, SLU Karviná, CZ
- Silesian University in Opava, School of Business Administration in Karviná, CZ
- University of Pardubice
- 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
- Ing. Katarína **Zábovská,** PhD.: Slovak Association for System Integration

Other Activities

Seminar with invited lecture of Mr. Peter **Gonda**, economist at Conservative Institute on current economic issues:
- Position of Slovakia in the EMU,
- Problems of public finances and more actual macroeconomic problems.

Videoconference: Approaches to tackling the current financial and economic problems with partner **Ural State Economic University in Jekaterinburg**, (RUSS)

Department of Technical Cybernetics

Head of department: **Prof. Ing. Juraj M i č e k, PhD.**

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Fax: +421-41- 565 52 80
e-mail: Juraj.Micek@fri.uniza.sk

 Teaching Staff:

Assoc.Prof.Ing. Peter **Gubiš**, PhD.

Ing. Adam **Jaroš**, PhD.

Ing. Jozef **Juríček**, PhD.

Ing. Matúš **Jurečka**, PhD.

Ing. Ján **Kapitulík**, PhD.

Ing. Ondrej **Karpiš**, PhD.

Ing. Oldřich **Kovář**, PhD.

Ing. Peter **Ševčík**, PhD.

Andrej **Holúbek**, PhD.

Ing. Lukaš **Čechovič**

Ing. Julius **Mlich**

Ing. Ján **Repka**

Researcher: Ivana **Hodasová**

Administrative Department: Mgr. Viera Černeková

PhD Students: Ing. Jana Púchyová   Ing. Martin Húdik
                 Ing. Michal Hodoň   Ing. Martin Hyben
                 Mgr. Dan Slováček   Ing. Filip Janovič
                 Ing. Michal Kochláň

PhD.-Programme

Theme	Student	Supervisor
1. Voice Recognition Systems	Ing. M. Hyben	Prof.Ing. J. Miček, PhD.
2. Onboard Location Technologies for Vehicle Position	Ing.M. Hodoň	Prof.Dr.Ing. h.c. E. Schnieder
3. Performance Modelling Optimization of Parallel Computers	Ing. D. Slováček	Prof.Ing. I. Hanuliak, PhD.
4. Performance Modelling Optimization of Parallel Algorithms	Ing. F. Janovič	Prof.Ing. I. Hanuliak, PhD.
5. Behaviour of Multi-Agent Systems with Defined Aim	Ing. J. Púchyová	Prof.Ing. J. Miček, PhD.
6. Efficiency Modelling of Parallel Algorithms	Ing. M. Húdik	Prof.Ing. I. Hanuliak, PhD.
7. Event's Driven Dynamic Systems	Ing. M. Kochláň	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).

second and third - order systems with variable damping ratio , proportional or integrate performance.

- Models MIMO (Multiple input, multiple output- 2 input and output)

There is 6 SISO models: second order system with variable damping ratio
second order system with variable time constant

first order system with variable time constant
first order system.

The model can by use 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
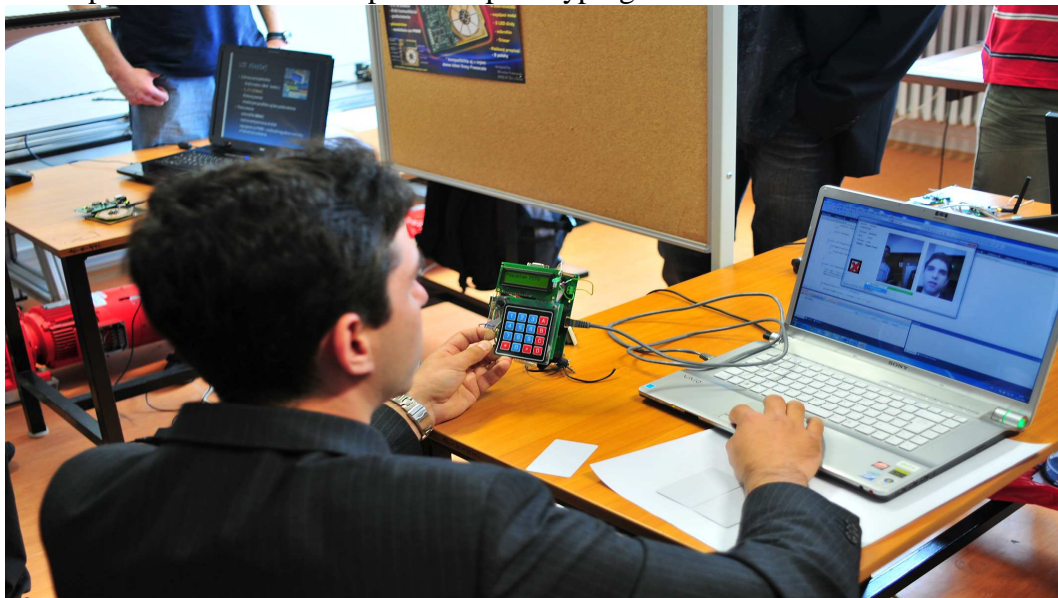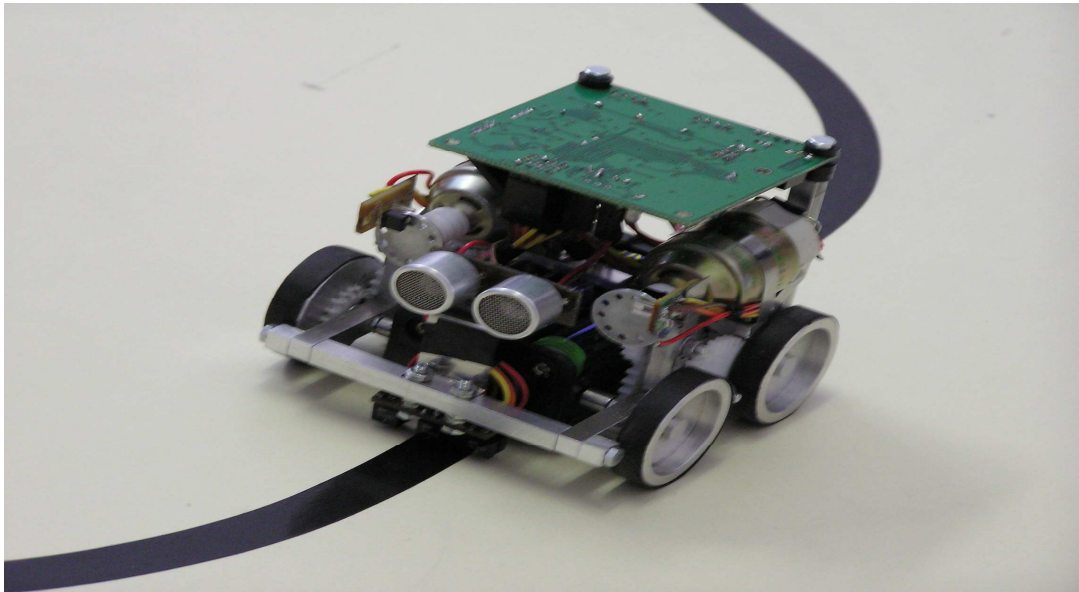
Cooperation with Institutes and Enterprises in Slovakia

