

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

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***UNIVERSITY OF ŽILINA***

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

### **Foreword**

**Faculty of Management Science and Informatics (FMSI)** is a part of **University of Žilina** (till 1996 University of Transport and Communications). Faculty was established in 1990 on the base of Department of Technical Cybernetics with programme of study Cybernetics in Transport and Communications, with integration of Department Mathematical Methods and Department of Economy in Transport from the Faculty of Operation and Economy of Transport and Communications and as well from the Institute for Development of Communications.

The Faculty primarily specialises in managing activities in extensive systems. These include problems of managing and optimising the transfer of objects, as well as the designing of integrated interactive information systems for decision making support including economic connections and technical background. There are the problems of control and optimization for transport of subjects (information, goods and passengers), transfer of information, processing of information and design of integrated interactive information systems for support of decision-making, including of its economical connections and technical security. The Faculty is interested in control and information systems with application for management, and transport systems from small-sized networks, such as a firm or company, through medium-sized, such as a region, to large-sized networks

Objectives in the area of science and research is to be productive in the environment for creative activity of the Faculty in science and research for employees and students, as the university education could be provided on the base of achieved results in scientific activities of the Faculty.

Educational and scientific 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

Objectives on the **Bachelor 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).

Objectives on the **Master level** consists 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.

Objectives on the **Doctoral level** consists in preparation of top experts in the area of science and research with the emphasis on the self-contained activity.

Education on the all three levels of study is providing on the base of active participation of teachers, research workers, students and doctoral students. Students are taking part active on the projects, bachelors and masters thesis, which are connected with scientific orientation of the research groups of the Faculty, University and cooperating organizations.

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

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

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

The programme is a well-rounded higher education in the 1<sup>st</sup> degree.

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

- ***Information Systems***
- ***Computer Engineering***
- ***Management***

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

- **Systems of Support for Decision-Making**
- **Applied Informatics**
- **Information-Communication Networks**
- **Business Informatics**
- **Distributed and Parallel Systems**

### ***Doctoral Programme***

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 3<sup>rd</sup> 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.

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

- ***Applied Informatics***
- ***Management***

### **Presidium of the Faculty:**

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

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Assoc.Prof.Ing. Matilda **D r o z d o v á**, PhD.  
Vice-Dean for Science

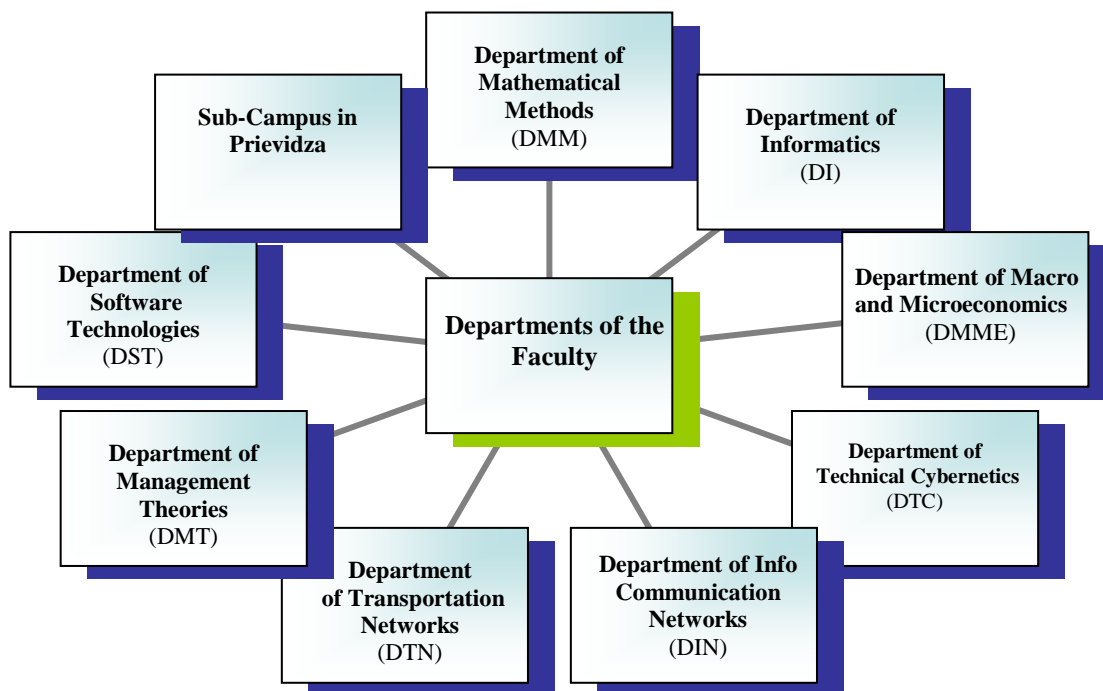
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### **Departments of the Faculty:**

The FMSI has eight Departments and one Sub-Campus. They are:



### ***Scientific and Professional Orientation of the Faculty:***

The Faculty is involved in the following scientific fields:

- Analysis, synthesis and design of integrated information and control systems
- Creation of integrated systems for the support of decision-making, including its economical correlations and technical equipment requirements
- Management, marketing, logistics and enterprising in the general field of transportation and communication systems
- Problem-solving design in transportation and communication systems and relative tasks of control
- Control and optimisation of transportation of products and persons
- Control and optimisation of database creation, transmission and data processing
- Analysis, synthesis and design of multimedia information systems
- Analysis, synthesis and design of geographical information systems
- Design and realization of simulation components for communication networks and systems
- Design and realization of technical means for information and control systems

### ***Scientific activities of the Faculty:***

In **2009** there were **13** projects of **International Science and Technology Cooperation**, **13** projects supported from **Science and Education Grant Agency** and **Cultural and Education Grant Agency – Ministry of Education in Slovak Republic**, **8 Special Purpose Projects** and **25 Institutional Projects** solved at the Faculty. They are:

#### **International Science and Technology Cooperation**

1. FIN/SK/ZU/08     *Research for Using of Visualisation Techniques in Investigation of Wide-Ranging Databases*  
Assoc.Prof. Michal **Zábovský**, PhD.
2. CZ/SK/ZU4/07     *Adaptive Replication System for Mobile Devices*  
Prof. Ing. Karol **Matiaško**, PhD.
3. BEL/SK/ZU/08/     *Research of Functions of Several Values Logics by Using of Logical Differential Calculus*  
Assoc.Prof. Vitaly **Levashenko**, PhD.
4. CH/SK/ZU/08     *Optimal Schema for Sorting of Cargo Wagons*  
Ing. Peter **Márton**, PhD.
5. CZ/SK/ZU6/08     *Using of Modern Software and Hardware Technologies in Modelling and Simulation of Transportation Processes*  
Mgr. Ing. Lubomír **Sadloň**, PhD.
6. CZ/SK/ZU2/07     *Methods for Design of Optimal Structure in Public Service systems*  
Prof. Ing. Jaroslav **Janáček**, PhD.

7. CHINA/SK/ZU1/07 *Using of Simulation Techniques for Optimisation of Transportation Processes in Production Companies*  
Ing. Norbert **Adamko**, PhD.
8. CHINA/SK/ZU2/07 *Terminal Simulation Models in Multimedia Transport*  
Assoc.Prof.Mgr. Valent **Klíma**, PhD.
9. CZ/SK/ZU5/08 *Marketing Communication Forms Design for Support of Implementation of New Multimedia Products into Praxis*  
Ing. Milan **Kubina**, PhD.
10. CZ/SK/ZU3/07 *Actual Managerial and marketing Trends in the Theory and Praxis*  
Assoc.Prof.Ing. Jozef **Strišš**, PhD.
11. STF LoE S36/02 *Customer in the Loop (Using Networked Devices enabled Intelligence for Proactive Customers Integration as Drivers of the Integrated Enterprise)*  
Assoc.Prof. Tatiana **Kováčiková**, PhD.
12. 331/10 ETSI STF *ICT GRID Technologies Interoperability and Standardization*  
Assoc.Prof. Tatiana **Kováčiková**, PhD.
13. ETSI STF 342 *Personalization and User Profile Management Standardization (i2010 - e-Inclusion)*  
Assoc.Prof. Tatiana **Kováčiková**, PhD.

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

1. 1/4064/07 *Development of the New Signal Pre-processing for the Technology Process Control and Monitoring*  
Assoc.Prof. Ing. Juraj **Miček**, PhD.
2. 1/0796/08 *Modelling and Processing of Data in Wide-Ranging Databases*  
Prof.Ing. Karol **Matiaško**, PhD.
3. 1/4061/07 *Error Rate Model for High-Speed Digital Network*  
Ing. Petr. **Ivaniga**, PhD.
4. 7/4057/07 *Agent Oriented Architecture of Service Systems Simulation Models*  
Assoc.Prof. Valent **Klíma**, PhD.
5. 1/3775 *Decision Support Tools for Design of Complex Distribution and Servicing Systems*  
Prof.RNDr. Jaroslav **Janáček**, PhD.
6. 1/0664/08 *Design of Algorithms for Adjustment of Data Based on of Several Values Logics and Fuzzy Logics*  
Assoc.Prof.Ing. Vitaly **Levashenko**, PhD.
7. 1/0808/08 *Self-Adjusting and Teaching Algorithms of Automatic Control*  
Prof.Ing, Mikuláš **Alexík**, PhD.

8. 1/0135/08 *Optimisation Problems in Logistics and Transportation Systems*  
Assoc.Prof.RNDr. Štefan **Peško**, PhD.
9. 1/0878/08 *Development of Theory of Cognitive Management*  
Prof.Ing. Štefan **Hittmár**1/0878/08
10. 1/0495/08 *Design of New Access System and Methods for References of Effectively Exploitation and Optimal Combination of Production Inputs by Using of Macro- and Micro-Economy Aspect and Prior Orientation to Human Capital*  
Assoc.Prof.Ing.Alžbeta **Kucharčíková**, PhD.
11. 1/4647/07 *Dynamic Model of Human Potential Motivation*  
Assoc.Prof.Ing. Martina **Blašková**, PhD.
12. 1/0024/08 *Intelligent Techniques in Modelling and Prognostics of Economic Time Progressions and their Use in Managerial Predictive Systems*  
Prof.Ing. Dušan **Marček**, PhD.

#### **Cultural and Education Grant Agency - Ministry of Education in Slovak Republic**

1. 3/5205/07 *Digital Libraries of e-Learning Metadata Objects and its Management.*  
Assoc.Prof. Ing. Matilda **Drozdová**, PhD.

#### **Special Purpose Projects**

1. LPP-0154-07 *Mathematical Competition SEZAM and SEZAMKO for the Pupils from Grammar Schools*  
RNDr. Hynek **Bachratý**, PhD.
2. 771370 *Project for Implementation of electronic signature*  
Ing. Emil **Kršák**, PhD.
3. 001ZU-3/2008 *Voice Output for www*  
Prof.Ing. Martin **Klím**, PhD.
4. 5/2008/FRI/PC/916 *Concept of Information Systems Development in the Žilina City*  
Prof.Ing. Karol **Matiaško**, PhD.
5. 10/2008/FRI/R/190 *Optimisation of Telecom Slovak Railways – ICT*  
Prof.Ing. Karol **Matiaško**, PhD.
6. 4/2008/FRI/PC/940 *Solution of Research Marketing Tasks 2008*  
Assoc.Prof. Miroslav **Hrnčiar**, PhD.
7. O-09-109/0041 *Research and Development of Project ZONA*  
Prof.Ing. Karel **Šotek**, PhD.



8.982008FRI/R/904 *Measurements of Time for Waiting in the Selected Posts in Slovakia*  
Assoc.Prof. Miroslav **Hrnčiar**, PhD.

**Institutional Projects:**

1. *Use of Model Control Architecture for Control and Automation of Object Mapping*  
Ing. Marek **Tavač**
2. *Modelling of QoS Mechanism by Effective Broad Wide*  
Mgr. Jakub **Daubner**
3. *Possibilities of Questions Sending to Database in Dynamic Network Environment*  
Ing Ján **Janech**
4. *Telework and its Influence on Working Power*  
Ing. Lucia **Tulejová**
5. *Design of Contents for Education Supported by Technologies by Using of Existing Standards and Oriented Architecture on Services*  
Mgr. Katarína **Pilátová**
6. *Model Driving LMS Platform Integration*  
Ing. Zuzana **Bizoňová**, PhD.
7. *Modelling and Forecasting High Frequency Financial Data*  
Ing Ján **Bábel**
8. *Particularities of Marketing Mix in the Services Sphere*  
Ing. Michal **Varmus**
9. *CRM Architecture Form Effective Enterprise Relationship Marketing*  
Ing. Viliam **Lendel**, PhD.
10. *Principles of Fuzzy Logics from the view of acquiring Fuzzy Rules from Databases*  
Ing. Ján **Boháčik**, PhD.
11. *Diagnostics of Standard in Slovak companies in Area of Implementation CRM to Enterprises Praxis*  
Ing. Milan **Kubina**, PhD.
12. *Reconstructions Possibilities of Graphs*  
Mgr. Peter **Cimermann**, PhD.
13. *Contribution of Talent Management for Organizations in Slovak Republic*  
Ing. Monika **Kormancová**
14. *Model Decision-Making and Operation Analysis Methods*  
Ing. Mgr. Zdenka Sidónia **Natšínová**
15. *Chance of Implementation Knowledge Management Activities to Slovak Enterprises*  
Ing. Marián **Hrubizna**

16. *Effectiveness of Human-Potential-Management Processes*  
Ing. Radka **Majerová**
17. *Human Potential as a Basis for Creating of Learning Organization*  
Ing. Jaroslava **Štaffenová**
18. *Replication, Parallel Query Processing and Modelling of Analytic Databases*  
Ing. Eva **Valentíková**
19. *Possibilities of Modelling and Design Calculus Independent Model in the Architecture Controlled by Model*  
Ing. Martin **Kardoš**
20. *Use of Transportation Schedules in Information Technologies*  
Ing. Michal **Murín**
21. *Creativity Performance of Managers*  
Ing. Jana **Dicová**, PhD.
22. *Extraction of Information Symptoms by Impulse Connected Neural Network for Need to Identification of Voice Signals*  
Ing. Matúš **Jurečka**, PhD.
23. *Implementation of Algorithms CSS to Programming Circuits of FPGA Type*  
Ing. Peter **Ševčík**, PhD.
24. *Simulation and Optimal Time Controlled Servomechanism in Real Time*  
Ing. Štefan **Bocko**
25. *Signal Classification by Artificial Neural Networks*  
Lukáš **Čechovič**

### **Scientific Board:**

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

**Members:** Prof. Ing. Mikuláš **A l e x í k**, PhD.  
Prof. Ing. Milan **D a d o**, PhD.  
Assoc. Prof. Ing. Vladimír **J a m r i c h**, PhD.  
Assoc. Prof. Zdeněk **H a v l i c e**, PhD.  
Prof. RNDr. Jaroslav **J a n á č e k**, PhD.  
Prof. Ing. Martin **K l i m o**, PhD.  
Prof. Ing. Dušan **M a r č e k**, PhD.  
Assoc. Prof. Ing. Juraj **M i č e k**, PhD.  
Assoc. Prof. RNDr. Stanislav **P a l ú c h**, PhD.  
Assoc. Prof. Ing. Jiří **S l a v í k**, PhD  
Coll. Prof. Ing. Ladislav **Š i m á k**, PhD.  
Prof. Ing. Petr **C e n e k**, Ph.D.  
Prof. Ing. Ivan **H a n u l i a k**, PhD.  
Prof. Ing. Štefan **H i t t m á r**, PhD.

Assoc. Prof. Mgr. Valent **K l i m a** , PhD.  
Prof. Ing. Milan **K o l e s á r** , PhD.  
Assoc. Prof. Ing. Vladimír **M l y n a r o v i č** , PhD.  
Prof. RNDr. Beloslav **R i e č a n** , DrSc.  
Assoc. Prof. Ing. Jozef **S t r i š š** , PhD.  
Prof. Ing. Karel **Š o t e k** , PhD.  
Assoc. Prof. Ing. Matilda **D r o z d o v á** , PhD.  
Prof. Ing. Peter **Z á v o d n ý** , PhD.

Scientific Board of the Faculty, after successful defence of Doctoral thesis, has appointed in 2009 with title **PhD.** following graduates of Doctoral Programme:

1. Ing. Emese T o k a r č í k o v á
2. Ing. Iveta N e d e l j a k o v á
3. Ing. Jana M a g d o l e n o v á
4. Ing. Marián H r u b i z n a
5. Ing. Viliam L e n d e l
6. Ing. Ján B o h á č i k
7. Ing. Peter T a r á b e k
8. Ing. Zuzana M e č i a r o v á
9. Ing. Peter Č á k y
10. Ing. Radovan M l a d š í k
11. Ing. Jana V i t v a r o v á
12. Ing. Matúš J u r e č k a

### **Publication Activities:**

Members of the Faculty of Management Science and Informatics have published in the year 2009 results of research activity in **381** publications. Among them there are **3** on the level of scientific monographs, **21** the others bookish publications, **4** scientific works published in prestigious scientific journals and **353** contributions in reviewed proceedings of conferences and journals. In the following list there are some of more significant titles.