- 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.
- HMH 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 Enterprices.

- 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.	Theme	Student	Supervisor
1.	Design and implementation of car instrument panel.	R. Bajak	Assoc.Prof.Ing. P. Gubiš, PhD.
2.	Information table for fire-sport competition.	M. Bohdan	Ing. O. Kovář, PhD.
3.	Information board with remote control	M. Hikaník	Prof.Ing. J. Miček, PhD
4.	Temperature monitoring unit.	M. Chudová	Ing. L. Čechovič
5.	Information board for displaying score of the table tennis match.	M. Kováčik	Ing. O. Kovář, PhD.
6.	Robot's motion control	J. Kuba	Assoc.Prof.Ing. P. Gubiš, PhD.
7.	Electromagnetic accelerator.	P. Lehotský	Ing. O. Kovář, PhD.
8.	Program utilities of mobile robot for competition mouse in labyrinth	M. Mariňák	Prof.Ing. J. Miček, PhD.
9.	Controller of the PC case internal temperature	T. Martinek	Ing. P. Ševčík, PhD.
10.	Video camera positioning system	J. Mazurák	Ing. P. Ševčík, PhD.
11.	Unit for light intensity monitoring	P. Michalák	Ing. L. Čechovič
12.	Equipment for digital display of engine speed and vehicle speed.	M. Moravec	Ing. L. Čechovič
13.	The system for automatic control of camera's movement	V. Olešnaníková	Ing. O. Kovář, PhD.
14.	Digital clock with rotary system of figurines presentation	Z. Pavlík	Ing. O. Kovář, PhD.
15.	Source code generator for STM32F100	R. Píš	Ing. O. Karpiš, PhD.
16.	Unit for sound intensity monitoring	I. Piterová	Prof.Ing. J. Miček, PhD.
17.	Plotter	M. Polťák	Ing. O. Kovář, PhD.
18.	Multifunction metering IC communication unit	M. Straka	Ing. L. Čechovič
19.	Power output measurement of photo-voltaic unit	M. Valocký	Ing. M. Húdik

MASTER THESIS

No.	Theme	Student	Supervisor
1.	Application of IEEE 1588 protocol for the audio signal source location.	M. Brádňanský	Ing. M. Princ, PhD.
2.	Wireless ISP Programmer	M. Brezani	Prof.Ing. J. Miček, PhD.
3.	Vehicle Registration Plate Recognition	D. Černica	Ing. M. Jurečka, PhD.
4.	To performance modelling of multi-core and multiprocessors systems	M. Dvořák	Prof.Ing. I. Hanuliak, PhD.
5.	Remote control of a model crane	P. Farko	Ing. J. Juríček, PhD.
6.	Local positioning system	M. Homola	Ing. O. Karpiš, PhD.
7.	The development and demonstration module with 32 bit microcontroller STM32 utilization	T. Jančoška	Ing. O. Kovář, PhD.
8.	Mapping the maze by autonomous mobile robot	M. Jokel	Prof.Ing. J. Miček, PhD.
9.	Full HD VGA controller	T. Kaprál	Ing. P. Ševčík, PhD.
10.	Radio Signal Energy Harvesting	M. Kochláň	Prof.Ing. J. Miček, PhD.
11.	The development environment for programming of robots	M. Korčák	Prof.Ing. J. Miček, PhD.
12.	To performance modelling of RAID systems	T. Máhrik	Prof.Ing. I. Hanuliak, PhD.
13.	Model of dynamic processes based on microcontroller ATMEL	M. Motyčák	Prof.Ing. M. Alexík, PhD.
14.	Technical equipment for motion control of portal crane model	F. Murcko	Ing. J. Juríček, PhD.
15.	System for processing and evaluation of the acoustic signal	J. Papán	Ing. M. Jurečka, PhD.
16.	Communication protocol for mobile robot	D. Pastorek	Ing. J. Capák
17.	Command recognition	T. Pretenhofer	Prof.Ing. J. Miček, PhD.
18.	Implementation of internet radio with using of OS Freescale MQX.	Š. Smidžár	Ing. M. Princ, PhD.
19.	Internet radio receiver	J. Šadlák	Prof.Ing. J. Miček, PhD.
20.	Personal wireless clipboard	M. Šinko	Ing. O. Karpiš, PhD.
21.	Flight track mapping for paragliding based on GPS.	P. Škorvánek	Ing. O. Kovář, PhD.
22.	MIDI synthesizer	T. Uhrin	Ing. J. Kapitulík, PhD.
23.	Software implementation for portal crane model	M. Václavík	Ing. J. Juríček, PhD.
24.	Digital compass	T. Vančo	Ing. M. Jurečka, PhD.
25.	Recognition system of isolated words	M. Veselý	Ing. O. Kovář, PhD.
26.	Image processing of video camera signal with processor Freesacale MPC5606B utilizing and its wireless transmission\r\non PC	P. Vilček	Ing. B. Zuczek

Students participation at the Professional Competitions:

International competition **„Robot challenge 2012" Wien,** March 9th, - 11th 2012
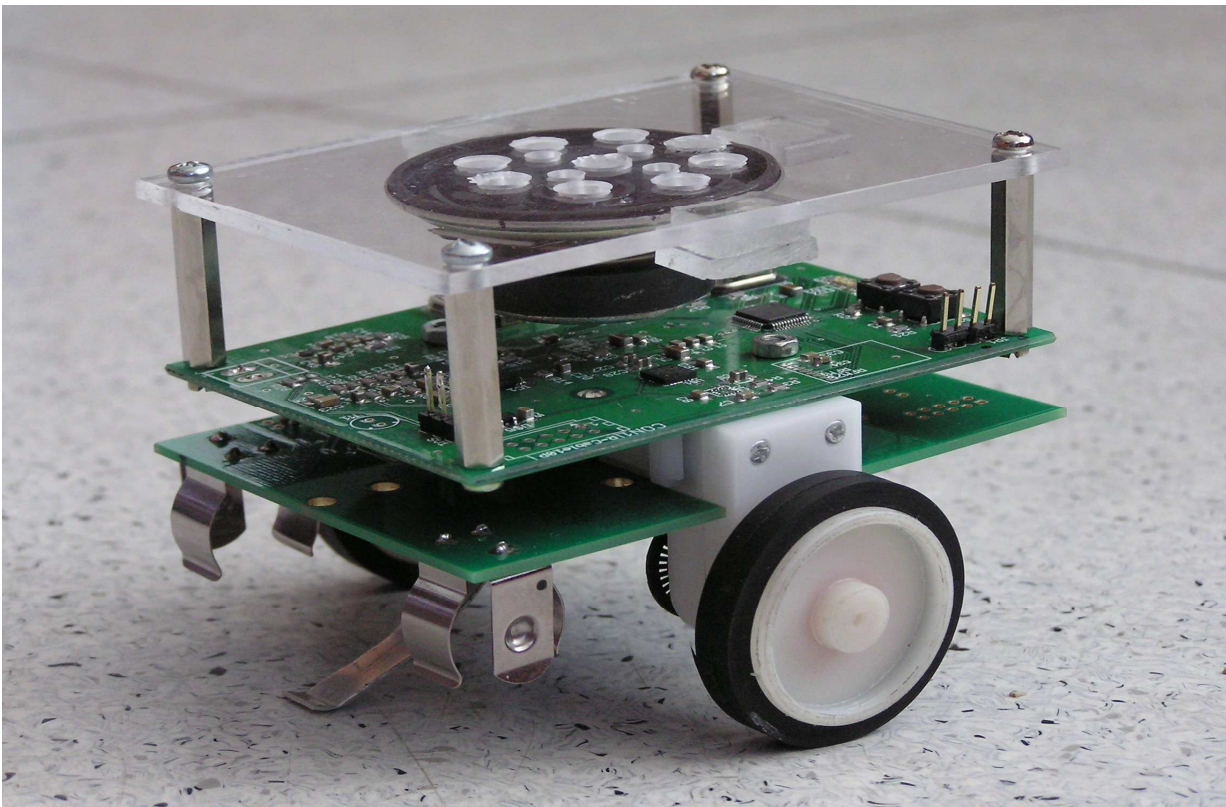Michal **Brezani**   Line Follower - 0x49
Mário **Korčák**   Line Follower
Daniel **Pastorek**   Line Follower
Tomáš **Jančoška**   Line Follower Enhanced
Michal **Kochláň**   Mega Sumo
Ingrid **Piterová**   Technical Service

International competition of autonomy robots **„Istrobot 2012" Bratislava,** April 21st, 2012
Marcel **Jokel**   in category " Mouse in Labyrinth"

International programming competition of software robots **RedBot** in November 2012
Anton **Chromjak**   1st, place
Michal **Chovanec**   4th, place

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.

- **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 is made before 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 2012 with

about 100 participants from many schools of Slovakia.

- In cooperation with company "Scheidt & Bachman", Mönchengladbach, GERMANY the Department participates on the design of Control System of Fuel Petrol Tester

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

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. Ľubomír Toman
Ing. Marek Kvet
Ing. Michal Kocifaj
Ing. Anna Kormanová
Ing. Miroslav Mintál
Ing. Matej Cebecauer

PhD. - Programme

Theme	Student	Supervisor
1. Retrieval and Storage of Relevant Information in Knowledge Management Systems	Ing. E. Molitorisová	Assoc.Prof.Ing. P. Fabián,PhD.
2. Sophisticated Decision Support Systems for Design of Public Service Systems of Evacuation Type in Conditions of Uncertainty	Ing. Ľ. Toman	Prof.RNDr. J. Janáček, PhD.
3. Exact and Approximate Solving Large Covering Problems	Ing. M. Kvet	Prof.RNDr. J.. Janáček, PhD.
4. Modelling Movement of Autonomous Mobile Equipment in the Complex Stochastic Environment of Transport Terminals	Ing. M. Kocifaj	Assoc.Prof.Mgr. V. Klima, PhD.
5. Hybrid Simulation Models of Pedestrians' Behaviour with Non-homogeneous Granularity	Ing. A. Kormanová	Assoc.Prof.Mgr. V. Klima, PhD.
6. Platform for Support the Use of Computing Power of Graphic Cards in Multi-agent Simulation Models	Ing. M. Mintál	Assoc.Prof.Ing. Ľ. Jánošíková, PhD.
7. Design of Service Systems with fair play Mediums Distribution	Ing. M. Cebecauer	Assoc.Prof. Ing. Ľ. Buzna, PhD.