#### **Scientific Monographs**

DUBOVEC, J.: *Decision-making of Economical Actors*

European Polytechnic Institute, Kunovice, ISBN 978-954-12-0166-4, pp. 130

STRIŠŠ, J., JANKAL, R., JANKALOVÁ, M., KUBINA, M., NADÁNYIOVÁ, M., SOVIAR, J., LENDEL, V.: *Trends in Marketing Communication*

European Polytechnic Institute, Kunovice, ISBN 978-80-7314-155-4, pp. 112

KLIMO, M., BACHRATÁ, K., SMIEŠKO, J., URAMOVÁ, J., CENEK, P.: *Theory of IP Telephony*

Edis, University of Žilina, ISBN 978-80-8070-915-0, pp.379

### Parts in Scientific monographs published in Slovakia

DROZDOVÁ, M., DADO, M., ČOŘEJOVÁ, T. and col.: *Multicriterial Sectors of Sustainable and Safety Development*  
Economical institute of Slovak Academic Sciences, Bratislava, ISBN 978-80-7144-168-7, pp. 147 – 196

### University Textbooks published in Slovakia

PALÚCH, S., STANKOVIANSKÁ, I.: *Algebra and Engineering Applications*  
Edis, University of Žilina, ISBN 978-80-8070-922-8, pp.182

KLAUDÍNÝOVÁ, A., STANKOVIANSKÁ, I.: *Algebra, in Problems*  
Edis, University of Žilina, ISBN 978-80-554-0003-7, pp.113

MATIAŠKO, K., VAJSOVÁ, M., ZÁBOVSKÝ, M., CHOCHLÍK, M.: *Database Systems and Technologies*  
Bratislava, STU, ISBN 978-80-227-3035-8, pp.693

KUCHARČÍKOVÁ, A.: *Macroeconomics*  
Edis, University of Žilina, ISBN 978-80-8070-978-5, pp.236

STRŠŠ, J., VODÁK, J., KUBINA, M., SOVIAR, J.: *Marketing Control*  
Edis, University of Žilina, ISBN 978-80-8070-680-7, pp. 440

CENEK, P., JÁNOŠÍKOVÁ, Ľ.: *Models and Optimisation in transport and Logistics*  
Edis, University of Žilina, ISBN 978-80-8070-951-8, pp. 186

JANÁČEK, J., BUZNA, Ľ.: *Optimisation in Networks*  
Edis, University of Žilina, ISBN 978-80-8070-986-0, pp. 157

BACHRATÁ, K., KLIMO, M.: *Process Analysis*  
Edis, University of Žilina, ISBN 978-80-554-0061-7, p. CD-ROM

CHOCHLÍK, M., GRONDŽÁK, K., BABOŠ, Š.: *Programming in the Kernel of Operation Systems Windows*  
Edis, University of Žilina, ISBN 978-80-8070-970-9, pp.256

### Scientific Works in Foreign Prestigious Journals

JANÁČEK, J., BUZNA, Ľ.: *Acceleration of Erlenkotter-Körkel's Algorithms for the Non-capacitated Facility Location Problem*  
In Annual of Operations Research, ISSN 0254-5330, Vol. 164, No.1 pp. 97-109

ILIAŠ, M., SAUE, T., ENEDVOLSEN, T., JENSEN, H.J.: *Gauge Origin Independent Calculations of Nuclear Magnetic Shielding in Relativistic Four-Component Theory*  
In: Journal of Chemical Physics. -ISSN 0021-9606. -Vol. 131, No. 12 (2009)

CARVALHO, R., BUZNA, Ľ., FLAVIO, G., JUST, W., ARROWSMITH, D.: *Robustness of trans-European gas networks*  
In: Physical Review E. -ISSN 1539-3755. -Vol. 80, No. 1 (2009), pp. 016106-1-9

SIKKERNA, J., VISSCHER, L., SAUE, T., ILIAŠ, M.: *Molecular Mean-Field Approach for Correlated Relativistic Calculations*  
In: Journal of Chemical Physics. -ISSN 0021-9606. -Vol. 131, No. 12, 124116-1-9

### Scientific Works in Foreign Journals

JANÁČKOVÁ, M., SZENDREYOVÁ, A.: *Impact of some Parameters on Correctness of the Location Problem Solution*  
In: Transport Problems: Czasopismo Naukowe. -ISSN 1896-0596. -Vol. 3. No. 4, Part 1 pp. 39-44

SOVIAR, J.: *Cluster Initiatives in Žilina Region (Slovak Republic)*  
In: Economics & Management, ISSN 1822-6515. -No. 14, pp. 528-534

- JACKOVÁ, J., HAMMER, J., CUTTS, Q and coll.: *Contributing Student Pedagogy*  
In: ACM SIGCSE Bulletin. -ISSN 0097-8418. -Vol. 40, no. 4 p. 194-112
- VODÁK, J., TESAROVICOVÁ, I.: *Economic Crisis, Performance Management and Human Capital*  
In: Sosyal Bilimler Dergisi =Journal of Social Sciences. -ISSN 1304-8392. -Vol. 6, No. 1
- RINGS, T., KOVÁČIKOVÁ, T. and Coll.: *Grid and Cloud Computing: Opportunities for Integration with the Next Generation Network*  
In: Journal of grid computing. -ISSN 1570-7873. -Vol. 7
- MÁRTON, P.: *Große Veränderungen im Bahnverkehr der neuen EU-Mitgliedsstaaten*  
In: EI -Der Eisenbahningenieur : internationale Fachzeitschrift für Schienenverkehr & Technik. -ISSN 0013-2810. -V ol. 60, No. 8, pp. 37-45
- ADAMKO, N., MÁRTON, P., MOCZARSKI, J.: *Komputerowe wspomaganie decyzji w modernizacji obiektów infrastruktury kolejowej*  
In:Problemy kolejnictwa. -ISSN 0552-2145. -Vol. 147 , pp. 55-73
- PETERS, K., BUZNA, Ľ., HELBING, D.: *Modelling of Cascading Effects and Efficient Response to Disaster Spreading in Complex Networks*  
In: International journal of critical infrastructures. -ISSN 1475-3219. -Vol. 4, No. 1/2
- ADAMKO, N., KLIMA, V.: *Optimisation of Railway Terminal Design and Operations Using Villon Generic Simulation Model*  
In: Transport : Journal of Vilnius Gediminas Technical University and Lithuanian Academy of Sciences. - ISSN 1648-4142. -Vol. 23, No. 4, pP. 335-340
- PETERSEN,F., PLUKE, M., KOVÁČIKOVÁ, T., BARTOLOMEO, G.: *Personalization and the Universal Communications Identifier Concept*  
In: World academy of science, engineering and technology. -ISSN 2070-3724. -Vol. 55, July(2009), pp.447-452
- JÁNOŠÍKOVÁ, Ľ.: *Reduction of a Hospital Network as a Multiple Criteria Optimisation Problem*  
In: Ekonomie a management. -ISSN 1212-3609. -Vol.. 12, No. 3 (2009), pp. 50-56
- BLAŠKOVÁ, M., BLAŠKO, R.: *Sustainable Development of Rural Tourism through Relations between Customers´ and Employees´ Motivation*  
In: Vadybos mokslas ir studijoskaimo verslsirjs infrastrukturos pletrai =Management theory and studies for rural business and infrastructure develop ment. -ISSN 1822-6760. -Nr. 15 (4)
- VODÁK, J.: *Talent Management in Selected Slovak Enterprises*  
In: Acta academica karviniensia. -ISSN 1212-415X. -Vol. 1 (2009), pp. 270-282
- LENDEL, V., KUBINA, M.: *Teleworking - Important Factor of Regional Development*  
In: Acta academica karviniensia. -ISSN 1212-415X. -Vol. 1 (2009), pp. 109-115
- BUZNA, Ľ., ISSACHAROFF, L., HELBING, D.: *Evolution of the Topology of High-Voltage Electricity Networks*  
In: International journal of critical infrastructures.-ISSN 1475-3219.-Vol. 5, No. 1/2, p.72-84
- JANKALOVÁ, M., JANKAL, R.: *Consumer Protection in the Slovak Republic*  
In: Business: theory and practice. -ISSN 1648-0627. -Vol. 10, no. 1 (2009), pp. 63-67

#### **Scientific Works in Domestic Journals**

- TARÁBEK, P.: *Contour Approach to Thinning Algorithms*  
In: Communications: Scientific Letters of the University of Žilina. -ISSN 1335-4205. -Vol. 11, No. 3 (2009), pp. 43-48
- PALÚCH, S.: *Multi Label Algorithm for Shortest Paths Problem*  
In: Communications: Scientific Letters of the University of Žilina. - ISSN 1335-4205. – Vol. 11, No. 3 (2009), pp. 11-14

- BACHRATÝ, H., KRŠÁK, E., TAVACĎ, M.: *Algorithm for generating text descriptions of bit Calendars*  
In: Communications: Scientific Letters of the University of Žilina. - ISSN 1335-4205. - Vol. 11, No. 3 (2009), pp. 54-62
- JANKAL, R., JANKALOVÁ, M.: *Ambush marketing*  
In: Marketing inspirations. -ISSN 1336-796X. -Vol. 3, No. 2, pp. 10-15
- KOVÁŘ, O.: *Wireless Communication Networks for Industrial Automation*  
In : Strojrenství. - ISSN 1335-2938. - No. 5 (2009)
- KUCHARČIKOVÁ, A.: *Business education as investment in human capital in organizations*  
In: Journal of Information, Control and Management Systems. Žilina. -ISSN 1336-1716. – Vol. 6, No. 2 , pp. 71-76
- SEGEČ, P., KOVÁČIKOVÁ, T.: *Call Processing Language (CPL) -a Tool for Creation of Internet Telephony Services by the end user*  
In: Communications: Scientific Letters of the University of Žilina. - ISSN 1335-4205. – Vol. 10, No. 4 , pp. 19-22
- JANKAL, R., JANKALOVÁ, M.: *Cause-Related Marketing*  
In: Marketing Inspirations: - ISSN 1336-796X. -Vol. 4, No. 1 (2009), pp. 3-8
- LENDEL, V.: *CRM Architecture for Effective Enterprise Relationship Marketing*  
In: Journal of Information, Control and Management Systems. Žilina. - ISSN 1336-1716. - Vol. 7, No. 1 (2009), pp. 65-70
- LENDEL, V., KUBINA, M.: *Diagnostic Level in Slovak Companies in the Area of Implementation CRM to Company Praxis*  
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ISBN 978-80-8070-927-3. - pp. 60-70

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**Secretary:** Assoc.Ing. Ľudmila J á n o š í k o v á , PhD.

#### **Chamber of Employees:**

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RNDr. Hynek B a c h r a t ý , PhD.

RNDr. Peter V a r š a PhD.

Ing Jozef G a j d o š í k

Ing. Juraj D u b o v e c , PhD.

Mgr.Ing. Ľubomír S a d l o ň , PhD.

RNDr. Katarína B a c h r a t á , PhD.

Ing. Jozef J u r í č e k , PhD.

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

Ing. Emil K r š á k , PhD.

Ing. Jozef M i č i c

Ing. Ján K a p i t u l í k , PhD.

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Kristína Š t r b á k o v á

Matej P u l c

Štefan B o c k o

Tomáš D u n a j s k ý

Milan V a v r o

Oliver B l e y

Martin C z i p p e l

**Official guests from foreign institutions accepted by Deans Office in 2009:**

1. Prof. Sergej V. A b l a m e y k o , PhD, Belarusian State University, (BY)
2. Dipl.-Oec. Uwe B r ü n n e r , Scheidt&Bachmann, Mönchengladbach, (D)
3. Dipl.-Kfm. Christoph P o o s , Scheidt&Bachmann, Mönchengladbach, (D)
4. Assoc.Prof. Petr K a r a m a z o v , PhD., University of Pardubice, (CZ)
5. Prof.Ing. Pavel B e z o u š e k , PhD., University of Pardubice, (CZ)
6. Assoc.Prof.Ing. Josef K o t y k , PhD, University of Pardubice, (CZ)
7. Assoc.Prof. Johan O p p e n , PhD., Molde University College, (N)
8. Assoc.Pof. Synne K l e i v e n , Telemark University College, (N)
9. Assoc.Prof. Radi R o m a n s k y , PhD., Technical Univeristy, Sofia, (BG)
10. Assoc.Prof. Irina N o n i n s k a , PhD., Technical Univeristy, Sofia, (BG)
11. Assoc.Prof. Jouni H u o t a r i , PhD., JAMK University of Applied Sciences, (FIN)
12. Assoc.Prof. Vladimiras G r a z u l i s , Mikolas Romeris University, Vilnius (LT)
13. Mr. Susumu A k i b a , Yokohama City University, (JAPAN)
14. Dipl.-Ing. Monika N i e h u e s , Chancellor, HTW Dresden, (D)
15. Mgr. Petra-Sibylle S t e n z e l , Head of Library, HTW Dresden, (D)
16. Mgr. Renate R u d a t , Head of Language Center, HTW Dresden, (D)
17. Dipl.-Ing. Christiane W i n k l e r , Study Advisor, HTW Dresden, (D)
18. Dr. Gerard T e l , University of Utrecht, (NL)

**Abroad stays of the Faculty staff and Doctoral Students:**

**In the 1<sup>st</sup> Quarter 2009**

	<i>Name</i>	<i>Institute - Country</i>	<i>from</i>	<i>to</i>
1.	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia – Antipolis (F)	11.1.2009	21.1.2009
2.	Zábovský Michal Assoc.Prof.Ing PhD.	ICT Proposers Day,Budapest (H)	21.1.2009	22.1.2009
3.	Klimo Martin Prof. Ing. PhD.	ICT Proposers Day,Budapest (H)	21.1.2009	22.1.2009
4.	Jurečka Matúš Ing. (PhD)	Hungexpo ICT, Budapest (H)	22.1.2009	22.1.2009
5.	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia – Antipolis (F)	25.1.2009	31.1.2009
6.	Bizoňová Zuzana Ing. PhD.	Uni. of Carlos III, Madrid (E)	7.2.2009	12.2.2009
7.	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia – Antipolis (F)	8.2.2009	21.2.2009
8.	Klimo Martin Prof. Ing. PhD.	European Commission, (B)	10.2.2009	12.2.2009
9.	Alexík Mikuláš Prof. Ing. PhD.	TU Wien (A)	10.2.2009	14.2.2009
10.	Koháni Michal Ing. PhD.	Rail Zurich 2009 (CH)	10.2.2009	14.2.2009
11.	Márton Peter Ing. PhD.	Rail Zurich 2009 (CH)	10.2.2009	14.2.2009
12.	Bocko Štefan Ing.	TU Wien (A)	11.2.2009	13.2.2009
13.	Kováčiková Tatiana Assoc.Prof.Ing PhD.	Slovenian Research Agency (SL)	23.2.2009	25.2.2009
14.	Levashenko Vitaly Assoc.Prof.Ing PhD.	University of Minsk (BELARUS)	12.3.2009	18.3.2009
15.	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia – Antipolis (F)	15.3.2009	28.3.2009
16.	Bruncko Michal, Ing	ETSI, Sophia – Antipolis (F)	15.3.2009	21.3.2009

**In the 2<sup>nd</sup> Quarter 2009**

	<i>Name</i>	<i>Institute - Country</i>	<i>from</i>	<i>to</i>
1	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis (F)	15.3.2009	28.3.2009
2	Bruncko Michal Ing.	ETSI, Sophia Antipolis (F)	15.3.2009	21.3.2009
3	Bizoňová Zuzana Ing. PhD	Konnevesi Research Station (FI)	1.4.2009	6.4.2009
4	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Nice (F)	5.4.2009	9.4.2009
5	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis (F)	19.4.2009	25.4.2009
6	Bizoňová Zuzana Ing. PhD	ICTE, Lisboa (PT)	21.4.2009	24.4.2009
7	Pilátová Katarína Mgr.	Reitoria da Uni. Nova,Lisboa (PT)	21.4.2009	24.4.2009
8	Fabián Peter Assoc.Prof.Ing CSc.	TRANSCOM, Pamplona (E)	22.4.2009	26.4.2009
9	Skyva Ladislav Prof. Ing. DrSc.	HTW Dresden (DE)	3.5.2009	9.5.2009
10	Márton Peter, Ing. PhD.	HTW Dresden (DE)	3.5.2009	9.5.2009
11	Matiaško Karol, Prof. Ing. PhD.	University. Bielsko Biala (PL)	6.5.2009	6.5.2009
12	Holková Beata, Ing	University Bielsko Biala (PL)	6.5.2009	6.5.2009
13	Kováčiková Tatiana Assoc.Prof.Ing PhD.	EC, DG INFSO, Brussel (B)	10.5.2009	15.5.2009
14	Hittmár Štefan, Prof. Ing. PhD.	Transport Logistic Munich (DE)	11.5.2009	14.5.2009
15	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis (F)	16.5.2009	27.5.2009
16	Klimo Martin, Prof. Ing. PhD.	European Commission (B)	13.5.2009	13.5.2009
17	Zaitseva Elena, Assoc.Prof.Ing PhD.	Belarusian University, Minsk	16.5.2009	23.5.2009
18	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis, (F)	1.6.2009	13.6.2009
19	Fabián Peter Assoc.Prof.Ing CSc.	Telecom Lille (F)	24.4.2009	1.7.2009
20	Tavač Marek, Ing.	Oracle Academy,Wien, (A)	28.6.2009	4.7.2009
21	Vajsová Monika Ing.	Oracle Academy,Wien, (A)	28.6.2009	4.7.2009
22	Václavková Monika, Ing.	Oracle Academy,Wien, (A)	28.6.2009	4.7.2009
23	Bizoňová Zuzana Ing. PhD	Oracle Academy,Wien, (A)	28.6.2009	4.7.2009
24	Valentíková Eva, Ing.	Oracle Academy,Wien, (A)	28.6.2009	4.7.2009
25	Marček Dušan, Prof. Ing. CSc.	University of Verona (I)	30.6.2009	5.7.2009
26	Kováčiková Tatiana Assoc.Prof.Ing PhD.	BT Labs, ETSI (UK) (F)	30.6.2009	10.7.2009