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

COOPERATION
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..

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

Membership in Slovak Organizations and Societies

Prof. RNDr. Jaroslav JANÁČEK, 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 JÁNOŠÍKOVÁ, 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 FABIÁN, 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 Commitee of GISIG, Genoa, I
- **JÁNOŠÍKOVÁ, Ľ.:** 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

BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Experimental comparison of hash files	S. Gálfy	Ing. P. Jankovič, PhD.
2.	Comparison of tools used for GPU computing	A. Horemuž	Ing. M. Mintál
3.	Comparison of methods for collision detection in 2D space	J. Hriadel	Ing. P. Jankovič, PhD.
4.	Creating tactical module for strategic game Starcraft: Broodwar	M. Isteník	Ing. P. Tarábek, PhD.
5.	Experimental comparison of pairing and Fibonacci heap	M. Kňažko	Ing. P. Jankovič, PhD.
6.	Decision support tool in selecting the mode of transport within the city	M. Kotus	Ing. M. Koháni, PhD.
7.	Creation of a turn-based strategy game	M. Maslík	Ing. P. Tarábek, PhD.
8.	Artificial intelligence for Gomoku	M. Megis	Ing. P. Tarábek, PhD.
9.	Optimization of Public Mass Transport System of the Rajec Valley with Help of Simulation Experiments	M. Murárik	Ing. M. Žarnay, PhD.
10.	Assigning approach to optimal design of two-level distribution system by IP-solver	Ľ. Oravec	Ing. Ľ. Toman
11.	Model of passenger waiting time in urban public transport	M. Slavík	Assoc.Prof.Ing. Ľ. Jánošíková, PhD.
12.	Online information tools for passenger in public transport	P. Sokolík	Ing. M. Koháni, PhD.
13.	Software tool for transformation of a railway infrastructure layout to its schematic representation.	F. Šilhár	Ing. N. Adamko, PhD.
14.	Comparison of methods for colour quantization	M. Špánik	Ing. P. Jankovič, PhD.
15.	United Arab Emirates license plate type classification	D. Václavik	Ing. P. Tarábek, PhD.
17.	Experimental comparison of exact methods of solving integer linear programming problems	P. Vojtaššák	Ing. M. Kvet

MASTER THESIS

No.	Theme	Student	Supervisor
1.	Decision support tool for planning lines in urban public transport - a mathematical model and solution method	Ľ. Bernátová	Assoc.Prof.Ing. Ľ. Jánošíková, PhD.
2	Text detection from real scene images	M. Berzák	Ing. P. Tarábek, PhD.
3.	Genetic Algorithm for Generalized Assignment Problem Solving in Crisis Management	M. Bihári	Prof. RNDr. J. Janáček, PhD.
4.	Proposition of more efficient internal corporate communication and the use of enterprise information system	A. Britková	Ing. M. Žarnay, PhD.
5.	Interactive visualisation of geo-information, buildings and grounds	M. Cebecauer	Prof.Ing. P. Cenek, PhD.
6.	Information tool supporting search for public service system centres on a large network	P. Cudrák	Prof. RNDr. J. Janáček, PhD.
7.	Simulator of Railway Operations Control	J. Daňko	Ing. P. Márton, PhD.
8.	Design of algorithm for optimal company financing	Ľ. Gelčinský	Ing. R. Mladšík, PhD.
9.	Artificial Intelligence for Texas Hold'em poker	M. Kopecký	Ing. P. Tarábek, PhD.
10.	Simulation model of a road traffic - control of crossroads	T. Lacko	Prof.Ing. P. Cenek, PhD.
11.	Information tool supporting search for private service system centres on a large network	A. Parimucha	Prof. RNDr. J. Janáček, PhD.
12.	Simulation of the Žilina – Rajec Railway Line Operation in Agent-based Architecture	B. Podskalický	Ing. M. Žarnay, PhD.
13.	Genetic Algorithm for Location Problem Solving in Design of Public Service System	R. Soukal	Prof. RNDr. J. Janáček, PhD.
14.	Implementation and evaluation of optimisation methods on networks	M. Tandara	Prof.Ing. P. Cenek, PhD.

Department of Information Networks

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

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

Ing. Ľudovít **Mikuš**, PhD.

Ing. Peter **Palúch**, PhD.

Ing. Pavol **Segeč**, PhD.

Mgr. Juraj **Smieško**, PhD.

Ing. Ondrej **Škvarek**, PhD.

Mgr. Jana **Uramová**, PhD.