**In the 3<sup>rd</sup> Quarter 2009**

	<i>Name</i>	<i>Institute - Country</i>	<i>from</i>	<i>to</i>
1	Jacková Jana Ing.	Uni. Pierre et Marie, Paris (F)	1.7.2009	9.7.2009
2	Soviár Jakub, Mgr. PhD.	Politech. Czestochowska (PL)	7.7.2009	7.7.2009
3	Levashenko Vitaly, Assoc.Prof.Ing PhD.	Belarusian University, Minsk	11.7.2009	20.7.2009
4	Klimo Martin, Prof. Ing. PhD.	Information Society, Brussel (B)	12.7.2009	16.7.2009
5	Marček Dušan prof. Ing. CSc.	TU Lisboa (PT)	19.7.2009	25.7.2009
6	Kováčiková Tatiana Assoc.Prof.Ing PhD.	WSEAS, Rhodos (GR)	22.7.2009	31.7.2009
7	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis (F)	8.8.2009	19.8.2009
8	Levashenko Vitaly, Assoc.Prof.Ing PhD.	Belarusian University, Minsk	12.8.2009	21.8.2009
9	Matiaško Karol, Prof. Ing. PhD.	SUT St.Petersburg (RUSS)	24.8.2009	28.8.2009
10	Slovák Juraj, Assoc.Prof.Ing CSc.	SUT St.Petersburg (RUSS)	24.8.2009	28.8.2009
11	Klimo Martin, Prof. Ing. PhD.	SUT St.Petersburg (RUSS)	24.8.2009	28.8.2009
12	Fabián Peter, Assoc.Prof.Ing PhD.	SUT St.Petersburg (RUSS)	24.8.2009	28.8.2009
13	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis (F)	26.8.2009	5.9.2009
14	Bizoňová Zuzana, Ing. PhD.	Uni. of Carlos IV, Madrid (E)	29.8.2009	1.9.2009
15	Slovák Juraj, Assoc.Prof.IngPhD..	TU Braunschweig (D)	3.9.2009	5.9.2009
16	Drozdová Matilda, Assoc.Prof.Ing PhD.	TU Braunschweig (D)	3.9.2009	5.9.2009
17	Varmus Michal, Ing	University of Viena (A)	9.9.2009	10.9.2009
18	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis (F)	9.9.2009	20.9.2009
19	Martincová Penka, Assoc.Prof.Ing PhD.	TU Sofia (BG)	17.9.2009	20.9.2009
20	Bizoňová Zuzana, Ing. PhD.	ICL 2009, Villach (A)	22.9.2009	25.9.2009
21	Janáček Jaroslav Prof. RNDr.PhD..	SDI Nova Gorica (SL)	22.9.2009	26.9.2009
22	Koháni Michal, Ing. PhD.	SDI Nova Gorica (SL)	22.9.2009	26.9.2009
23	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Bremen (D)	23.9.2009	25.9.2009
24	Klimo Martin, Prof. Ing. PhD.	European commission, Malta	24.9.2009	26.9.2009
25	Bizoňová Zuzana, Ing. PhD.	EC-TEL 2009, Nice (F)	26.9.2009	4.10.2009
26	Márton Peter, Ing. PhD.	TU Dresden (D)	27.9.2009	30.9.2009
27	Kováčiková Tatiana Assoc.Prof.Ing PhD.	ETSI, Sophia Antipolis (F)	30.9.2009	10.10.2009

**In the 4<sup>th</sup> Quarter 2009**

	<i>Name</i>	<i>Institute - Country</i>	<i>from</i>	<i>to</i>
1	Fabián Peter, doc. Ing. CSc.	SUT St. Petersburg (RUS)	1.10.2009	5.10.2009
2	Kováčiková Tatiana, doc. Ing. PhD.	Fraunhofer FOKUS, Berlin (D)	10.11.2009	13.11.2009
3	Kapitulík Ján, Ing. PhD.	Polsie towarzystwo inform (PL)	11.10.2009	15.10.2009
4	Miček Juraj, doc. Ing. PhD.	Polsie towarzystwo inform (PL)	11.10.2009	15.10.2009
5	Marček Dušan, prof. Ing. CSc.	Peking University (CN)	15.10.2009	24.10.2009
6	Kováčiková Tatiana, doc. Ing. PhD.	ETSI, Sophia Antipolis (F)	19.10.2009	31.10.2009
7	Klimo Martin, prof. Ing. PhD.	European commision, Brussel (B)	21.10.2009	22.10.2009
8	Adamko Norbert, Ing. PhD.	EUROSIS Leicester (GB)	25.10.2009	29.10.2009
9	Slovák Juraj, doc. Ing. CSc.	SI University, Győr (H)	26.10.2009	27.10.2009
10	Klimo Martin, prof. Ing. PhD.	SI University, Győr (H)	26.10.2009	26.10.2009
11	Márton Peter, Ing. PhD.	RWTH Aachen (D)	5.11.2009	7.11.2009
12	Blašková Martina, doc. Ing. PhD.	Division of Production Janów.(PL)	6.11.2009	8.11.2009
13	Blaško Rudolf, RNDr. PhD.	Division of Production Janów.(PL)	6.11.2009	8.11.2009
14	Kováčiková Tatiana, doc. Ing. PhD.	ETSI, Sophia Antipolis (F)	17.11.2009	27.11.2009
15	Buzna Ľuboš, Ing. PhD.	ETH Zurich (CH)	25.11.2009	28.11.2009
16	Varmus Michal, Ing.	WCTT-WPT Wroclav (PL)	26.11.2009	26.11.2009
17	Cenek Peter, prof. Ing. CSc.	EURIAS Dresden (D)	27.11.2009	28.11.2009
18	Kováčiková Tatiana, doc. Ing. PhD	ETSI, Sophia Antipolis (F)	29.11.2009	5.12.2009
19	Klimo Martin, prof. Ing. PhD.	European commision, Brussel (B)	2.12.2009	3.12.2009
20	Kováčiková Tatiana, doc. Ing. PhD.	ETSI, Sophia Antipolis (F)	9.12.2009	19.12.2009

### **Turnover of staff in 2009**

Within the space of year 2009 the Faculty has accepted into pedagogical and scientific staff following members:

1. Ing. Emese Tokarčíková, PhD
2. Ing. Štefan Bocko
3. Ing. Viliam Lendel, PhD.
4. Ing. Ján Boháčik, PhD.
5. Ing. Peter Tarábek, PhD.
6. Ing. Jana Magdolenová, PhD.
7. Ing. Jana Dicová, PhD.
8. Ing. Matúš Jurečka, PhD.

In the same period following members left the Faculty:

1. Ing. Cyril Srnka
2. Ing. Bohuslav Sedliak

### **Human resource management**

As far as the required qualification structure of the pedagogical staff at the FMSI 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 2005-2009.

<b>CATEGORY/YEAR</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Professors	10	10	9	11	10
Guest Professors	1	1	2	1	1
Assoc. Prof.	9	11	15	12	15
Senior Lecturers PhD.	24	27	35	45	58
Senior Lecturers	46	42	26	16	13
Assistants	1	2	1	1	0
Lectors	1	7	6	6	5
Research staff	13	13	9	9	6
Tech. Admin. Staff	52	49	49	52	47
Total	157	162	152	153	155

**Programmes of Study:**

**Bachelor Degree Programme: *INFORMATICS***

**1<sup>st</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	<b>COMPULSORY</b>				
	5BF01	Algebra	2-2-0	6	DMM
	5BF15	Mathematics for Informatics	2-2-0	8	DMM
	5BL33	Introduction to studies	2-0-2	3	DIN
	5BE01	Basics of Economic Theory	2-2-0	5	DMME
	5BI01	Informatics 1	2-2-2	8	DI
	<b>OPTIONAL</b>				
	5BF09	Practice of Mathematics	0-2-0	1	DMM
	5BI11	Practice of Programming 1	0-0-2	1	DI
	5BL15	Foreign Language	0-2-0	3	FSc_DL
5BL09	Physical Education	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	<b>COMPULSORY</b>				
	5BA26	Algorithmic Graphs Theory	2-2-0	6	DMM
	5BN10	Communication Technologies	2-0-2	6	DIN
	5BA24	Discrete Probability	2-2-1	6	DTN
	5BE02	Microeconomics	2-2-0	5	DMME
	5BI38	Informatics 2	2-2-2	7	DI
	<b>OPTIONAL</b>				
	5BI36	Practice of Programming 2	0-0-2	1	DI
	5BL16	Foreign Language	0-2-0	3	FSc_DL
	5BL10	Physical Education	0-0-2	1	IPE

**Recommended number of credits in the 1<sup>st</sup> year of study: 60**

**2<sup>nd</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	<b>COMPULSORY</b>				
	5BI39	Informatics 3	2-1-2	5	DI
	5BH01	Logical Systems	2-0-2	6	DTC
	5BI25	Assemblers	2-0-2	4	DTN
	5BF11	Mathematical Analysis 1	2-2-1	6	DMM
	<b>OPTIONAL</b>				
	5BI33	Spreadsheets	2-0-2	3	DI
	5BI35	Techniques of Programming 1	0-0-2	4	DI
	5BI45	Graphics in Computers Applications	1-0-3	4	DIN
	5BL17	Foreign Language	0-2-0	3	FSc_DL
5BL11	Physical Education 3	0-0-2	1	IPE	



Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	<b>COMPULSORY</b>				
	5BH18	Digital Computers	3-0-1	6	DTC
	5BA22	Discrete Optimisation	2-0-2	6	DTN
	5BI06	Basics of Database Systems	2-0-2	6	DI
	5UI24	Data Structures 1	2-0-2	6	DTN
	<b>OPTIONAL</b>				
	5BI28	Unified Modelling Language	2-1-1	4	DST
	5BE14	Small and Medium Entrepreneurship	2-2-0	6	DMME
	5BA30	Probability and Statistics	2-2-0	6	DTN
	5BA08	Numerical Methods	2-0-2	3	DMM
	5BI40	Computers Graphic and Animation	1-0-3	4	DIN
	5BL18	Foreign Language 4	0-2-0	3	FSc_DL
	5BL12	Physical Education 4	0-0-2	1	IPE

Recommended number of credits in the 2<sup>nd</sup> year of study: 120

3<sup>rd</sup> year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
5	<b>COMPULSORY</b>				
	5BS01	Operational Systems	2-0-2	6	DI
	5UA13	Modelling and Simulation	2-0-2	6	DTN
	5US03	Software Engineering	2-0-4	6	DI
	<b>OPTIONAL</b>				
	5US05	GIS Application in the Management	2-0-2	6	DTN
	5BI31	Database System - Access	2-0-2	4	DI
	5BF19	Mathematical Analysis 3	2-1-1	6	DMM
	5BS05	Identification of Systems	2-0-2	6	DTC
	5BH23	Microprocessors	2-0-2	6	DTC
	5BS07	Multimedia Information Systems	2-0-2	6	DTN
	5BL03	Law 1	2-2-0	4	DMME
	5BL35	Sociology	1-2-0	4	G
	5BH21	Technical Equipment of PC	0-0-2	3	DTC
	5BI29	Basics of Programming in WINDOWS	2-0-2	4	DST
	5UA03	Game Theory	2-2-0	6	DMM
	5UA05	Petri Nets	2-0-2	6	DTN
	5UM23	Communication Management	2-2-0	5	DMT
5BL13	Physical Education 5	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
6	<b>COMPULSORY</b>				
	5BZ01	Bachelors Project	0-0-8	12	G
	5BL40	English Language 1	0-0-0	3	FSc_DL
	<b>OPTIONAL</b>				
	5IUE04	Taxes and Budget	2-1-0	4	DMME
	5BS12	Implementation of UNIX-LINUX	2-0-2	6	DMM
	5BS04	Information and Control Systems in Transport	2-0-1	3	DST
	5BI32	Compilers	2-0-2	6	DI
	5BS02	Management of Information Systems	2-0-2	6	DMT
	5BA20	Modern Approximate Methods	2-0-2	4	DMM
	5BI26	Object Programming in WINDOWS	1-0-1	2	DST
5UI14	Computers Graphics	2-0-2	6	DTN	

	5UI02	Reliability Theory	2-0-2	5	DI
	5BL04	Law 2	2-2-0	4	DMME
	5BL06	Psychology	2-1-0	4	G
	5BI22	Open Source Software	1-0-3	4	DMM
	5BL14	Physical Education 6	0-0-2	1	IPE

### **Compulsory Optional Courses**

Groups of Compulsory Optional Courses include further themes from kernel of knowledge for study field. From the group of Compulsory optional courses student is to choose these groups of courses, which corresponds to his future professional orientation (*Applied Informatics, Distributed and Parallel Systems, Systems of Support for Decision-Making, Business Informatics, Information-Communication Networks*). These groups of Compulsory optional course are connected with the Programmes of study in **MSc. Degree** level due to professional orientation.

#### *Applied Informatics*

##### *Distributed and Parallel Systems*

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
<b>COMPULSORY OPTIONAL</b>					
Autumn	5BI41	JAVA – Language and Development Applications	2-0-2	6	DI
	5BI43	Software Modelling	2-0-2	6	DI
	<b>COMPULSORY OPTIONAL</b>				
Spring	5BA06	Modelling and Optimisation	2-0-2	6	DTN
	5US10	Internet Application Development	2-0-2	4	DI

#### *Systems for Support of Decision-Making, Business Informatics*

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
<b>COMPULSORY OPTIONAL</b>					
Autumn	5BE07	Finance of Enterprise	2-0-2	6	DMME
	5BI43	Software Modelling	2-0-2	6	DI
	<b>COMPULSORY OPTIONAL</b>				
Spring	5BA06	Modelling and Optimisation	2-0-2	6	DTN

#### *Information-Communication Networks*

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
<b>COMPULSORY OPTIONAL</b>					
Autumn	5BN03	Computer Networks 1	2-0-4	6	DIN
	5BN11	Computer Networks 3	2-0-2	6	DIN
	<b>COMPULSORY OPTIONAL</b>				
Spring	5BN04	Computer Networks 2	2-0-4	6	DIN
	5US04	Analysis of Processes	2-0-2	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
<b>OPTIONAL</b>					
Autumn	5BF19	Mathematical Analysis 3	2-2-1	6	DMM
	<b>COMPULSORY OPTIONAL</b>				
Spring	5BA30	Probability and Statistics	2-2-0	6	DTN

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

**Bachelor Degree Programme: COMPUTER ENGINEERING**

**1<sup>st</sup> year**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	<b>COMPULSORY</b>				
	5BF01	Algebra	2-2-0	6	DMM
	5BF17	Mathematical Analysis 1	2-2-1	6	DMM
	5BF05	Basics of Physics	3-1-1	6	FEE
	5BE01	Basics of Economic Theory	2-2-0	5	DMME
	5BI37	Informatics 1	2-2-2	8	DI
	<b>OPTIONAL</b>				
	5BF09	Practice of Mathematics	0-2-0	1	DMM
	5BI11	Practice of Programming 1	0-0-2	1	DI
	5BL15	Foreign Language 1	0-2-0	3	FSc-DL
5BL09	Physical Education	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	<b>COMPULSORY</b>				
	5BF04	Electrical Circuits	2-2-0	5	DTC
	5BN10	Communication Technologies	2-0-2	6	DIN
	5BF14	Mathematical Analysis 2	2-2-1	6	DMM
	5BH08	Theory of Automatic Control 1	2-1-1	5	DTC
	5BI38	Informatics 2	2-2-2	7	DI
	<b>OPTIONAL</b>				
	5BI36	Practice of Programming 2	0-0-2	1	DI
	5BL15	Foreign Language 2	0-2-0	3	FSc-DL
	5BL09	Physical Education 2	0-0-2	1	IPE

**Recommended number of credits in the 1<sup>st</sup> year of study: 60**

**2<sup>nd</sup> year**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	<b>COMPULSORY</b>				
	5BI39	Informatics 3	2-1-2	5	DI
	5BH01	Logical Systems	2-0-2	6	DTC
	5BF07	Electronics	2-0-2	6	DTC
	<b>COMPULSORY OPTIONAL</b>				
	5BF19	Mathematical Analysis 3	2-2-1	6	DMM
	5BN03	Computer Networks 1	2-0-4	6	DIN
	5BH09	Theory of Automatic Control 2	2-0-3	6	DTC
	5BS11	UNIX – Development Environment	1-0-3	4	DMM
	<b>OPTIONAL</b>				
	5BI25	Assemblers	2-0-2	5	DTN
	5BI45	Graphics in Computers Applications	1-0-3	4	DIN
	5BL17	Foreign Language 3	0-2-0	3	FSc-DL
	5BL11	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
4	<b>COMPULSORY</b>				
	5BH18	Digital Computers	3-0-1	6	DTC
	5BH04	Digital Systems	2-0-2	6	DTC
	5BA24	Discrete Probability	2-2-1	6	DTN
	5BH02	Measurements	2-0-2	6	DTC
	5BL32	Legal and Ethic Aspects of Information Technologies	2-0-0	3	DMT
	<b>COMPULSORY OPTIONAL</b>				
	5BI06	Basics of Database Systems	2-0-2	6	DI
	5BH22	Elements of Automatic Systems	2-0-2	6	DTC
	5BN04	Computer Networks 2	2-0-4	6	DIN
	<b>OPTIONAL</b>				
	5BA08	Numerical Methods	2-0-2	3	DMM
	5UE04	Basics of Electronic Business	2-0-2	6	DIN
	5BF10	Complex Variable and Integral Transformation	2-1-1	4	DMM
	5BI40	Computers Graphic and Animation	1.0.3	4	DIN
	5BL18	Foreign Language 4	0-2-0	3	FSc-DL
5BL12	Physical Education 4	0-0-2	1	IPE	

3<sup>rd</sup> year

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
5	<b>COMPULSORY</b>				
	5BH05	Electronic Systems	2-0-2	6	DTC
	5BH19	Construction and Technology of Electronic System Production	1-0-3	4	DTC
	5BS01	Operational Systems	2-0-2	6	DI
	<b>COMPULSORY OPTIONAL</b>				
	5BH13	Microcomputers and their Applications	1-0-3	6	DTC
	5BH23	Microprocessors	2-0-2	6	DTC
	5BI41	JAVA – Language and Development Applications	2-0-2	6	DI
	5BI23	Object Programming	2-0-2	5	DST
	5BI29	Basic Programming in Windows	2-0-2	4	DST
	<b>OPTIONAL</b>				
	5BI07	Algorithms and Computational Complexity	2-0-0	3	DI
	5BI31	Database Systems – MS Access	2-0-2	4	DI
	5BN11	Computers Networks 3	2-0-2	6	DIN
	5BS05	Identification of Systems	2-0-2	6	DTC
	5UM23	Communication Management	2-2-0	6	DMT
5UA05	Petri Nets	2-0-2	6	DTN	
5BS15	Implementation of UNIX - LINUX	2-0-2	6	DMM	
5US07	Multimedia Information Systems	2-0-2	6	DTN	
5BL03	Law 1	2-2-0	4	DMME	
5BL35	Sociology	1-2-0	4	G	
5BH21	Technical Equipments of PC	0-0-2	3	DTC	
5BL13	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	<b>COMPULSORY</b>				
	5BH20	Computer Engineering	2-0-4	6	DTC
	5BZ01	Bachelors Project	0-0-8	12	G
	5BL40	English Language	0-0-0	3	FSc-DL
	<b>COMPULSORY OPTIONAL</b>				
	5BH14	Computer Process Control	2-0-3	7	DTC
	<b>OPTIONAL</b>				
	5BS04	Information and Control Systems in Transport	2-0-1	3	DST
	5BI32	Compilers	2-0-2	6	DI
	5BI26	Object Programming in WINDOWS	1-0-1	2	DST
	5UI02	Reliability Theory	2-0-2	5	DI
	5BL04	Law 2	2-2-0	4	DMME
	5BL06	Psychology	2-1-0	4	G
	5BA10	Scheduling Theory	2-2-0	6	DMM
	5US10	Development of Applications for Internet and Intranet	2-0-2	4	DST
5BE14	Small and Medium Entrepreneurships	2-2-0	6	DMT	
5BL14	Physical Education 6	0-0-2	1	IPE	

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

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

**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  
FSc-DL - Faculty of Science – Department of Languages  
IPE - Institute of Physical Education

**Bachelor Degree Programme: *MANAGEMENT***

**1<sup>st</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	<b>COMPULSORY</b>				
	5BF01	Algebra	2-2-0	6	DMM
	5BF17	Mathematical Analysis 1	2-2-1	6	DMM
	5BL03	Law 1	2-2-0	4	DMME
	5BE01	Basics of Economic Theory	2-2-0	6	DMME
	5BL43	Informatics for Management 1	2-1-1	6	DI
	<b>OPTIONAL</b>				
	5BF09	Practice of Mathematics	0-2-0	1	DMM
	5BI11	Practice of Programming 1	0-0-2	1	DI
	5BL15	Foreign Language 1	0-2-0	3	FSc-DL
5BL09	Physical Education	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	<b>COMPULSORY</b>				
	5BM10	Management	2-2-0	6	DMT
	5BE02	Microeconomics	2-2-0	6	DMME
	5BE16	Business Economy	3-2-0	6	DMT
	5BE14	Small and Medium Entrepreneurship	2-2-0	6	DMT
	5BI40	Informatics for Management 2	2-1-1	6	DI
	<b>OPTIONAL</b>				
	5BI36	Practice of Programming 2	0-0-2	1	DI
	5BL15	Foreign Language 2	0-2-0	3	FSc-DL
	5BL09	Physical Education 2	0-0-2	1	IPE

**Recommended number of credits in the 1<sup>st</sup> year of study: 60**

**2<sup>nd</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	<b>COMPULSORY</b>				
	5BA15	Economical Statistics	2-1-1	6	DTN
	5BE05	Financial Accounting	2-2-0	6	DMME
	5BS13	Information Systems of Enterprise	2-0-2	6	DMT
	5UM11	Project Management	2-1-1	6	DMT
	<b>OPTIONAL</b>				
	5BI33	Spreadsheets	2-0-2	3	DI
	5BI45	Graphics in Computers Applications	1-0-3	4	DIN
	5BL17	Foreign Language 3	0-2-0	3	FSc-DL
	5BL11	Physical Education 3	0-0-2	1	IPE

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	<b>COMPULSORY</b>				
	5BE18	Marketing	2-2-0	6	DMT
	5BM14	Human Resource Management	2-2-0	6	DMT
	5BM16	Operational Management	3-1-0	6	DMT
	<b>OPTIONAL</b>				
	5BA08	Numerical Methods	2-0-2	3	DMM
	5BI40	Computers Graphic and Animation	1.0.3	4	DIN
	5BL18	Foreign Language 4	0-2-0	3	FSc-DL
5BL12	Physical Education 4	0-0-2	1	IPE	

Recommended number of credits in the 2<sup>nd</sup> year of study: 120

3<sup>rd</sup> year of study

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
5	<b>COMPULSORY</b>				
	5BE07	Finance of Enterprise	2-2-0	6	DMME
	5BM13	Quality Management	2-2-0	6	DMT
	<b>OPTIONAL</b>				
	5US05	GIS Application in the Management	2-0-2	6	DTN
	5BI31	Database Systems – MS Access	2-0-2	4	DI
	5BS07	Multimedia Information Systems	2-0-2	6	DTN
	5BH21	Technical Equipments of PC	0-0-2	3	DTC
	5UA03	Game Theory	2-2-0	6	DST
5BL13	Physical Education 5	0-0-2	1	IPE	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
6	<b>COMPULSORY</b>				
	5BZ01	Bachelors Project	0-0-8	12	G
	5BL02	Foreign Language 1	0-0-0	3	FSc-DL
	<b>OPTIONAL</b>				
	5BS04	Information and Control Systems in Transport	2-0-1	3	DST
	5II14	Computers Graphics	2-0-2	6	DTN
5BL14	Physical Education 6	0-0-2	1	IPE	
Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	<b>COMPULSORY OPTIONAL</b>				
	5BL35	Sociology	1-2-0	6	G
	5BA13	Modelling and Simulation	2-0-2	6	DTN
	5UE13	Controlling	2-1-0	4	DMME
	5BM15	Supply Management	2-1-0	4	DMT

	COMPULSORY OPTIONAL				
Spring	5BL38	Politology	2-2-0	4	DMT
	5BL36	Business Ethics	2-1-0	4	DMT
	5UE04	Taxes and Budget	2-0-1	5	DMME
	5BE20	Financial Analysis	2-1-1	4	DMME
	5BL06	Psychology	1-2-0	4	G
	5BF14	Mathematical Analysis 2	2-2-1	6	DMM
	5BM06	Marketing Communication	2-1-0	4	DMT
	5BM18	Quality in Services	2-1-0	4	DM
	5BE08	Macroeconomics	2-2-0	5	DMME
	5BL04	Law 2	2-2-0	5	DMME

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

**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  
 FSc-DL - Faculty of Science – Department of Languages  
 IPE - Institute of Physical Education

[www.fri.uniza.sk](http://www.fri.uniza.sk) link: Study - Bachelors study



**Master Degree Programme: INFORMATION SYSTEMS**

**1<sup>st</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	<b>COMPULSORY</b>				
	5II15	Data Structures 2	2-0-2	5	DTN
	5II07	Database Systems 2	2-0-2	5	DI
	5IN09	Optimisation of Networks	2-0-2	5	DTN
	5IN17	Architecture of Networks	2-0-2	5	DIN
	<b>COMPULSORY (due to Professional Orientation)</b>				
	5IP01	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	<b>COMPULSORY</b>				
	5II08	Discrete Simulation	2-0-2	5	DTN
	5IA02	Theory of Information	2-0-2	5	DMM
	5IS08	Architectures of Information systems	2-0-2	5	DIN
	<b>COMPULSORY (due to Professional Orientation)</b>				
	5IP02	Project 2	0-2-4	6	G

Recommended number of credits in the 1<sup>st</sup> year of study: 60

**2<sup>nd</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	<b>COMPULSORY</b>				
	5II17	Cryptography and Safety	2-0-2	5	DMM
	5IP05	Internship	0-0-0	0	G
	<b>COMPULSORY (due to Professional Orientation)</b>				
	5IP03	Project 3	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	<b>COMPULSORY</b>				
	5IZ01	Diploma Thesis	0-0-20	30	G
	5IL04	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**

**Systems of Support for Decision-Making**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
<b>COMPULSORY OPTIONAL</b>					
Autumn	5IE01	Theory of Enterprise	2-2-0	5	DMME
	5II01	Fuzzy Sets and Neural Networks	2-0-2	5	DTN

Semester	<b>COMPULSORY OPTIONAL</b>				
Spring	5IN08	Communication Systems	2-0-2	5	DTN
	5IA06	Mathematical Programming	2-0-2	5	DTN

**Applied Informatics**

Semester	<b>COMPULSORY OPTIONAL</b>				
Autumn	5II13	Advanced Object Technologies	2-0-2	5	DI
	5II03	Database Languages	2-0-2	5	DI
	5IE01	Theory of Enterprise	2-0-2	5	DMME

Semester	<b>COMPULSORY OPTIONAL</b>				
Spring	5II12	Data Mining	2-0-2	5	DI
	5IS06	Geographic Information Systems	2-0-2	5	DTN

**Information Communication Networks**

Semester	<b>COMPULSORY OPTIONAL</b>				
Autumn	5IP07	Design of Networks	2-0-2	5	G-FEE
	5IN07	Signal Transmissions	2-0-2	5	G-FEE
	5IN03	Integration of Networks	2-0-2	5	DIN

Semester	<b>COMPULSORY OPTIONAL</b>				
Spring	5IN10	Theory of Networks	2-0-2	5	DIN

**Business Informatics**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
<b>COMPULSORY OPTIONAL</b>					
Autumn	5IE15	Finance	2-2-0	5	DMME
	5IE17	Econometrics	2-0-2	5	DMME
	5II01	Fuzzy Sets and Neural Networks	2-0-2	5	DTN

Semester	<b>COMPULSORY OPTIONAL</b>				
Spring	5IE10	Accounting and Analysis	3-2-0	5	DMME
	5II24	Artificial Neural Networks and Soft Computing	2-0-2	5	DMME

**Distributed and Parallel Systems**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
<b>COMPULSORY OPTIONAL</b>					
Autumn	5IS13	Parallel Developing Standards Open MP and MPI	2-0-2	5	DTC
	5IS11	HPC and Grid computing	2-0-2	5	DTC
	5IS07	Distributed Systems	2-0-2	5	DTC

Semester	<b>COMPULSORY OPTIONAL</b>				
Spring	5IA06	Mathematical Programming	2-0-2	5	DTN
	5II26	Complexity of Distributed and Parallel Algorithms	2-0-2	5	DTC

**Groups of Optional courses**

*Systems of Support for Decision-Making*

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
<b>OPTIONAL</b>					
Autumn	5IS09	Expert Systems	2-0-2	6	DTN
	5IS07	Distributed Systems	2-0-2	5	DTC
	5II03	Database Languages	2-0-2	5	DI
	5IN17	Architecture of Networks	2-0-2	5	DIN

Semester	<b>OPTIONAL</b>				
Spring	5US04	Analysis of Processes	2-0-2	5	DIN
	5IE12	Prognostics	2-0-2	6	DMME
	5IS02	Real Time Systems Programming	2-0-2	5	DI

**Applied Informatics**

Semester	<b>OPTIONAL</b>				
Autumn	5IS09	Expert Systems	2-0-2	6	DTN
	5IS11	HPC and Grid computing	2-0-2	5	DTC
	5IN05	Architecture of Networks	2-0-2	5	DIN

Semester	<b>OPTIONAL</b>				
Spring	5IM14	Quality Management – Access and TQM Methods	2-1-0	5	DMT
	5US04	Analysis of Processes	2-0-2	5	DIN
	5IE12	Prognostics	2-0-2	6	DMME
	5IS02	Real Time Systems Programming	2-0-2	5	DI
	5IS06	Geographical Information Systems	2-0-2	5	DTN

**Information Communication Networks**

Semester	OPTIONAL				
Autumn	5IS09	Expert Systems	2-0-2	6	DTN
	5IS11	HPC and Grid computing	2-0-2	5	DTC
	5IS13	Parallel Developing Standards Open MP and MPI	2-0-2	5	DTC

Semester	OPTIONAL				
Spring	5IE12	Prognostics	2-0-2	6	DMME
	5IS06	Geographical Information Systems	2-0-2	5	DTN
	5IS02	Real Time Systems Programming	2-0-2	5	DI

**Business Informatics**

Semester	OPTIONAL				
Autumn	5II13	Advanced Object Oriented Technologies	2-0-2	5	DI
	5II23	Artificial Intelligence	2-0-2	5	DTN
	5II03	Database Languages	2-0-2	5	DI
	5IE05	Management Accounting	2-2-0	6	DMME
	5IN17	Architecture of Networks	2-0-2	5	DIN

Semester	OPTIONAL				
Spring	5IE12	Prognostics	2-0-2	6	DMME

**Distributed and Parallel Systems**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	OPTIONAL				
	5IS09	Expert Systems	2-0-2	6	DTN
	5IN17	Architecture of Networks	2-0-2	5	DIN

Semester	OPTIONAL				
Spring	5IS06	Geographical Information Systems	2-0-2	5	DTN
	5US04	Analysis of Processes	2-0-2	5	DIN
	5IS02	Real Time Systems Programming	2-0-2	5	DI
	5IE12	Prognostics	2-0-2	6	DMME
	5IM14	Quality Management – Access and TQM Methods	2-1-0	5	DMT

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

**Master Degree Programme: COMPUTER ENGINEERING**

**1<sup>st</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	<b>COMPULSORY</b>				
	5IH13	Technical Means of Control and Information Systems	2-0-2	5	DTCE
	5IH09	Digital Signal Processing 1	2-0-2	5	DTC
	5IH11	Introduction to the Theory of Discrete Systems	2-2-0	6	DMT
	5IPP1	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	<b>COMPULSORY</b>				
	5IH06	Digital Data Transmission	2-0-2	5	DTC
	5IH02	Design of the Customer Integrated Circuits	2-0-2	5	DTC
	5IPP2	Project 2	0-2-4	6	G

Recommended number of credits in the 1<sup>st</sup> year of study: 60

**2<sup>nd</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	<b>COMPULSORY</b>				
	5IN05	Networks Architecture	2-0-2	5	DIN
	5IP05	Internship	0-0-0	6	DMT
	5IPP3	Project 3	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	<b>COMPULSORY</b>				
	5IZ01	Diploma Thesis	0-0-20	30	G
	5IL04	English Language 2	0-0-0	3	DL

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	<b>COMPULSORY OPTIONAL</b>				
	5IH07	Adaptive Systems of Automatic Control	2-0-2	5	DTC
	5IS07	Distributed Systems	2-0-2	5	DTCT
	5II17	Cryptography and Safety	2-0-2	5	DMM
	5II13	Advanced Object Oriented Technologies	2-0-2	5	DI
	5II21	Basics of Programming in the Kernel of an Operational System	2-0-2	5	DI

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	<b>COMPULSORY OPTIONAL</b>				
	5IH08	Digital Signal Processing 2	2-0-2	5	DTC
	5IA02	Theory of Information	2-2-0	5	DMM
	5II12	Data Mining	2-0-2	5	DI

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

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

**Master Degree Programme: MANAGEMENT**

**1<sup>st</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
1	<b>COMPULSORY</b>				
	5IE05	Management Accounting	2-2-0	6	DMME
	5US03	Software Engineering	2-0-4	6	DI
	5IM21	Marketing Control	2-2-0	6	DMT
	5IE17	Econometrics	2-0-2	5	DMT
	5PM1	Project 1	0-2-4	6	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
2	<b>COMPULSORY</b>				
	5IM26	International Management and Marketing	2-2-0	6	DMT
	5IM22	Systems for Support of Decision-Making	2-0-2	6	DMT
	5IPM2	Project 2	0-2-4	6	G

**Recommended number of credits in the 1<sup>st</sup> year of study: 60**

**2<sup>nd</sup> year of study**

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
3	<b>COMPULSORY</b>				
	5IM09	Strategic Management	2-0-2	6	DMT
	5IM27	Logistics	3-1-0	6	DMT
	5IM17	Organizational Behaviour	2-2-0	6	DMT
	5IP09	Design of Management Systems	0-4-1	6	DMT
	5IP05	Internship	0-0-0	0	G
5IPM3	Project 3	0-2-4	6	G	

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
4	<b>COMPULSORY</b>				
	5IL06	Foreign Language 2	0-0-0	3	DL
	5IZ01	Diploma Thesis	0-0-20	30	G

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Autumn	<b>COMPULSORY OPTIONAL</b>				
	5IM25	Marketing Tools and Applications	2-0-2	5	DMT
	5IM11	Management Games and Simulations	1-0-2	5	DMT

Semester	Code	COURSE	HOURS PER WEEK	ECTS	Department
Spring	<b>COMPULSORY OPTIONAL</b>				
	5IM14	Complex Quality Management- TQM Methods	2-1-0	5	DMT
	5IM24	Marketing of Services	2-2-0	5	DMT
	5UM23	Managerial Communication	2-2-0	5	DMT
	5IE12	Prognostic	2-2-0	6	DMME
	5IM16	Marketing Research	2-1-0	3	DMT

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	<b>OPTIONAL</b>				
	5IE15	Finance	2-2-0	5	DMME
	5IS09	Expert Systems	2-0-2	4	DTN

Semester	<b>OPTIONAL</b>				
Spring	5IE06	Capital and Investment Theories	2-2-0	6	DMME
	5IS08	Architecture of Information Systems	2-0-2	5	DIN
	5UE04	Basics of Electronic Business	2-0-2	5	DIN
	5IS06	Geographical Information Systems	2-0-2	6	DTN
	5US10	Internet and Intranet Application Development	2-0-2	4	DST

**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
- 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
- FEE - Faculty of Electrical Engineering
- FSc-DL - Faculty of Science - Department of Language
- G - Guarantee for Programme of Study

[www.fri.uniza.sk](http://www.fri.uniza.sk) link: Study - Masters (Engineering)

**Students with excellent results:**

**Excellent Master Thesis:**

Student Name	Thesis Title	Supervisor
Matejčková Eva	Data Acquisition System Design - Hardware	Gubiš Peter
Púčík Viliam	Info-Line Service – Internet Telephony for Interactive Communication	Segeč Pavol
Podstavek Michal	Numerical Solving of Partial Differential Equations by parallel Algorithm	Varša Peter
Bača Tomáš	Design and Development of Plugging System for UML.FRI Case	Janech Ján
Bulka Peter	Mobile Robot with Possibility of Wireless Control	Miček Juraj
Mrázek Milan	Model of Information Flows of Supplier and Customer Relationship in Enterprise	Hittmár Štefan
Wagnerová Zuzana	Graph Colouring and Related Problems	Palúch Stanislav
Chlapečka Marián	Reusable Software for Preparation and Presentation Map Data	Kršák Emil

**Excellent Bachelor Thesis:**

Student Name	Thesis Title	Supervisor
Varga Michal	Simulation Model of Local Bus Transportation Service in Chosen Region	Adamko Norbert
Krausko Ľubomír	Electronic Security System	Karpiš Ondrej
Lobotka Lukáš	Compiler Of DDL and Select Statements	Vajsová Monika
Frátrik Milan	Voltage Supply Test Device	Zorec. Michal

**Scheidt & Bachmann, Transportation Systems Award and Rectors Award** for excellent thesis:

**Ing. Eva M a t e j č í k o v á**

**Dexia Bank Award** for excellent MSc-thesis *Decision Support Tool for Design of Public Systems with Limited Accessibility*