Administrative Department: Mária Liskayová

Technical Staff: Vladimír Frnčo

PhD students

Ing.Dušan Nemček
Ing. Michal Mokryš
Ing. Milan Frátrik
Ing. Michal Srnec
Ing. Katarína Bačová
Ing. Lucie Žoltá
Mgr. Iveta Jančigová
Ing. Jozef Papán

PhD.-Programme

Theme	Student	Supervisor
1. Configuration of QoS Mechanisms for Multimedia Networks	Ing. D. Nemček	Assoc.Prof.Ing. K.Bachratá, PhD.
2. Interdependency Modelling between Socio-Economics and Information Systems	Ing.M. Mokryš	Prof.Ing. M. Drozdová, PhD
3. Design and Implementation of Algorithm for Context Aware Routing in Hybrid Networks for Support QoS End-End	Ing. M. Srnec	Assoc.Prof.Ing. T. Kováčiková, PhD.
4. Optimal Implementation of System in Text-to-Speech	Ing. M. Frátrik	Prof.Ing. M. Klimo, PhD.
5. Solving of Selected Problems in Service Oriented Architectures SOA	Ing. K.Bačová	Prof.Ing. M. Drozdová, PhD
6. Navigating Fuzzy Logical System	Ing. L. Žoltá	Prof.Ing. M. Klimo, PhD.
7. Optimization of Micro Fluidic Equipments with Application in Medicine	Mgr. I. Jančigová	Assoc.Prof.Ing. K.Bachratá, PhD.
8. Formalization of Selected Tasks by Design of Information Systems	Ing. J. Papán	Prof.Ing. M. Drozdová, PhD

EQUIPMENT

Teaching and Research Laboratories.

- B 03 Laboratory of Communication Technology
- B302 Laboratory of Applications Development
- B303 Cisco Networking Academy Laboratory

B301 **Laboratory of Networking**

<u>COOPERATION</u>

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.	Theme	Student	Supervisor
1.	The L2TP Protocol and its Applications	J. Baroš	Ing. P. Palúch, PhD.
2.	Create users guide of 8 bit microcontrollers and implementation to Departments system fribot.sk with Drupal	E. Drgáň	Ing. M. Frátrik
3.	Security of the SIP protocol, tools and testing.	P. Formánek	Ing. P. Segeč, PhD.
4.	Application for improving of programming skills	M. Gonščák	Assoc.Prof.RNDr. K. Bachratá, PhD
5.	SIP and IPv6	J. Hrabovský	Ing. P. Segeč, PhD.
6.	Generators and Analyzers of Network Traffic	M. Kéri	Mgr. J. Uramová, PhD.
7.	Selection of the collaboration tool suitable to carry presentation over the IP network	J. Kordiak	Ing. O. Škvarek, PhD.
8.	OS Debian - Security and Basic Working	M. Kurka	Ing. Ľ. Mikuš, PhD.
9.	Software tools for active network elements monitoring	G. Majtáň	Ing. M. Čerňanská, PhD.
10.	Practical exercises for traffic filtering using ACL lists	R. Matisko	Ing. O. Škvarek, PhD.
11.	Impact of AJAX on the Web server load	Z. Muchová	Ing. M. Čerňanská, PhD.
12.	Testing of the SIP proxy performance	F. Nôta	Ing. P. Segeč, PhD.
13.	Graphics layout for PC game	J. Olosová	Ing. Ľ. Mikuš, PhD.
14.	Internet application for automatic testing of programs	Z. Paráč	Assoc.Prof.RNDr. K. Bachratá, PhD.
15.	OSPF routing protocol and testing OSPF implementation compatibility	F. Pirchala	Ing. P. Segeč, PhD.
16.	Programs for automation of repetitive tasks on a computer\r\n	M. Staňa	Ing. O. Škvarek, PhD.
17.	System logs and its analysis.	M. Vidlička	Ing. P. Segeč, PhD.

MASTER THESIS

No.	Theme	Student	Supervisor
1.	IPv6 Protocol Vulnerabilities	P. Barlík	Ing. P. Palúch, PhD.
2.	Principles of traditional animation	I. Barták	Ing. Ľ. Mikuš
3.	Independent Component Analysis in Speech Recognition	A. Beláň	M.Sc. O. Šuch, PhD.
4.	Information and administration system of small ISP	B. Berák	Ing. P. Segeč, PhD.
5.	Distributed Network Traffic Generator	P. Hajtol	Ing. P. Palúch, PhD.
6.	SIP denial of service attacks	L. Jurák	Ing. P. Segeč, PhD.
7.	Image recognition using neural networks	A. Kľučková	Prof.Ing. M. Klimo, PhD.
8.	Model Driven Engineering in the context of the Architecture Frameworks	E. Mečiar	Prof. Ing. M. Drozdová, PhD.
9.	SIMPLE communication platform solutions	M. Meliš	Ing. P. Segeč, PhD.
10.	Solutions supporting mechanisms of SIP NAT traversal	M. Paulus	Ing. P. Segeč, PhD.
11.	Optimizing production quantity of heat at the source using mathematical methods	M. Ružička	Assoc.Prof.RNDr. K. Bachratá, PhD.
12.	IMS platform prototype	Ľ. Troják	Ing. P. Segeč, PhD

Membership in International Organizations and Societies

Prof.Ing. Martin **Klimo** – IEEE, ACM,

Prof.Ing. Martin **Klimo** – ICTC European Commission

Assoc.Prof.Ing Tatiana **Kováčiková** – ETSI, EC – FP7 ICT projects reviewer

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

Assoc. Prof. Ing. Josef **Vodák**, PhD.

Ing. Radoslav **Jankal**, PhD.

Ing. Jana **Dicová**, PhD.

Ing. Milan **Kubina**, PhD.

Ing. Viliam **Lendel**, PhD.

Ing. Jana **Magdolenová**, PhD.

Ing. Michal **Varmus**, PhD.