**Ing. Jozef G l o n ě á k**

**ACM CZ&SK Student Research Competition** for Bc – thesis

**Bc. Ľubormír K r a u s k o**

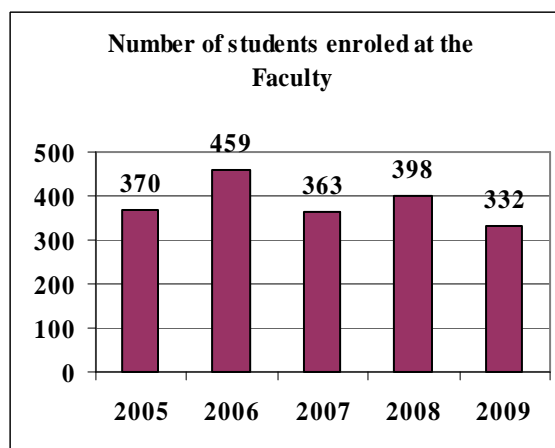
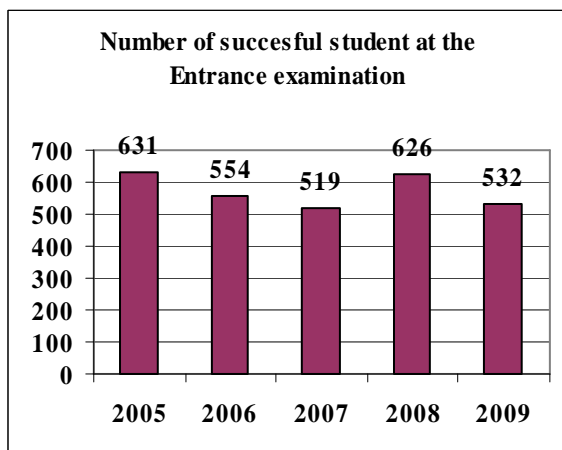
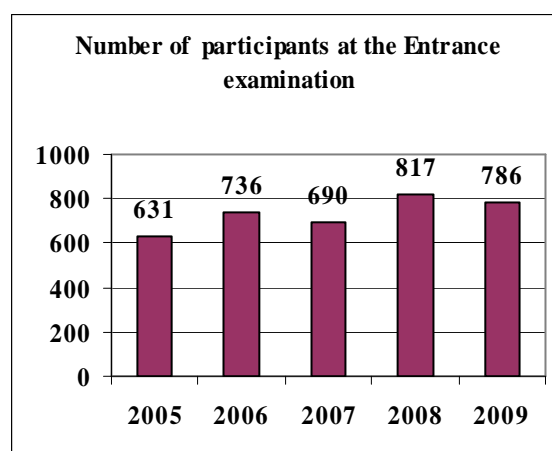
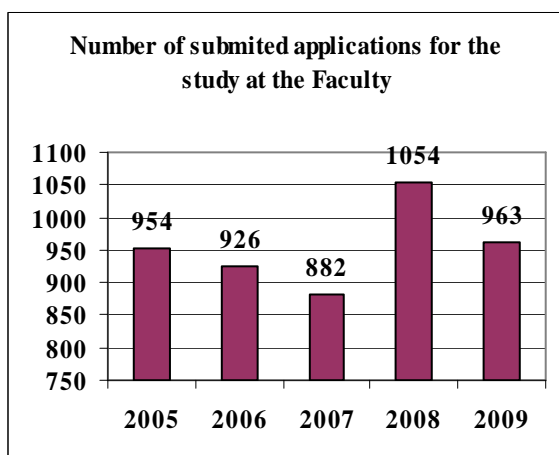


**Students:**

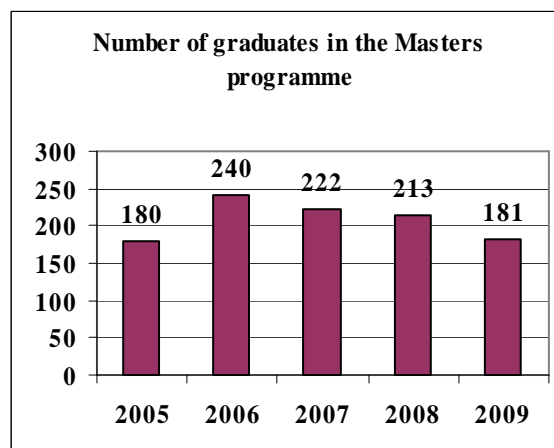
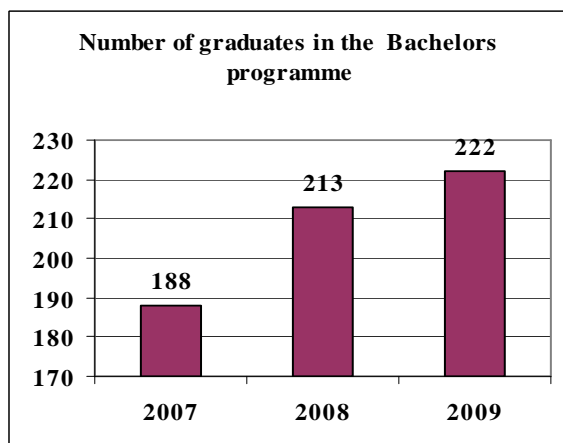
In November 2009, there were **872** students for Bachelors degree programme, **363** students for Masters Degree programme and **33** doctoral full-time and **34** doctoral part-time students at the Faculty.

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

In June 2009 the Entrance exams for **786** candidates of the Faculty took place. From this number **532** were successful and **332** students were enrolled. They started in September 2009 their Programmes of study at the Faculty



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



### ***Programme ERASMUS and other international activities of the Faculty***

There are following bilateral agreements signed in 2009 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 Darmstadt (FH), (D)
- Hochschule für Technik und Wirtschaft, Dresden, (D)
- Telecom SudParis, Evry, (F)
- Université de Poitiers, (F)
- University of Science and Technology, Telecom Lille, (F)
- 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 Politecnica de Valencia, Facultad d´Informatica, (E)
- Universidad Politecnica de Valencia, Escuela Technica Superior deTelecomunicacion, (E)
- Széchenyi István University, Győr, (H)
- Technical University of Sofia, (BG)
- College of Telecommunications and Posts, Sofia, (BG)
- University of Porto (P)
- Utrecht University (NL)
- University of Pardubice (CZ)
- College of Computer Science and Business Administration, Lomža (PL)
- Technical University, Radom (PL)
- Kielce University of Technology (PL)
- Mikolas Romeris University, Vilnius (LT)

In the year 2009 took part on the study stay at the Faculty one student from FRANCE, 2 students from FINLAND, 2 students from BULGARIA and 4 from PORTUGAL.

From the Faculty 13 students followed the programme of study at the partner's universities and Institutions in the frame of programmes ERASMUS.

In the frame of Student Training Agreement with Telecom SudParis Evry, FRANCE, 2 students took part on two months internship at the Faculty.

In the frame of Program TEMPUS MADEPRITY have carried out 3 months study stay at the Faculty 4 students from State University of Telecommunication in St. Petersburg RUSSIA.

Study stay within 5 months on the base of Slovak National Scholarship Programme carried out one student from Technical University of Ostrava, CZECH REPUBLIK

### ***Information Centre:***

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

Information Centre provides:

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

### ***Intranet of the Faculty:***

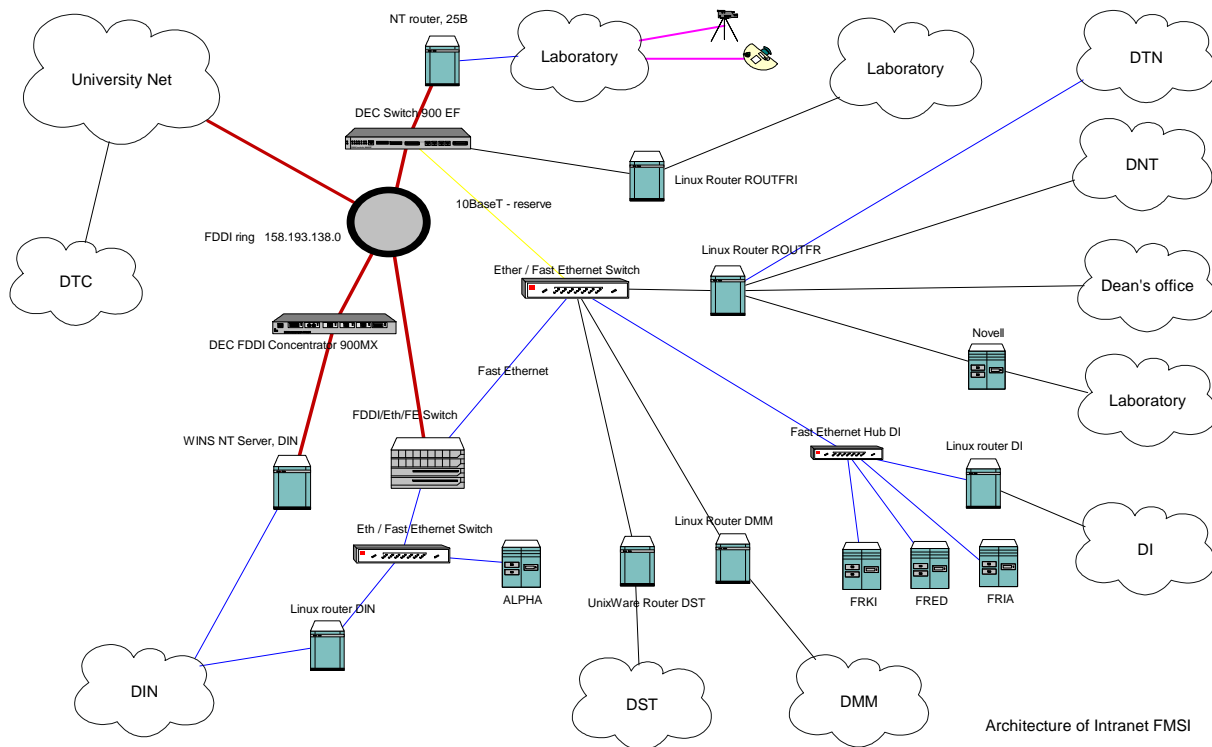
It was in 1992 when the Intranet of Faculty was created and in the meantime was continuously improving. It came into existence from the needs to process and to make accessible lot of information to students and to pedagogical staff, as well. The intranet of Faculty is a part of University Intranet, which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

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

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

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

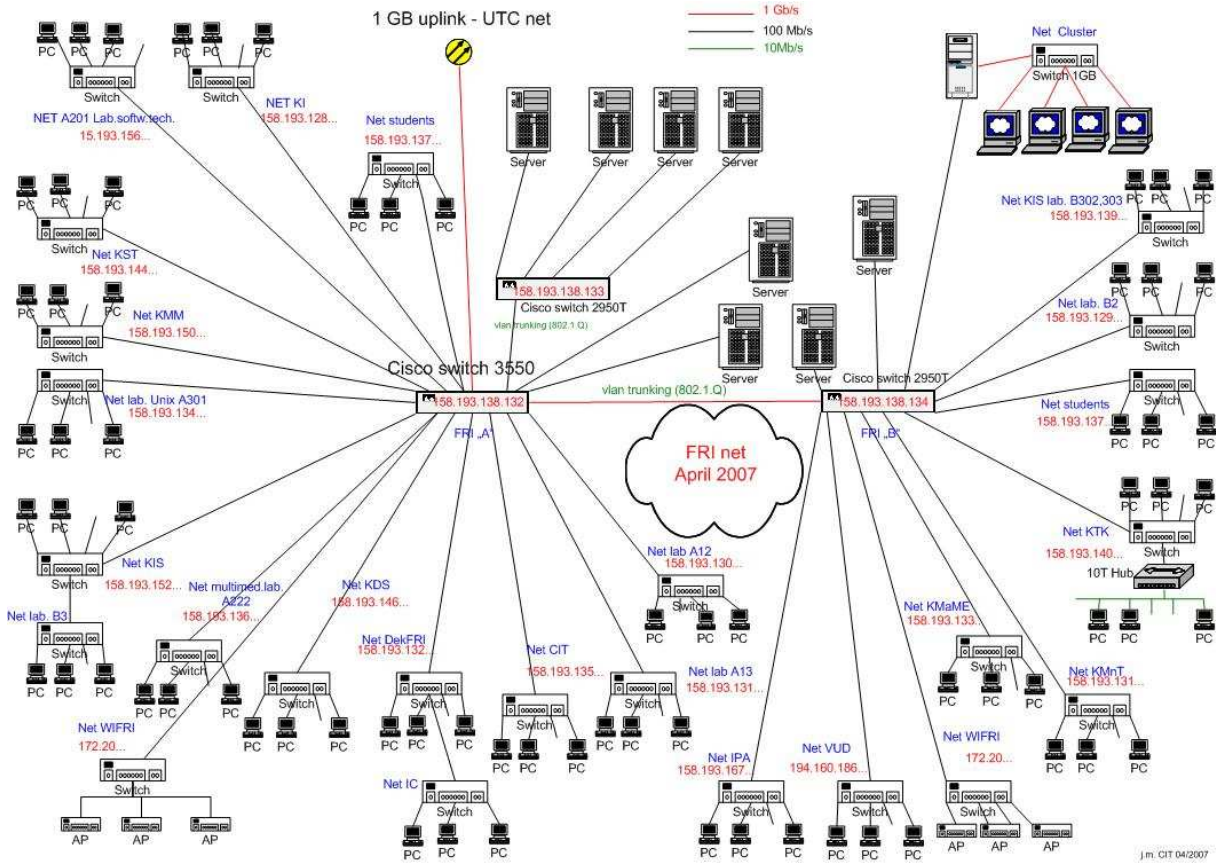
**Architecture of INTRANET:**



**Abbreviations of Departments:**

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

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



## Department of Mathematical Methods

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Mgr. Lýdia Gábrišová, PhD.  
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RNDr. Alžbeta Kludinyová  
RNDr. Aleš Kozubík, PhD.  
Ing. Tomáš Majer  
Mgr. Eduard Omasta  
Assoc.Prof. RNDr. Stanislav Palúch, PhD.  
Assoc.Prof. RNDr. Štefan Peško, PhD.  
RNDr. Július Rebo, PhD.  
RNDr. Ida Stankovianska, PhD.

**PhD students** Ing. Tomáš Ladovský  
Ing. Michal Murín

**Administrative Department:** Bc. Ľubica Micháľková

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## II. EQUIPMENT

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

### III. PhD.-Programme

Theme	Student	Supervisor
1. Optimum Route Problems in Large Transportation Networks	T. Majer	S. Palúch
2. Timetable Optimization in Position – Time Scheduling	M. Murín	Š. Peško
3. Uniform Scheduling in Case of Uncertainty	T. Ladovský	Š. Peško

#### **IV. RESEARCH PROJECTS**

VEGA 1/0135/08 “Optimization Problems in Logistics and Transportation Systems”

#### **V. 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

##### **V.2 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
4. Mykolas Romeris University, Vilnius, Lithuania, Faculty of Public Administration
5. Czestochowa University of Technology, PL, Faculty of Management

##### **V.2.1 Foreign Visitors to the Department**

Prof. RNDr. Jan Černý, Dr.Sc., Dr.Hc., Faculty of Management, Jindřichuv Hradec, CZ  
Assoc. Prof. Ing. Anna Černá, PhD., Faculty of Management, Jindřichuv Hradec, CZ

##### **V.2.2 Visits of Staff Members to Foreign Institutions**

University of Pardubice, CZ - Assoc. Prof. S. Palúch  
Faculty of Management, Jindřichuv Hradec, CZ - Assoc. Prof. S. Palúch  
Technical University of Ostrava, CZ - Assoc. Prof. Š. Peško  
Mykolas Romeris University, Vilnius, Lithuania, Faculty of Public Administration – R. Blaško

##### **V.3 Membership in Slovak Organizations and Societies**

- KAUKIČ, M.: Society for Open Source Information Technologies
- KAUKIČ, M.: Association of Slovak Mathematics and Physicists
- MAJER, T.: Slovak Society for Operation Research
- PEŠKO, Š.: Association of Slovak Mathematics and Physicists
- PEŠKO, Š.: Society for Open Source Information Technologies
- PEŠKO, Š.: Slovak Society for Operation Research
- PALÚCH, S.: Slovak Society for Operation Research
- PALÚCH, S.: Slovak Information Society
- REBO, J.: Association of Slovak Mathematics and Physicists
- REBO, J.: Slovak Society for Operation Research
- KOZUBÍK, A. : Slovak Society of Actuaries
- KOZUBÍK, A. : Slovak Statistic and Demographic Society

## **VI. BACHELORS THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	System for Processing Departmental Research Activity	J. Šimo	M. Kaukič
2.	OSS System for Race Time Measurements	T. Kanik	M. Kaukič
3.	Exploitation of LaTeX for Academic Purposes	L. Ecker	P. Czimmermann
4.	Location Problems in large Networks	M. Homolová	Š Peško
5.	Properties of Certain Economic and Social Networks	A. Gergelič	P. Czimmermann
6.	Solving Combinatorial Problems in Spreadsheets	V. Baranová	Š. Peško
7.	Construction of some Graphs from Voltage Graphs	M. Ďurčo	P. Czimmermann
8.	Using I-Python for Parallel Computation	P. Veľas	M. Kaukič
9.	Graphs Isomorphism and Local Complements	V. Mamatej	P. Czimmermann
10.	Python Tools for Parallel and Distributed Computing	M. Mintál	M. Kaukič
11.	Number of Voltages on Walks in Certain Graphs	J. Lisko	P. Czimmermann
12.	Numerical Computations Using GPU	J. Procviňák	M. Kaukič
13.	Eigenvalues of Local Complements of Strongly Regular Graphs	M. Verš	P. Czimmermann
14.	Heuristics for p-Median on Graphs	M. Džúr	R. Blaško

## **VII. DIPLOMA THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	Ant Colony Optimization in Petri Net	J. Kozák	Š. Peško
2.	Supply Logistic on Petri Nets	P. Škultéty	Š. Peško
3.	Analysis of Study Group Design for the Case of Individual Curricula	R. Šlepák	S. Palúch
4.	Problems of User Autentification	M. Krnáč	T. Majer
5.	Lower Bounds of some Parameters of Faculty Time Table	M. Stenclák	S. Palúch
6.	Reduction Problem for Urban Public Transport Network	T. Hugáň	Š. Peško
7.	Graph Colouring and Related Problems	Z. Wagnerová	S. Palúch



## **VIII. OTHER ACTIVITIES**

### **Mr. Palúch S.:**

- Member of Academic Board of Faculty of Management Science and Informatics
- Member of Academic Board of Faculty of Management, Jindřichuv Hradec, University of Economics, Prague
- Member of Editorial Staff "Tatramountains" (Mathematical Journal)
- Member of Editorial Staff "Horizonty dopravy" ( Journal of Transportation)
- Member of Editorial Staff "Studies of the University of Žilina, Mathematical Series"

### **Mr. Blaško, R.:**

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

### **Mr. Kaukič, Mr. Peško, R.:**

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

## Department of Informatics

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**Administrative Department:** Anna Ilovská

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Ing. Zuzana Bizoňová, PhD.  
Ing. Miroslav Faktor  
Ing. Matúš Chochlík, PhD.  
Ing. Karol Grondžák, PhD.  
Ing. Miroslav Iliáš, PhD.  
Ing. Jana Jacková  
Mgr. Ing. Alžbeta Kanáliková, PhD.  
Ing. Josef Kopecký  
RNDr. Štefan Kovalík, PhD.  
Assoc. Prof. Ing. Vitaly Levašenko, PhD.  
Prof. Ing. Karol Matiaško, PhD.  
Ing. Iveta Nedeljaková, PhD.  
Ing. Monika Václavková  
RNDr. Peter Varša, PhD.  
Assoc. Prof. Ing. Michal Záborský, PhD.  
Ing. Ján Boháčik, PhD.

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

### **Doctoral full-time students:**

Ing. Eva Valentíková  
Ing. Jan Janech  
Ing. Tomáš Bača  
Ing. Anton Lieskovský  
Ing. Michal Ulbricht

### **Doctoral part-time students:**

Ing. Stanislav Piecka  
Ing. Monika Vajsová  
Ing. Marek Tavač  
Ing. Patrik Hrkút

## **II. EQUIPMENT**

### **Laboratories:**

<b>Laboratory</b>	<b>Capacity</b>	<b>HW</b>
<b>FRA 201</b>	20 places	21 OPSYS Celeron 2.8 GHz, HDD 80GB
<b>Server</b>	<b>Purpose</b>	
<b>frdb1</b>	Linux – teaching	
<b>frdb2</b>	Linux – databases, teaching	
<b>fra208d</b>	Linux - databases, teaching	
<b>frios</b>	Linux – operating systems, teaching	
<b>fra203a</b>	WIN2000 server	
<b>e-learning</b>	Linux – e-learning applications	
<b>elearn</b>	Linux – e-learning applications	

## **III. PhD.-Programme**

<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1. Query processing optimisation	T. Bača	K. Matiaško
3. Replication of Databases in Ad-Hoc Networks	A. Lieskovský	K. Matiaško
4. Analytical Databases Replication	E. Valentíková	M. Zabovský
5. Multicriterial Grid Scheduling	M. Ulbricht	P. Martincová
6. Database Object and Temporal Transformation	P. Hrkút	K. Matiaško
7. Process Control in Distributed Databases	J. Janech	K. Matiaško
8. Knowledge Searching in Semantic Defined Environment	M. Tavač	K. Matiaško
9. Parallel Methods for Supply Problem Solving Using Ant Colony	S. Piecka	M. Lucká

## **IV. RESEARCH PROJECTS**

Large Data Modelling and Processing  
Reliability of Complex Systems

## **V. COOPERATION**

### **V.1. 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 Zilina
- Elanor Žilina

- KROS Žilina
- MASM Žilina
- S&T Žilina
- Softip, Banská Bystrica

## **V.2. Cooperation with Foreign Institutes and Enterprises**

- State Economic University, Minsk, Belarus
- Groupe ESC Bordeaux, F
- Technical University, Faculty of Electrical Engineering and Informatics, Ostrava, CZ
- University of Pardubice, Faculty of Transport, Pardubice, CZ
- University of Ostrava, Faculty of Natural Sciences, Ostrava, CZ
- Rutherford Appleton Laboratory, Oxford, Didcot, UK
- Scheidt und Bachman, D
- Siemens Österreich, A
- Alcatel, A
- Technical University of Sofia, BG
- College of Telecommunications and Posts, BG
- United Institute of Informatics Problems of the National Academy of Sciences of Belarus Minsk, Belarus

### **V.2.1. Foreign Visitors to the Department**

- Assoc. prof. Radi Romansky, TU Sofia, BG
- Assoc. prof. Irina Noninska, TU Sofia, BG
- Assoc. prof. Youni Huotari, University Jivaskila, Finland

### **V.2.2. Visits of Staff Members to Foreign Institutions**

- College of Telecommunications and Posts, Bulgaria – P. Martincová

## **V.3. Membership in Slovak Organizations and Societies**

- Prof. Ing. Karol Matiaško, PhD.
  - Slovak Society for System Integration (SSSI) - President
  - Academic Board of Faculty of Management science and Informatics of University of Zilina - President
  - Academic Board of University of Zilina
  - Academic Board of Faculty of Electrical Engineering and Informatics of University of Ostrava
  - Slovak Informatics Society
  - Advice Council of Ministry of Transport and Communications Advice Council of Ministry of Education for Informatics
  - Advice Council of Ministry of Transport and Communications for Informatics
  - Slovak Informatics Society (ACM) - Chairman of University Zilina group
  - Advice Council of Mayor of Prievidza

- Group for Informatics in Accreditation Board of Government
- Assoc. Prof. Ing. Michal Zabovský, PhD.
- Slovak Information Society – Member of steering committee

#### V.4 Membership in International Organizations and Societies

- Prof. Ing. Karol **Matiaško**, PhD. – European science foundation – PESC - Member of steering committee
- 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), membership no. 4\_95

#### VI. BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Information System of Training Process in Swimming	M. Pavlu	M. Vajsová
2.	Analysis and Implementation Fuzzy C-mean Clustering Algorithms	M. Tirčáni	V. Levashenko
3.	Hotel Accommodation Web-Portal	A. Jeleník	J. Kopecký
4.	Sharing of Documents on Web-Portal	R. Šmondrk	M. Faktor
5.	Application for Management Abets and Invoices	P. Macura	A. Kanáliková
6.	Label Marker for Creation of Label Templates	L. Trubač	B. Sedliak
7.	Interactive Automation System for Radio Broadcasting	K. Haršányi	M. Benedikovič
8.	Web-Discussion Portal	M. Pekár	M. Benedikovič
9.	Software Support of the Questionnaire Creation	L. Budoš	I. Nedeljaková
10.	Software Support of the JAWA Education	M. Lacko	I. Nedeljaková
11.	System of Evidence and Interpretation Bovine Capture	J. Páleník	A. Kanáliková
12.	Multi-State System Reliability Analysis by Boolean Algebra	M. Kamenský	E. Zaitseva
13.	e-Library Management System	L. Leško	M. Chochlík
14.	Analysis and Implementation Crisp Decision Trees Algorithms	A. Šulhin	V. Levashenko
15.	Analysis and Implementation Regression Trees Algorithms	P. Solenský	V. Levashenko
16.	Multi-State System Reliability Analysis	T. Laštík	E. Zaitseva
17.	Information Portal of the Department of Telecommunication	M. Sucheňák	K. Grondžák
18.	Information System for Woodworking Factory	M. Kubek	Š. Kovalík
19.	Digital Library for Learning Objects	V. Vrábel	Z. Bizoňová

No.	Theme	Student	Supervisor
20.	Entertaining Betting Shop Web Portal	M. Katreník	Š. Kovalík
21.	Application to Visualize Data Structures with Purpose to Support Teaching Programme	M. Kubinčánek	J. Kopecký
22.	Offline Test Question Editor for Learning Management System MOODLE	M. Gmuca	K. Grondžák
23.	Village Web Portal	J. Hovančík	V. Levashenko
24.	3D Model of Building	M. Beňo	M. Kopecký
25.	Analysis of Algorithms for Fuzzy Decision Trees Induction	V. Ďurech	V. Levashenko
26.	Ordering System for Restaurants	P. Truska	M. Chochlík
27.	Visualization of Data Structures for Support of Education	M. Wagner	J. Kopecký
28.	Implementation of Data Cleaning Algorithms	P. Tkáč	V. Levashenko
29.	System for Bookmarks Synchronization of Firefox Web-Browser	T. Bakita	K. Grondžák
30.	Compiler Of DDL and Select Statements	L. Lobotka	M. Vajsová
31.	Application for Data Processing of the management and Economic Information System	M. Lulek	A. Kanáliková
32.	Euro Conversion in Expert Software	M. Maťovič	P. Troják
33.	Company Web Application Support Module	Y. Mao	K. Grondžák
34.	Modification of Web Application for Company	F. Xiong	K. Grondžák

## VII. MASTER THESIS

No.	Theme	Student	Supervisor
1.	Monitoring System for the Vehicle	M. Habalčík	K. Matiaško
2.	Using Grid for Time-Consuming Task Solving	P. Pudiš	P. Martinová
3.	Model Projection of Information Flows of Human Resources Processes in the Company	T. Slabej	I. Nedeljaková
4.	Information System Generator - Form for SQL Operation SELECT	L. Gálik	K. Matiaško
5.	Desktop Interface for Implementation of Advertisements into Public Transport	L. Čulen	V. Hudec
6.	Data Import and Export Module as a Extension KrosLib Framework of Kros Company	A. Furták	V. Levashenko
7.	Self-Served Card Charger machine for Charging Credit in Catering System	M. Cepek	S. Piecka
8.	Replication Features of Database Systems	V. Čalfa	M. Zábovský
9.	Application of Ticket Vending machine for City Mass Transport	J. Beňadik	S. Piecka
10.	Information System for Mobile Users - DDBS	E. Bartoš	M. Zábovský
11.	Basic System for management Data of Book	T. Jasenovec	A. Kanáliková
12.	Model Projection of Information Flows of Purchaser-Supplier Processes in Company	I. Blahová	I. Nedeljaková

No.	Theme	Student	Supervisor
13.	Benchmarking for Database System	J. Lenko	K. Matiaško
14.	Data Structure Visualization	I. Šimšálek	M. Benedikovič
15.	Implementation of DTrace API in the OpTr Framework of UMLA Software	M. Juríček	J. Bellan
16.	Planning System for Advertising in the Print Media	M. Hrabovčín	K. Matiaško
17.	Model Projection of Information Flows of Manufacturing Processes in Company	L. Richter	I. Nedeljaková
18.	Software System for Support of Exercises from Informatics	M. Minich	V. Levashenko
19.	Using Replication for Large Datasets Processing	V. Kyseľa	M. Zábovský
20.	Information System Generator - Forms for Destructive SQL Operations	L. Mojto	K. Matiaško
21.	Application for the Competency-Based Creation of the Curriculum	M. Boháčik	Z. Bizoňová
22.	Replication System for Mobile Environment	V. Géczy	M. Zábovský
23.	Searching in Textual Database	M. Solánsky	K. Matiaško
24.	Parallel Algorithms for Numerical Solving of Partial Differential Equations	L. Guldanová	P. Varša
25.	Numerical Solving of Partial Differential Equations by parallel Algorithm	M. Podstavek	P. Varša
26.	Information System for Mobile Users - SOA	R. Hučko	M. Zábovský
27.	Replication System for Mobile Environment with Surrounding Knowledge	P. Jánoška	M. Zábovský
28.	Information System for Thesis – Modules: State Exam and Library	M. Eliáš	K. Matiaško

## **VIII. OTHER ACTIVITIES**

MATIAŠKO K.: Program committee member of conference DATAKON 2008, Brno

## Department of Macro and Microeconomics

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**Teaching Staff:** JUDr. Margita Beháňová  
Ing. Juraj Dubovec, PhD.  
Ing. Mária Ďurišová, PhD.  
Ing. Anna Jacková, PhD.  
Ing. Zuzana Kozubíková, PhD.  
Assoc. Prof. Ing. Alžbeta Kucharčíková, PhD.  
Prof. Ing. Dušan Marček, PhD.  
Ing. Lucia Pančíková, PhD.  
Ing. Zuzana Staníková  
Ing. Emese Tokarčíková, PhD.  
Ing. Katarína Zábovská, PhD.

**PhD Students** Ing. Lucia Tulejová  
Ing. Ján Bábel  
Ing. Alexander Ferianc  
Ing. Alexandra Kotillová  
Ing. Petr Matušík  
Ing. Ladislav Nižník  
Ing. Michal Fraňo

### II. PhD.-Programme

Theme	Student	Supervisor
Modelling of economic processes with legislative approach with econometric methods and methods of AI	A. Kotillová	D. Marček
Economic policies as determinant of management decision-making	A. Ferianc	D. Marček
The Entropy Reduction in Management decision systems using the Prediction Algorithms	M. Fraňo	D. Marček
Employee Appraisal Model as Tool of the Management Decision	L. Nižník	A. Kucharčíková
Time Series Modelling: Comparison of ANNs Methodology with ARCH-GARCH one	J. Bábel	D. Marček
Flexible working forms as a tool for effective management of the enterprise.	L. Tulejová	A. Kucharčíková
ANNs forecasting of admission to studies at universities as alternative of statistical models	P. Matušík	D. Marček



### **III. EQUIPMENT**

### **IV. RESEARCH PROJECTS**

#### **State Grant Projects**

- **ĎURIŠOVÁ, M.:** *Formation of flexible system determining growth of the value of enterprise flowing from analyse relevant attributes by using classical and modern approaches and methods (VEGA č. 1/0149/09)*
- **KUCHARČÍKOVÁ, A.:** *The proposal of a system of a new approaches and methods for effectiveness appraisal exploitation and optimal combination of production inputs with applied macroeconomic and microeconomic aspect and priority orientation on human capital (VEGA č. 1/049/08)*
- **MARČEK, D.:** *Computational intelligence in modelling and forecasting economic time series and their exploitation in management prediction systems (VEGA č. 1/0024/08)*

### **V. COOPERATION**

#### **V.1 Co-operation with Institutes and Enterprises in Slovakia**

- Faculty of Economy UMB, Banská Bystrica,
- Economical University of Bratislava
- 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

#### **V.2 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

#### **V.2.2 Visits of Staff Members to Foreign Institutions**

- Dušan Marček: International Conference: RACR 2009 – Risk Analysis and Crisis Response. Paper Title: Risk Evaluation for ARCH-Garch vs. RBF NN Forecasting Models: Application to High-Frequency Time Series  
October 19-21, 2009, Beijing, China, Peking university

### V.3 Membership in Slovak Organisations and Societies

- Prof. Ing. Dušan **Marček**, PhD.: Studies of FMSaI University of Zilina, editorial board member
- Prof. Ing. Dušan **Marček**, PhD.: University Library in Zilina, member of the information board
- Prof. Ing. Dušan **Marček**, PhD.: University of Žilina, Faculty of MSaI, member of the Faculty board for Grant projects evaluating
- Assoc.Prof.. Ing. Alžbeta **Kucharčíková**, PhD.: member of The Management Trainers Association
- Ing. Katarína **Zábovská**: Slovak Association for System Integration

### V.4 Membership in International Organisations and Societies

- Prof. Ing. Dušan **Marček**, PhD.: Managing and modelling of financial risks – member of Conference Committee.
- Prof. Ing. Dušan **Marček**, PhD.: MDAI 2004 – Chair of the Section Clustering

### V.5 Contracts with Slovak and Foreign Institutions

- Softip SEVER a.s., Žilina
- Slovak Railways Bratislava
- DOOS s.r.o. Žilina
- Crystal a.s. Lednické Rovne
- Varias a.s. Žilina
- ELAS s.r.o., Prievidza
- BIC s.r.o., Prievidza

## VI. BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Financial Investment	M. Bízik	C. Srnka
2.	Design of Virtual Business Information System	J. Daňko	J. Dubovec
3.	Application Methods of Measuring Performance in Enterprise	J. Okapalová	M. Ďurišová
4.	Financial Analysis of TILO SLOVAKIA, Ltd .	J. Vnuk	C. Srnka
5.	Financial Investment	P. Kurcin	C. Srnka
6.	Planning Module of Virtual Business	M. Kocifaj	J. Dubovec
7.	Credit Possibilities of Households in Consumer Society	M. Švábik	A. Kucharčíková
8.	Creation of Web-Portal about Regional Performance	T. Marusa	A. Kucharčíková
9.	Foreign Direct Investment Influence on Regional Performance	Š. Sekáč	A. Kucharčíková
10.	Financial Analysis of OFZ,a.s. Istebné	P. Sklárčik	C. Srnka
11.	Marketing Communication of Selected Telecommunication Operators	L. Tamáš	Z. Staníková
12.	Business Information Protection and Security	P. Krušínský	M. Beháňová
13.	Marketing Plan of the Firm	A. Baláková	Z. Kozubíková
14.	Cost of Business	S. Škrtelová	C. Srnka

No.	Theme	Student	Supervisor
15.	Computer Simulation of Economic Event	I. Halupka	J. Dubovec
16.	Analysis of Financial Crisis Impact on Enterprise Economy	J. Šeliga	Z. Mečiarová
17.	Marketing Activities of Selected Telecommunication Operators	O. Hlad	Z. Staníková
18.	Evaluation of Waste Management in the North Slovakia	B. Klepáčová	M. Beháňová
19.	Consumer Credits and Social Income Disparity	S. Časo	A. Kucharčíková
20.	Depreciation of Fixed Assets of Business	L. Duchoňová	C. Srnka
21.	Utilization of Information Technologies in Purchases Processes in Railway	D. Kubala	Z. Staníková

## **VII MASTER THESIS**

No.	Theme	Student	Supervisor
1.	Impact of Credit Expansion on Managerial Decisions	P. Lacek	J. Dubovec
2.	Investment Decision Making Approach to the Selection of the Project Finance	P. Ondoš	Z. Kozubíková
3.	Pyramid Games and Decision Making of Economic Subjects	T. Mičáň	J. Dubovec
4.	Optimization of Purchase Process in the Company Key Plastic Slovakia	P. Kuva	J. Dubovec
5.	Financial Analysis of Inland and Foreign Activities of Company	J. Leporisová	A. Jacková
6.	Internal IS for Work-Flow Management Based on Standardized System	M. Kuba	K. Zábovská
7.	Software Application for Selection of Leasing Company as a Source of Company	Ľ. Valihora	A. Jacková
8.	Using Open Source Technologies for Reporting Systems	J. Rajnoha	K. Zábovská
9.	Software Application for Selection of Commercial bank as a Source of Finance	M. Laco	A. Jacková
10.	Processing of Forecasting Methods of Software R Environment	N. Mešťánek	L. Pančíková
11.	Software R Utilization in Time Series Forecasting of Enterprise Outputs	M. Sigetová	L. Pančíková
12.	Software Application Creation for Prediction of Financial Situation of the Enterprise	M. Bujna	M. Ďurišová
13.	Application for Tracking Machine Break Downs with Spare Parts Optimization	M. Pham	M. Ďurišová
14.	Reference Model for Public Governance Reporting	S. Klučková	K. Zábovská
15.	Impact on the Complexities of Company Profits	J. Oboňa	J. Dubovec
16.	Marketing Manager and Improving the Efficiency of its Activities	O. Chocholáček	Z. Kozubíková
17.	Use of Statement Analysis in Financial Management of Company	I. Petráš	A. Jacková

No.	Theme	Student	Supervisor
18.	Influence of an Allocating Decisions	A. Ferienc	J. Dubovec
19.	Calculation of Return-Ability for Reporting Based on Data Warehouse	J. Mokráň	K. Zábovská
20.	Web-Based Analysis Application for Firm Financial Situation	M. Švidroň	M. Ďurišová
21.	Time Series Modelling of Selected Macro-Economic Indicators in the R Environment	J. Rendeková	L. Pančíková
22.	Using of Artificial Neural Network to Economic Time Series Prediction	J. Guniš	D. Marček
23.	Evaluation of the Business Financial Things with Software Support	T. Rakšáni	M. Ďurišová

## **VII. OTHER ACTIVITIES OF DEPARTMENT**

- MARČEK D.: Member of Scientific Board of Faculty of Management Sciences and Informatics, University of Žilina, Žilina

## **Department of Technical Cybernetics**

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

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**Administrative Department:** Bc. Viera Černeková

**Teaching Staff:** Prof. Ing. Mikuláš Alexík, PhD  
Ing. Lukáš Čechovič  
Assoc. Prof. Ing. Peter Gubiš, PhD.  
Prof. Ing. Ivan Hanuliak, PhD.  
Assoc. Prof. Ing. Vladimír Jamrich, PhD.  
Ing. Adam Jaroš, PhD.  
Ing. Jozef Juríček, PhD.  
Ing. Matúš Jurečka, PhD.  
Ing. Ján Kapitulík, PhD.  
Ing. Oldřich Kovář, PhD..  
Ing. Julius Mlich  
Ing. Ján Repka  
Assoc. Prof. Ing. Juraj Slovák, PhD.  
Ing. Peter Ševčík, PhD.