Ing. Jozef **Gajdošík**

Administrative Department: Oľga Doricová

PhD Students:
Ing. Anna Závodská
Ing. Veronika Šramová
Ing. Miroslav Peťo
Ing. Michal Bízik
Ing. Katarína Púčková
Ing. Lenka Kocifajová
Ing. Jozef Šarlay
Mgr. Anna Havranová
Ing. Michal Salaj
Ing. Monika Kerestešová

PhD.-Program

Theme	Student	Supervisor
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	Assoc. Prof. Ing. J. Vodák, PhD.
3. Knowledge in Strategic Marketing	Ing. A. Závodská	Assoc. Prof. Ing. J. Vodák, PhD.
4. Using of Scenario in Enterprise Planning	Ing. V. Šramová	Prof. Ing Š. Hittmár, PhD.
5. Information-Communication Perspectives of Logistics Operations and their Implication for Decision-Making in Business Process Management	Ing. M. Peťo	Assoc. Prof. Ing. J. Král, PhD.
6. Elements Applying of Knowledge Management in Strategic Management	Ing. M. Bízik	Prof. Ing Š. Hittmár, PhD.
7. Using of Scenario in Enterprise Planning	Ing. J. Šarlay	Prof. Ing Š. Hittmár, PhD.
8. Use of BSC Approach in Efficiency Management	Mgr. A. Havranová	Assoc. Prof. Ing. J. Vodák, PhD.
9. Application of Strategic Tools 6-Sigma in Management of Lean Logistic Operations	Ing. M. Salaj	Assoc. Prof. Ing. J. Král, PhD.
10. Model of Planning and Motivating Human Potential in Organization	Ing. M. Kerestešová	Assoc. Prof. Ing M. Blašková, PhD.

COOPERATION

Cooperation with Institutes and Enterprises in Slovakia
- The Railways of the Slovak Republic (ZSR)
- Slovak Rail (ZSSK)
- Slovak Rail CARGO
- Tento, Zilina
- MASM, Zilina
- 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

Cooperation with Foreign Institutes and Enterprises
- University of Pardubice, CZECH REPUBLIC
- OSŽD Warszaw, POLAND
- European Polytechnic Institute, LLC., Kunovice, CZECH REPUBLIC
- BOC Unternehmensberatung GmbH, Wien, AUSTRIA
- 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

Membership in Slovak Organizations and Societies

Prof. Ing. **Štefan HITTMÁR**, PhD.
- Slovak Economical Club at Economical University of Bratislava
- Slovak Association for System Integration
- The Management Trainers' Association
- Slovak Science-technical Society

Assoc. Prof. Ing. **Josef VODÁK**, PhD.
- The Management Trainers' Association
- Slovak Marketing Society
- Slovak Science-technical Association

Ing. **Jozef GAJDOŠÍK**
- Slovak Association for System Integration
- Slovak Science-technical Association

Ing. **Milan KUBINA**, PhD.
- Slovak Association for System Integration
- Slovak Science-technical Association

Other activities of department

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 Resource Management & Ergonomics
- Member of Editorial Board of Scientific Journal "Public Administration Research", Canada
- 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 Management in a Company (held in Banská Bystrica, Poland, 27th-28th June)
- Member of Scientific Committee of the International Scientific Conference Toyotarity in the Context of European Enterprises Improvement (held in Poland, 7nd-9th December)

- Member of Academic Senate Faculty of Management Sciences and Informatics
- Member of Scientific Council of Faculty of Management Sciences and Informatics

Prof. Ing. **Štefan HITTMÁR**, 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 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)

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 Center of Science and Education), Canada
- Member of Editorial Board of Scientific Journal "International Journal of Business and Management" (Canadian Center of Science and Education), Canada
- Member of Editorial Board of Scientific Journal "Business and Management Research" (Sciedu Press), Canada

BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Quality in a Manufacturing Business	A. Al-Hussein	Assoc. Prof. Ing. J. Král, PhD.
2.	Marketing communication for company Z+M service, Ltd.	M. Bednáriková	Ing. V. Lendel, PhD.
3.	Motivating, appraisal and rewarding of employees and managers at GGB Slovakia	M. Belošová	Assoc. Prof. Ing. M. Blašková, PhD.
4.	The improvement marketing communication for business Dairy Svrčinovec	J. Blažej	Ing. M. Varmus, PhD.
5.	The arrangements on improvement functionality and security of computer networks.	Š. Čavoš	Ing. M. Kubina, PhD.
6.	Creative leadership, training and development of employees in a selected company subjected to organizational changes	P. Dubajová	Ing. K. Mužíková
7.	Proposal of marketing strategy with application of knowledge management elements in Sauer-Danfoss Company	L Galko	Ing. A. Závodská
8.	Marketing communication of event Salamander days	P. Herčko	Mgr. J. Soviar, PhD.
9.	Using possibilities of telemarketing of call centre	K. Holbičková	Ing. V. Lendel, PhD.
10.	The Quality Policy as a Tool for the Goal and Objectives Achievements	L. Husár	Assoc. Prof. Ing. J. Král, PhD.
11.	Customer satisfaction measuring	V. Kanisová	Mgr. J. Soviar, PhD.
12.	Marketing communication plan of production company	P. Kelčíková	Ing. M. Bízik
13.	Measuring of customer satisfaction in KINEKUS, ltd.	Z. Kistanová	Mgr. J. Soviar, PhD.
14.	Application Performance Management approaches the focus on the development and employee evaluation in selected enterprise	Z. Kmecíková	Assoc. Prof. Ing. J. Vodák, PhD.
15.	Marketing communication for institute Spojená škola Kysucké Nové Mesto	G. Koman	Ing. V. Lendel, PhD.
16.	Improvement of Waste Management at the Kysucky Lieskovec Municipality	N. Králik	Assoc. Prof. Ing. J. Král, PhD.
17.	Marketing plan of BALJAK company	J. Kubás	Ing. R. Jankal, PhD.
18.	Marketing communication of ODEVA company	A. Lipovská	Ing. R. Jankal, PhD.
19.	Customer satisfaction measurement of selected firm	P. Lúčanová	Ing. R. Jankal, PhD.
20.	The improvement marketing communication for a selected business	M. Lučivjanský	Ing. M. Varmus, PhD.
21.	Proposal of the strategy of product Aixam GTO introduction	V. Mackovčák	Ing. M. Varmus, PhD.