**Researcher:** Ivana Hodasová

**PhD Students:** Ing. Štefan Bocko  
Ing. Andrej Holúbek  
Ing. Peter Goga  
Ing. Michal Hodoň  
Mgr. Dan Slováček  
Ing. Filip Janovič  
Ing. Lukáš Čechovič  
Ing. Pavol Lajčiak

## **II. EQUIPMENT**

### **II.1 Teaching and Research Laboratories.**

- Laboratory of Digital Control.
- Laboratory of Digital Signal Processing
- Laboratory of Automatic Control ( in the Sub campus Prievidza)
- Laboratory of Electronics (in the Sub campus Prievidza)
- 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 Communication systems
- Laboratory of Technical equipments of automatic control

### **II.2 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 It can by use as a MIMO plant or SISO plant first to sixth - order. The gain of the plants (step response) it can be continuously or 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.

The same model as in the point a), with possibility to switch non-linear gain or transport delay.

or step response with no minimal phase.

- Analogy model of heat exchanger station.
- Analogy model of Helicopter

All models could be connected with PC's (8x) with Ad and DA converters or with some PLC (Bernecker&Reiner, Octagon etc.)

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 ARM7+DI

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

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

Foundation ISE 7.1. fy XILINX, System Generator for Simulink, Model Sim ISE EMBEDDED DEVELOPMENT KIT

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)

### **III. PhD.-Programme**

<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1. Low lost Algorithms for speech synthesis	P. Lajčiak	J. Miček
2. Adaptive and learning Algorithms for Automatic Control	Š. Bocko	M. Alexík
3. Methods and Algorithms of Processing of Multidimensional and Multichannel Signals	L. Čechovič	J. Miček
4 Modelling and optimization of parallel factorization algorithms	A. Holúbek	I. Hanuliak
5. Methods of routing in VANET networks	P. Goga.	J. Miček
6. Onboard Location Technologies for Vehicle pozitoin	M. Hodoň	E. Schnieder
7. Performance modelling optimization of parallel computers	D. Slováček	I. Hanuliak
8. Performance modelling optimization of parallel algorithms	F. Janovič	I. Hanuliak

### **IV. RESEARCH PROJECTS**

VEGA 1/0808/08: „*Selftunningd and learning Algorithms for Automatic Control.*“ Principal investigator - Prof. Ing. Mikuláš Alexík, PhD.

Easy Way:.. Partial project n. 6: Modelling the Behaviour of Vehicle Drivers in men Standard Situation. Principal investigator - Prof Ing. Mikuláš Alexík, PhD.

- Project of High-Powered Computer SI (SIVP) – Prof. Ing. Ivan Hanuliak, PhD.

## **V. COOPERATION**

### **V.1. Cooperation with Institutes and Enterprises in Slovakia**

- Slovak Technical University, Bratislava - Fac.of Electr. Eng. & Informatics, Fac. of Mechanical Eng., Faculty of Chemical Engineering
- Dopravné systémy Scheidt & Bachmann s.r.o. Žilina.
- SAE Control s.r.o. Žilina, URAP Automatizacia Žilina.
- HMH s.r.o. Bratislava
- ETC. s.r.o. Žilina, VUVT Eng., a.s. Žilina,
- ENO. a.s. Zemianské Kostol'any
- ZS-VTS Bratislava
- Ekonomická univerzita Bratislava
- UMB Banská Bystrica
- UPJŠ Košice
- TU Košice
- ABB a.s., pobočka Žilina
- VS SAV Bratislava
- UI SAV Bratislava
- VÚD Žilina
- AŽD Žilina
- Agentúra MŠ SR štrukturálne fondy EU

### **V.2. Cooperation with Foreign Institutes and Enterprises.**

- UTIA -Institute of Information Theory and Automation, Academy of Sciences of the Czech Rep.
- Universities-Plzen, Liberec, Praha, Brno, CZECH REP
- ARGE Simulation , Vienna University of Technology, AUSTRIA
- Dutch Benelux Simulation Society, Technische Universiteit Delft, NEDERLAND  
(Cooperation in preparing EUROSIM Congres and in the EUROSIM Society)  
SCS Europe (Society for computer Simulation), University of Ghent, BELGIUM.  
(Preparing an European Simulation Multiconference).
- Chinese Association for System Simulation, Beijing, CHINA,
- Asian Simulation Conference, Shanghai, CHINA
- EPCC ( Edinburgh Parallel Computing Centre ), UK
- University of Balamund,– BioMedSim , Conference LEBANON
- TU – VŠB, Faculty of mechanical Engineering strojní, Ostrava, CZ, project 72/114
- CINECA, Bologne, ITALY
- 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
- Elsevier
- UK Sim – United Kingdom Simulation Society
- FIT – VUT Brno – Fakulta informačních technologií, Vysoké učení technické, Brno (příprava mezinárodní konference CSSim, EUROSIM, febr. 2009, Brno).

### V.2.1 Foreign Visitors to the Department

### V.2.2. Visits of Staff Members to Foreign Institutions

### V.3 Membership in Slovak Organizations and Societies

- **M. Alexík:** SSAKI- Slovak Society for Applied Cybernetics and Informatics, vicechairman
- **M. Alexík:** IFAC National Committee, member
- **M. Alexík:** SAKI – Slovak Society for Cybernetics and Informatics, Slovak Academy of Sciences, board member
- **M. Alexík:** AT&P Journal, HMM s.r.o. Tavariková osada 39, 841 02 Bratislava 42. ISSN 1335-2237., editorial board member
- **M. Alexík:** Journal of Information, Control and Management Systems, ISSN 1336-1716, Edis, University Publishing House, Žilina, SR, editorial board member
- **M. Alexík:** EDIS – Žilina University Publisher, board member
- **M. Alexík:** Cybernetics and Informatics. Journal of SAKI, editorial board member.
- **M. Alexík:** SOK 38-01-9 Automatization and Control. Common committee for PhD study, Slovak Republic
- **M. Alexík:** Committee for PhD study Automatization, Slovak University of Technology, Bratislava, member.
- **M. Alexík:** State examinations committee chairman (Automatization), FEI – Slovak University of Technology, Bratislava
- **M. Alexík:** State examinations committee chairman (Automatization), FE – University of Technology, Košice
- **M. Alexík:** State examinations committee chairman (Informatics), FE – University of Technology, Košice
- **M. Alexík:** Faculty of Management Science and Informatics, University of Žilina, academic board member
- **I. Hanuliak:** Member of GCCCP (Grid computing of complex problems)
- **I. Hanuliak:** Member of Scientific Board “Transcom”
- **I. Hanuliak:** Member of Scientific Committee “Slovak Grid”
- **I. Hanuliak:** Member of Scientific Board “HPC and Grid computing”
- **A. Jaroš:** Czech & Slovak Simulation Societe – member
- **A. Jaroš:** Slovak Society for cybernetics and Informatics by Slovak Academy of Science, Bratislava
- **A. Jaroš:** The Slovak Society for Applied cybernetics and Informatics by ZSVTS Bratislava

- **Š. Bocko:** Czech & Slovak Simulation Society – member
- **Š. Bocko:** The Slovak Society for Applied cybernetics and Informatics by ZSVTS Bratislava – member
- **Š. Bocko:** Slovak Society for cybernetics and Informatics by Slovak Academy of Science, Bratislava

#### V.4 Membership in International Organizations and Societies

- **M. Alexík:** EUROSIM president EUROSIM, the Federation of European Simulation Societies.
- **M. Alexík:** Simulation Modelling Practise and Theory (SIMPRA) – Editorial Board - area editor. SIMPRA -International Journal of the Federation of European Simulation Societies SCI – Journal, Publisher: Elsevier. ISSN: 1569-190X
- **M. Alexík:** Simulation News Europe (SNE) – editorial board member. SNE is the also the official membership journal of EUROSIM and SCS Europe. Publisher: ARGESIM/ASIM, TU Vienna. ISSN 1015-8685 (0929-2268)
- **M. Alexík:** Cybernetics Letters, editorial board. ISSN 1802-3525, Brno, ČR.
- **M. Alexík:** IFAC Technical Committee - member “Systems and Signals – Modelling, Identification and Signal processing”.
- **M. Alexík:** ECCAI –European Coordination Committee for Artificial Intelligence, national board member.
- **M. Alexík:** CSSS - Czech and Slovak Simulation Society, vice chairman
- **M. Alexík:** Tomas Bata University in Zlin, Czech Republic, Faculty of Applied Informatics, Academic board member.
- **M. Alexík:** Brno University of Technology, faculty of Electrical Engineering and Communication. Member of committee for PhD. Study.
- **I. Hanuliak:** Editorial board member, The Open cybernetics and Systemic Journal, United Kingdom

#### V.5 Contracts with Slovak and Foreign Institutions

#### V.6 Membership in International Program Committee

- **M. Alexík:** MATHMOD 2009-6<sup>th</sup> Vienna International Conference an Mathematical Modelling, February 11-13 2009, Vienna, Vienna University of Technology. Alexík – IPC members reviewer (35 manuscripts), Session chairman.
- **M. Alexík:** AMS 2009 – Asia Modelling Symposium 2009. Third Asia International Conference an Modelling and Simulation Bandung 25-26 May, Bali, Indonesia Alexík – IPC members reviewer (10 manuscripts).
- **M. Alexík:** WMSCI 2009 – 13th World Multi-Conference an Systematic Cybernetics and Informatics, Orlande, USA, Sept 2009. Alexík – reviewer
- **M. Alexík:** ECC 09 European Control Conference 2009, 23-26 August 2009 Budapest Alexík – reviewer
- **M. Alexík:** CSSim 2009 – Brno International Conference an Computational Intelligence, Modelling and Simulation. 7-9 September 2009, Brno Alexík – Honorary Conference Chair International Programme Committee (IPC) Reviewer

- **M. Alexík:** Ursim 2009 - International Conference an Modelling and Simulation Cambridge 25-27 March, 2009  
Alexík – IPC member, reviewer
- **M. Alexík:** Informatics 2009, International Conference, November 23-26, Herľany, SR  
Alexík – IPC member, reviewer, Sessions Chairman
- **M. Alexík:** Mosis 2009, Modelling and Simulation of Systems, International Conference, Rožnov pod Radhoštěm, April 7-9, 2009  
Alexík – IPC member, reviewer
- **M. Alexík:** ASIS 2009 – Advanced in Simulation of Systems, International Collegiums, 20- 22. October 2009, Olomouc, ČR

## VI. BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Design of the Control System for the Robotic Hand	L. Slovík	O. Kovář
2.	Micro-Mouse Contest Robot	J. Pisjová	J. Miček
3.	Monitoring Software for IP Camera Vivotek PZ6124 in Linux	V. Beseda	O. Karpiš
4.	Web Page for the Department of Technical Cybernetic	M. Mišinec	J. Kapitulík
5.	Cable Rope Tester	P. Siman	M. Zorec
6.	System for Temperature Measuring	P. Novák	J. Miček
7.	Mobile Robot for Competition in Category “Minisumo”	M. Kelemen	J. Miček
8.	Embedded RTSM-R	S. Rendeš	J. Kapitulík
9.	Isolated Measuring Amplifier	E. Ryban	P. Gubiš
10.	Monitoring System for Net Devices	M. Bielík	J. Miček
11.	LC Meter	P. Lendel	L. Čechovič
12.	Digital Level	M. Kojtal	J. Miček
13.	Time Switching Device for School Bell	T. Matejčík	L. Čechovič
14.	Control of Mobile Robot in Category “Path-Follower”	T. Laššo	J. Miček
15.	Design and Realization of the DC Motor Speed Controller	P. Gula	O. Kovář
16.	Weather Station	J. Janáčík	O. Kovář
17.	Ultrasound Measurement of the Speed	M. Kanderka	J. Miček
18.	Voltage Supply Test Device	M. Frátrik	M. Zorec
19.	Organic Vapour Concentration Sensor	T. Selyem	Š. Bocko
20.	Mobile Robot for Competition in Category “Path-Follower”	R. Majerčík	J. Miček
21.	Design and Realization of the Thermal Regulator	M. Marguš	O. Kovář
22.	Japanese-Class Sumo Robot	M. Ťažký	J. Miček

No.	Theme	Student	Supervisor
23.	Measurement of Aggregate Level in the Bin	I. Sulovec	Š. Bocko
24.	Wind Speed Measuring Device	M. Srnec	J. Miček
25.	Motion Sensor	L. Biľ	J. Miček
26.	Humidity Measuring Device	M. Bros	J. Miček
27.	Temperature Measurement Device with SD Card	M. Švec	J. Miček
28.	Control System of the Rotary Manipulation	J. Šlosiar	O. Kovář
29.	Device to Sound Recording to SD Card	M. Veselý	J. Miček
30.	Measuring for Light Intensity	M. Motyčák	J. Miček
31.	Audio for PC	F. Murcko	J. Mlich
32.	Recovery of Lost Data on Disk	E. Mroč	J. Mlich
33.	Ultrasound Torch	V. Pažický	J. Miček
34.	Electronic Security System	Ľ. Krausko	O. Karpiš
35.	Mobile Electronic Distance Measuring Device	M. Štefanides	O. Kovář
36.	Micro C/OS-II Using in Case of Software Design for AT91SAM7X256-EK	V. Piliar	J. Kapitulík
37.	Remote Control of the Electronic Switches	P. farko	O. Kovář
38.	Monitoring System for Net Device	Ľ. Minarík	J. Miček
39.	Sound Intensity Measurement	T. Završan	L. Čechovič

## VII. MASTER THESIS

No.	Theme	Student	Supervisor
1.	Data Collection System for Motor Vehicle Operation	M. Kapičák	J. Miček
2.	Data Collection System for Motor Vehicle Operation	V. Brienik	J. Miček
3.	Data Processing System from Sensor Network	P. Husárik	J. Kapitulík
4.	System for Measuring Bio Signals	R. Lacek	P. Ševčík
5.	Communication Computer	M. Privarčák	J. Miček
6.	Adaptive Equalizer	E. Oravec	O. Karpiš
7.	Design of the Autonomous GPS Navigated Ground Robotic Vehicle	A. Sedlák	J. Juríček
8.	Project of Communication System in Selected Company	M. Gsaldun	R. Gabarík
9.	Mobile Robot with Possibility of Wireless Control	P. Bulka	J. Miček
10.	Complexity of Chosen Integer Factorization Algorithms	L. Križan	I. Hanuliak
11.	Laboratory Model of Continuous Controlled Processes Based on mP ATMEL ARM	M. Čičmanec	M. Alexík
12.	GPS Tracking Software for an Autonomous GPS Navigated Ground Robotic Vehicle	R. Petráš	J. Juríček
13.	Control Unit of Graphic Display Device	D. Ďurica	J. Miček
14.	Voice-Controlled System	M. Duran	J. Kapitulík
15.	Audio Transmission Using Wireless Technology ZigBee Communication Gateway Between ZigBee and TCP-IP Network	M. Zuzula	J. Kapitulík
16.		P. Goga	J. Kapitulík

No.	Theme	Student	Supervisor
17.	Data Collection Device from Network of Sensors	Ľ. Skurčák	J. Kapitulík
18.	Card Reader RFID	P. Štefanides	J. Miček
19.	RFID Mifare Cards Reader	T. Soták	J. Miček
20.	Data Acquisition System Design - Hardware	E.Matejíčková	P. Gubiš
21.	Wireless Humidity Sensor	A. Sitár	J. Kapitulík
22.	GSM Access Point to ZigBee Network	M. Hodoň	J. Miček
23.	Wireless Temperature Sensor	P. Bella	J. Kapitulík
24.	Picture Transfer into PC	M. Rýchlik	O. Kovář
25.	Design and Implementation of the Graphics Processor	M. Baranček	O. Kovář
26.	Card Reader 125 KHz	M. Psoťka	J. Miček
27.	Concentrator of Asynchronous Serial Data Channels	J.Krčmáriková	O. Kovář
28.	System for Measuring Bio-Signals	M. Čamrada	P. Ševčík
29.	Differential GPS	M. Holák	J. Miček
30.	Design and Implementation of the SDBus into FPGA	M. Stareček	M. Zorec
31.	Fingerprint Sensor - Software Equipment	E. Jedináková	J. Miček
32.	Control System of the Robotic Arm L 601 - KT	P. Beliančin	O. Kovář
33.	Design and Implementation of the CAN Bus into FPGA	M. Vlk	M. Zorec
34.	Fingerprint Sensor - Hardware Equipment	P. Decký	J. Miček
35.	Differential GPS	M. Lauko	J. Miček