No.	Theme	Student	Supervisor
22.	The design and the implementation of computer network for DCM Maják organization	K. Majer	Ing. M. Kubina, PhD.
23.	Application Balanced Scorecard methodology with the focus on customer perspective in selected enterprise	K. Matejčeková	Assoc. Prof. Ing. J. Vodák, PhD.
24.	Information system for company AIO tech, Ltd.	M. Mihalčinová	Ing. V. Lendel, PhD.
25.	Evaluating efficiency on investment in employee development in the selected company	Z. Nemergutová	Assoc. Prof. Ing. J. Vodák, PhD.
26.	Warehouse Management and Warehouse Management System in a Wholesaler Business	A. Obertová	Assoc. Prof. Ing. J. Král, PhD.
27.	Marketing communication plan of the civic association\r\n	L. Olšiak	Ing. J. Magdolenová, PhD.
28.	Process of acquisition, selection and accepting of employees in a chosen company	R. Ondáková	Ing. K. Mužíková
29.	Proposal of marketing communication system with emphasis on customer satisfaction improvement of Villa Betula hotel	T. Paukovček	Ing. A. Závodská
30.	The design of web order's system for selected business.	K. Pekárová	Ing. M. Kubina, PhD.
31.	Utilization of European Union (and state) support for solving the investment needs of the municipality Lomna	T. Plaštiak	Ing. J. Gajdošík
32.	Marketing plan of selected company \r\n	J. Poláček	Ing. V. Šramová
33.	\r\n Proposal for improving marketing activities of selected company	R. Poláček	Ing. V. Šramová
34.	Specificity of selected human resource management in small enterprises	I. Poliaková	Ing. J. Magdolenová, PhD.
35.	Marketing communication for company PetCenter Slovakia Ltd.	N. Rizmanová	Ing. V. Lendel, PhD.
36.	Application Performance Management approaches the focus on the development and employee in selected enterprise	E. Siantová	Assoc. Prof. Ing. J. Vodák, PhD.
37.	Proposal of Integrated Marketing Communications for XPS Ltd.	T. Siget	Ing. M. Varmus, PhD.
38.	Analysis of business marketing communication tools\r\n	K. Slezáková	Mgr. J. Soviar, PhD.
39.	Customer satisfaction measuring in Aquapark Tatralandia Tatry mountain resorts, Inc.	Z. Slobodová	Mgr. J. Soviar, PhD.
40.	Possibilities of use of untraditional forms of marketing communication in conditions of selected firm	Ľ. Šoška	Ing. R. Jankal, PhD.
41.	Motivation and Motivating of Employees and Managers at MetLife Amslico	K. Tršková	Assoc. Prof. Ing. M. Blašková, PhD.

No.	Theme	Student	Supervisor
42.	Utilization of European Union (and state) support for solving the investment needs of the municipality Mutne	J. Vaterka	Ing. J. Gajdošík
43.	Marketing communication of selected company	M. Vejčíková	Ing. R. Jankal, PhD.
44.	Selected components of LEAN manufacturing in small business	Ľ. Závodská	Ing. L. Richter

MASTER THESIS

No.	Theme	Student	Supervisor
1.	The Proposal of Motivation Program of Employees and Managers in Conditions of IT Company	R. Bednárik	Assoc. Prof. Ing. M. Blašková, PhD.
2.	Propose the elements of knowledge management in the company TMG, Ltd.	S. Beňadiková	Assoc. Prof. Ing. J. Vodák, PhD.
3.	Inventory Planning and Control in a Selected Logistics Segment of a Manufacturing Business	L. Blaňarová	Assoc. Prof. Ing. J. Král, PhD.
4.	Information providing of selected business processes and their rationalization	I. Brejová	Ing. V. Lendel, PhD.
5.	Internal marketing in conditions of selected firm	K. Brosová	Ing. R. Jankal, PhD.
6.	Improvement Possibilities of Processes in Enterprise Management	J. Cabániková	Prof. Ing Š. Hittmár, PhD.
7.	Selection of International Market Entry Mode with Application of Methods for Decision Support	E. Czastek	Ing. J. Magdolenová, PhD.
8.	Decision.-Making Process in Enterprise Management	I. Gallová	Prof. Ing Š. Hittmár, PhD.
9.	Propagation support on internet	Z. Graňák	Mgr. J. Soviar, PhD.
10.	The selection and the implementation a tool of MIS for the existing IS of enterprise.	M. Janek	Ing. M. Kubina, PhD.
11.	Corporate social responsibility in conditions of selected firm	S. Jurčiková	Ing. R. Jankal, PhD.
12.	Proposal for a data-warehouse and application of selected MIS tool.	R. Juroško	Ing. M. Kubina, PhD.
13.	Motivation Program and Learning System of Scheidt&Bachmann	L. Kocifajová	Assoc. Prof. Ing. M. Blašková, PhD.
14.	Inventory Planning and Control in a Selected Logistics Segment of a Manufacturing Business	S. Kontra	Assoc. Prof. Ing. J. Král, PhD.

No.	Theme	Student	Supervisor
15.	Creating a model of information flows for the implementation of ERP system for small business enterprises.	P. Macková	Assoc. Prof. Ing. J. Vodák, PhD.
16.	Application of Quality Management Methods and Tools in a Manufacturing Business	D. Matúšová	Assoc. Prof. Ing. J. Král, PhD.
17.	International Market Selection through Multi-Criteria Decision Making	J. Pajdučáková	Ing. J. Magdolenová, PhD.
18.	Business marketing communication strategy	K. Púčková	Mgr. J. Soviar, PhD.
19.	Strategy Map Creating with Using of The Balanced Scorecard methodology.	M. Rádik	Assoc.Prof.Ing. J. Vodák, PhD.
20.	Management information flows optimization in non-profit organization	M. Rusnáková	Mgr. J. Soviar, PhD.
21.	International Market Selection with Application of Methods for Decision Support	K. Rybáriková	Ing. J. Magdolenová, PhD.
22.	The Quality of Informational and Communicational Relations of the Motivating in Strengthening of Employees' High Performance and Loyalty	V. Soboňová	Assoc. Prof. Ing. M. Blašková, PhD.
23.	Using Application of Selected Methods in Enterprise Management	J. Ščensná	Prof. Ing Š. Hittmár, PhD.
24.	Information system for Slovenský skauting, 55. zbor Lišiak Vrútky	Z. Škutchanová	Ing. V. Lendel, PhD.
25.	Information Providing of Selected Processes of Firm Proma	E. Vrabcová	Prof. Ing. Š. Hittmár, PhD.
26.	Significations and management of security police in the company	R. Zuščák	Ing. M. Kubina, PhD.

EQUIPMENT

Management laboratory

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Mgr.Ing. Ľuboš **Sadloň**, PhD.

Ing. Viliam **Tavač**, PhD.

Ing. Marek **Tavač,** PhD.

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

RNDr. Hynek **Bachratý**, PhD**.**

Dr. Ivan **Cimrák**

Ing. Miroslav **Gábor,** PhD.

Administrative Department: Mgr. Iveta **Belošovičová**

PhD Students:

Ing. Štefan Toth

Mgr. Peter Madzík

Ing. Matej Meško

Ing. Zuzana Fabiánová

PhD-Programme

Theme	Student	Supervisor
Adaptive System for Integration of Person-Machine	Ing. Š. Toth	Assoc.Prof.Ing. E. Kršák, PhD.
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.

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 Serve

Laboratory of Control Process Developing

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

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:
- Intelligent Transport Systems Association Slovakia

Ing. 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

BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Enhancement of services over goods in e-Commerce	J. Augustín	Ing. M. Uram
2.	Information system for an educational centre	M. Bajči	Ing. P. Hrkút, PhD.
3.	Navigation application in the building via two-dimensional bar code recognition	M. Banik	Ing. Š. Toth
4.	Modelling relational algebra operations using the UML .FRI tool	M. Belás	Ing. J. Janech, PhD.
5.	Maintenance of Bank Accounts	J. Grega	Ing. Mgr. Ľ. Sadloň, PhD.
6.	Marketing communication in sport	D. Hanzlík	Ing. M. Uram
7.	POS software	T. Ivan	Assoc.Prof.Ing. E. Kršák, PhD.
8.	Numerical study of the micro-magnetic Landau-Lifshitz equation	J. Knebl	Dr. I. Cimrák, PhD.
9.	File manager	P. Legéň	Ing. Mgr. Ľ. Sadloň, PhD.
10.	Graph theory algorithms visualisation in the UML .FRI tool.	M. Lokaj	Ing. J. Janech, PhD.
11.	Advanced photo explorer	L. Majchrák	Ing. J. Janech, PhD.
12.	Information system for the course Internet application development	R. Marejka	Ing. P. Hrkút, PhD.
13.	Interactive foreign language learning software through pictures	J. Mintal	Ing. Š. Toth
14.	Web interface for simulation of fluid flows	R. Pivko	Dr.. I. Cimrák, PhD.
15.	Creating games for Microsoft Xbox 360	Ľ. Szalai	Ing. Š. Toth
16.	Computer Game Agricola	E. Šandor	Ing. M. Gábor, PhD.
17.	Application for recognition of traffic policeman's signals	M. Tomka	Ing. P. Hrkút, PhD.
18.	Extensions for content management system for accommodation	K. Varačková	Ing. M. Matuška
19.	Information system for PhD Study management	T. Viktorín	Ing. P. Hrkút, PhD.

MASTER THESIS

No.	Theme	Student	Supervisor
1.	Decision support in construction company	P. Adamčík	Assoc.Prof. Ing. M. Hrnčiar, PhD.
2.	Layout Manager	S. Brezáni	Ing. S. Kopinec
3.	The risk management in the organization	P. Holý	Assoc.Prof. Ing. M. Hrnčiar, PhD.
4.	Control of computer by hand moving in space	P. Horňák	Assoc.Prof.Ing. E. Kršák, PhD.
5.	Graphical web-module for data display in a logistics information system	M. Joštiak	Dr. I. Cimrák, PhD.
6.	The quality of products of Statistical Office of the SR	K. Kozáková	Assoc.Prof. Ing. M. Hrnčiar, PhD.
7.	The Information Support of the Target Marketing	J. Krištoffy	Assoc.Prof. Ing. M. Hrnčiar, PhD
8.	Automated support for generating of schematic maps and visualization of operational transport	R. Liptaj	RNDr. H. Bachratý, PhD.
9	Design and Implementation of a VoIP System Interconnected with the Company CRM System	M. Mruškovič	Ing. M. Matuška
10.	The quality standards for social services	B. Petrek	Assoc.Prof. Ing. M. Hrnčiar, PhD.
11.	Home multimedia centre using DLNA	T. Pšenák	Assoc.Prof.Ing. E. Kršák, PhD.
12.	Control Tool for Advanced Information Board	M. Švalec	Ing. T. Gatial
13.	Generating of versioned relational database schema	J. Vresilovič	Ing. J. Janech, PhD

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

Ing. 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

Day of Opening Door at the Faculty - Information for perspective students

PHOTO GALERY

Faculty of Management Science and Informatics

Scientific Board of the Faculty

Entrance hall of the Faculty

Permanent photo exhibition at the corridor of the Faculty

115

Dining-Room at the Faculty

First LEGO League Competition at the Faculty

116