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**Administrative Department:** Mária Liskayová

**Teaching Staff:** RNDr. Katarína Bachratá, PhD.  
Ing. Mária Čerňanská  
Assoc.Prof.Ing. Matilda Drozdová, PhD.  
Ing. Petr. Ivaniga, PhD.  
Assoc.Prof.Ing. Tatiana Kováčiková, PhD.  
Ing. Ľudovít Mikuš, PhD.  
Ing. Peter Palúch, PhD.  
Ing. Pavol Segeč, PhD.  
Mgr. Juraj Smieško, PhD.  
Ing. Ondrej Škvarek  
Mgr. Jana Uramová, PhD

**PhD students** Ing. Štefan Baďura  
Ing. Juraj Boroň  
Ing Michal Bruncko  
Ing. Ondrej Škvarek  
Ing. Martin Kardoš  
Ing. Dušan Nemček  
Mgr. Katarína Pilátová  
Ing. Michal Mokryš  
Ing. Stanislav Foltán  
Mgr. Jakub Daubner

**Technical Staff:** Vladimír Frnčo

## II. EQUIPMENT

### *II.1 Teaching and Research Laboratories.*

- B 03 Laboratory of Communication Technology
- B301 Laboratory of Networking
- B302 Laboratory of Applications Development
- B303 Cisco Networking Academy Laboratory

### III. PhD.-Programme

Theme	Student	Supervisor
1. Selected issues of speech synthesis	J. Boroň	M. Klimo
2. Methodology of test specification design for functionality of IMS kernel	M. Bruncko	T. Kováčiková
3. QoS Guarantee Mechanisms Modelling by Effective Bandwidth	J. Daubner	M. Klimo
4. CIM to PIN Transformation in Model Driven Architecture	M. Kardoš	M. Drozdová
5. Configuration of QoS Mechanisms for Multimedia Networks	D. Nemček	M. Klimo
6. E-learning object design and evaluation for content creation	K. Pilátová	M. Drozdová
7. Prosody and prosody modelling in Slovak language	M. Čerňanská	M. Klimo
8. Interdependency modelling between socio-economics and information systems	M. Mokryš	M. Drozdová
9. Speech recognition using networks of fuzzy flip circuits flop	S. Foltán	M. Klimo
10. Selection of speech units for speech synthesis system	O. Škvarek	T. Kováčiková
11. Video recognition using networks of fuzzy flip circuits flop	Š. Baďura	M. Klimo

#### RESEARCH AND EDUCATION PROJECTS

- *Error rate model for high- speed digital networks*, 1/4061/07, VEGA, INANIGA PETR, Ing., PhD.
- *Digital Library of e-learning metadata objects and its management* 3/5205/07, KEGA, DROZDOVÁ MATILDA, Assoc.Prof.Ing.PhD.
- *Project IST 7.RP - Customer in the Loop (Using Networked Devices enabled Intelligence for Proactive Customers Integration as Drivers of the Integrated Enterprise)*, STF LoE S36/02, KOVÁČIKOVÁ TATIANA Assoc.Prof.Ing. PhD
- *ETSI STF 331 on ICT GRID Technologies Interoperability and Standardization*, STF LoE 331/05, 331/10, KOVÁČIKOVÁ TATIANA Assoc.Prof.Ing. PhD.
- *ETSI STF 342 on Personalization and User Profile Management Standardization (i2010 - e-Inclusion)*, STF LoE 342/05, KOVÁČIKOVÁ TATIANA Assoc.Prof.Ing. PhD.
- *ETSI STF 360 on QoS management at the Network Interfaces (juxtaposition)*, STF LoE 360/01, KOVÁČIKOVÁ TATIANA Assoc.Prof.Ing. PhD.
- *CISCO Training in Frame of Accreditation Activity of the FMSI* O-06-105/0002-02, SEGEČ PAVOL, Ing., PhD.
- *Multimedia Course* P-105-0004/06, MIKUŠ ĽUDOVÍT, Ing., PhD.
- *ECDL* O-07-105/0001-00, MIKUŠ ĽUDOVÍT, Ing., PhD.

## **V. COOPERATION**

### **V.1 Cooperation with Institutes and Enterprises in Slovakia**

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

### **V.2 Cooperation with Foreign Institutes and Enterprises**

- Telecom SudParis Evry, FRANCE
- ENST Paris, FRANCE
- University of Technology Dresden, GERMANY
- University of Poitiers, FRANCE
- ETSI Sophia Antipolis, FRANCE
- Université de Nice – Sophia Antipolis, FRANCE
- University of Zagreb, CROATIA

### **V.4 Membership in International Organizations and Societies**

Martin **Klím** – IEEE, ACM, ETSI STQ

Tatiana **Kováčiková** – ETSI TISPAN, EC – FP7 IST projects reviewer

## **VI. BACHELOR THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	QoS Toolset – Congestion-Management and Congestion-Avoidance Tools	J. Šufliarský	J. Uramová
2.	Internet Application as Front-end for Linux Firewall	M. Klinovský	M. Bruncko
3.	Open Office - Impress -Multimedia Guide 1	O. Kredatus	O. Škvarek
4.	Adobe Flash CS3-Multimedia	A. Kormanová	Ľ. Mikuš
5.	Action Script 3.0 – Multimedia Guide	B. Kútnik	Ľ. Mikuš
6.	VLC - Multimedia Guide	Š. Koncz	Ľ. Mikuš
7.	Adobe Flash Applications and Programming	M. Cebecauer	Ľ. Mikuš
8.	Open Office.org Calc 1 - Multimedia Guide	A. Jadroň	K. Pilátová
9.	Network Infrastructure - VPN Connections	L. Falát	P. Palúch
10.	Campus Portal Development	M. Kurpe	P. Segeč
11.	E-Learning: Fast Dimension of Single Server Queue	T. Krnčok	J. Smieško
12.	Information System for Evidence of Network Devices	F. Hallo	M. Kardoš
13.	Web Application for Registration of Publishing of Lectures	P. Hajtol	K. Bachratá
14.	Solving of Particular Problems in LaTeX Documents Creation	M. Biel	J. Uramová
15.	Open Office Write - Multimedia Guide 2	M. Kavalek	M. Čerňanská
16.	Ubuntu Linux Distribution - Multimedia Guide	Ľ. Galčinský	M. Bruncko
17.	Gimp Shop - Multimedia Guide	P. Skřivánek	Ľ. Mikuš
18.	Guide for Graduation Thesis written in LaTeX	E. Vrabcová	K. Bachratá
19.	Open Office – Impress - Multimedia Guide 2	M. Jurečka	O. Škvarek
20.	Network Control with the SNMP Protocol	J. Lacko	P. Palúch



No.	Theme	Student	Supervisor
21.	Filezilla - Multimedia Guide	Š. Kobrová	Ľ. Mikuš
22.	Pinnacle Studio - Multimedia Guide	V. Kubala	Ľ. Mikuš
23.	Kerberos Authentication System	J. Breziarský	P. Palúch
24.	3D Canvas - Multimedia Guide	J. Vlk	Ľ. Mikuš
25.	Synthesized Speech Recognition	M. Bašista	K. Bachratá
26.	PSPad - Multimedia Guide	V. Králiková	Ľ. Mikuš
27.	Web Page - Shop Catalogue	R. Patúš	J. Daubner
28.	Virtual Dub - Multimedia Guide	M. Kostka	Ľ. Mikuš
29.	Software Application for Stock Control	P. Pojtek	M. Morávek
30.	Open Office.org Base 2 - Multimedia Guide	J. Kobuš	K. Pilátová
31.	Open Office.org Base 1 - Multimedia Guide	T. Kližan	K. Pilátová
32.	Soribus - Multimedia Guide	S. Piták	Ľ. Mikuš
33.	Open Office Write - Multimedia Guide 1	M. Ružička	M. Čerňanská
34.	Advanced Data Handling in Open Office Calc. - Multimedia Guide	D. Chrenko	K. Pilátová
35.	PSPad - Multimedia Guide 2	M. Stračiak	Ľ. Mikuš
36.	Guide for Text Processing in TeX-Language in Windows Operating System	P. Lakošík	J. Uramová
37.	Windows Movie Maker - Multimedia Guide	A. Garaj	Ľ. Mikuš
38.	Gimp Shop - Multimedia Guide 1	S. Braško	Ľ. Mikuš
39.	Sketch Up - Multimedia Guide	A. Beláň	Ľ. Mikuš
40.	Open Office Draw - Multimedia Guide	M. Turčianik	Ľ. Mikuš
41.	Web Page of Mathematical Club	A. Vyboh.	K. Bachratá
42.	Released Version of Software Administration	M. Rak	P. Kysela
43.	Web Page of Auto Service	L. Berka	J. Daubner
44.	Ubuntu Linux Distribution - Multimedia Guide	T. Kaprál	M. Bruncko
45.	Databank for Transmission and Transportation Company - Front End	L. Riho	M. Vrábel
46.	Radiofrequency Communication System in the 434 MHz Band	M. Václavík	P. Palúch
47.	Monitoring House with Camera Systems	A. Matys	M. Vrábel
48.	Open Office.org Calc 2 - Multimedia Guide	K. Acs	K. Pilátová
49.	Databank for Transmission and Transportation Company - Back End	M. Šinko	M. Vrábel
50.	Guide Book for ACTIV Studio Application	M. Ševčík	M. Drozdová
51.	Advanced Word Processing – Open Office - Writer Multimedia Guide	P. Píš	K. Pilátová
52.	Ubuntu Linux Distribution - Multimedia Guide	J. Guráň	M. Bruncko

## **VII. MASTER THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	Using of Service Oriented Architecture in e-Content Design	T. Bulla	M. Drozdová
2.	Vowels Recognition in Speech Synthesis	M. Furinda	K. Bachratá
3.	Detection of Vehicle Characteristics in a Picture	S. Foltán	F. Jennes
4.	VoIP Service over WiFi LAN	J. Galis	P. Segeč
5.	IP Multimedia Subsystem(IMS)Interoperability with VoIP SIP Solutions	A. Krivulčík	P. Segeč
6.	IP Network QoS Architectures – Implementation Tools and the Methodologies	P. Čenšák	P. Segeč
7.	Design of the Security Policy of Information System	J. Saxa	P. Segeč
8.	Statistical Estimate of Effective Bandwidth for Date Traffic	M. Mihály	J. Smieško
9.	Set of the Test Words for Slovak Language	T. Halás	K. Bachratá
10.	Using of Service Oriented Architecture in e-Learning Objects	E. Podhorský	M. Drozdová
11.	Vehicle Tracking with one Camera Inside a Lane	J. Mikulovský	F. Jennes
12.	Using of Model Driven Architecture in e-Content Design	J. Mundier	M. Drozdová
13.	Info-Line Service – Internet Telephony for Interactive Communication	V. Púčik	P. Segeč
14.	Simulation of the Single Shared Channel Network	J. Ďurček	J. Uramová
15.	Human Protection for Barrier Hits	Š. Baďura	F. Jennes
16.	QoS in Present-Day Networks	J. Zahradníček	P. Palúch
17.	Security of the SIP Communication	M. Pajdič	P. Segeč

## Department of Transportation Networks

**Head of Department:** Assoc.Prof.. Mgr. Jiří S l a v í k , PhD.

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**Administrative Department:** Elena Rohrböcková

**Teaching Staff:** Ing. Norbert Adamko, PhD.  
Ing. Ľuboš Buzna, PhD.  
Prof.Ing. Petr Cenek, PhD.  
Assoc.Prof.Ing. Peter Fabián, PhD.  
Prof.RNDr. Jaroslav Janáček, PhD.  
Ing. Peter Jankovič  
Assoc.Prof.Ing Ľudmila Jánošíková, PhD.  
Assoc.Prof. Mgr.Valent Klima, PhD.  
Ing. Michal Lekýr, PhD.  
Ing. Peter Márton, PhD.  
Ing. Peter Matis, PhD  
RNDr. Alžbeta Szendreyová, PhD.  
Ing. Michal Žarnay, PhD  
Ing. Michal Koháni, PhD.  
Ing. Peter Tarábek, PhD

**PhD students** Mgr. Ellen Molitorisová,  
Ing. Karolína Mužíková

## II. EQUIPMENT

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

## III. PhD. - Programme

Theme	Student	Supervisor
Retrieval and Storage of Relevant Information in Knowledge Management Systems	Ellen Molitorisová	Peter Fabián
Using Game Theory in Managerial Decision- Making	Karolína Mužíková	Peter Fabián

## **VI. RESEARCH PROJECTS**

### **State and International Grant Projects:**

KLIMA, V.: *Agent Oriented Architecture of Simulation Models of Service Systems* VEGA-07-026-00

## **V. COOPERATION**

### **V.1 Cooperation with Institutions and Enterprises in Slovakia**

Slovak Telecom

Technical University Košice

Slovak Technical University Bratislava

University of Matej Bel, Banská Bystrica

ŽSR, Bratislava (Slovak Railway)

VUD -Research Institute in Transport, Žilina

Slovak Environmental Agency, Banská Bystrica

Slovak Association for Geographical Information, Bratislava

Slovenska Posta, a.s. (Slovak Posts and Telecommunications)

CORAGEO, s.r.o.

### **V.2 Cooperation with Foreign Institutions and Enterprises**

SibSUTIS Novosibirsk, Russian Federation

SPbSUT Sankt Peterburg, Russian Federation

ENIC Lille, France

UPV Valencia, Spain

HfT Leipzig, Germany

GISIG, Genova, Italy

Universita Pardubice, Czech Republic

VSB-TU Ostrava, Czech Republic

TDJ Research Centre, Harbin, People's Republic of China

University of Tennessee, Knoxville, U.S.A.

Florida International University, dpt. of Logistics

TU Dresden, Germany,

#### **V.2.1 Foreign Visitors to the Department**

- Blatoň, M., Kozel, P., Širc, J., Rusek, M.: VŠB TU Ostrava, Czech Republic, short study stays and X-press-IVE course, Oct. and Nov. 2009
- Teichmann, D.: VŠB TU Ostrava, Short study stays. March 2009
- 

#### **V.2.2 Visits of Staff Members to the Foreign Institutions**

- ŽARNAY, M.: University of Zaragoza, Spain, Department of Informatics and System Engineering, January 1 – December 31, 2009
- MÁRTON, P. KOHÁNI, M.: ETH Zürich, International Conference, 10.2-14.2. 2009
- MÁRTON, P.: TU Dresden, 27.9. – 30.9. 2009
- MÁRTON, P.: RWTH Aachen, Germany, lecturer, 5.11. – 7.11. 2009
- MÁRTON, P.: TU Berlin, VII.RP Project, 14.12.2009
- FABIÁN, P.: Pamplona, Spain, Project Natur GIS, 22.4. – 26.4. 2009

- FABIÁN,P.: Lille, France, Tempus project, 24.6. 1.7. 2009
- FABIÁN,P.: St. Petersburg, Russian Federation, ERASMUS Project, 24.8. – 27.8. 2009, 1.10. – 5.10 2009
- JANÁČEK, J., KOHÁNI, M.: Nova Gorica, Slovenia, International Conference, 22.9. – 26.9. 2009
- JANÁČEK, J., KOHÁNI, M.: Molde, Norway, Teacher's mobility, 16.4. – 27.4. 2009
- ADAMKO, N.: Leicester, Great Britain, Intern. Conference, 25.10. – 28.10. 2009
- CENEK, P.: Dresden, Germany, conference, 27.11. – 28.11. 2009
- BUZNA, L.: Zurich, Switzerland, Int. Project, 25.11. – 28.11.2009

### **V.3 Membership in Slovak Organizations and Societies**

Prof. RNDr. Jaroslav JANÁČEK, PhD:

- Member of SOK for PhD study in „Transport and Communication Technologies“.
- Member of SOK for PhD study in „Applied Mathematics“
- Member of OK for PhD study in „Control of Transportation Systems“.
- Member of committee SSOV (Slovak Society for Operations Research
- Member of Board for Doctoral Study for Transport technique and technology, VSB-TU Ostrava
- Member of Scientific Board of Zilina University

**Assoc.Prof. Ing. Ludmila JÁNOŠÍKOVÁ, PhD.**

- Member of SAGI ( Slovak Association for Geoinformatics)
- Member of Editorial Board, Journal of Information, Management and Control Systems, FRI, University of Zilina
- Member of Academic Senate of FRI

**Assoc. Prof. Ing. Peter FABIÁN, CSc**

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

### **V.5 Membership in International Organizations and Societies**

- JANÁČEK, J.: Reviewer of Zentralblatt für Mathematik
- FABIÁN, P : Member of Executive Committee of GISIG (Geographic Info Systems International Group)
- CENEK, P.: Member of the Transportation Research Board, by National Research Council, USA, Washington (representative of the University of Žilina)
- CENEK, P.: Alliance of Universities for Democracy (AUDEM)
- MATIS, P.: Member of People to People organization
- JÁNOŠÍKOVÁ, L.: Member of Scientific Board, FEI, University of Pardubice
- ADAMKO,N.: Member of European Simulation Society
- MÁRTON,P.: Member of International Association of Railway Operations Research

## **VI. BACHELOR THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	Digital Processing of the Video Information	T.Körmendy	P. Fabián
2.	Comparison of Software Tools for Solving Mathematical Programming Problems	P. Zúber	L. Jánošíková
3.	Dynamic Web Application for Quire Art Anno	M. Škvarka	M. Lekýr
4.	Tutorial of CPN ML	M. Páleš	M. Žarnay
5.	Time Consumption of Exact Algorithm solving Location Problems	P. Stránsky	A. Szendreyová
6.	System for Monitoring of Consumption of Fuel and Energy	R. Soukal	H. Varecha
7.	Collision Detection of Point Clouds and Objects in 3D Space	M. Antal	Z. Barta
8.	Protected Mode of Intel 80384and Later Proceession	M. Kolář	L. Jánošíková
9.	Simulation Model of Local Bus Transportation Service in Chosen Region	M. Varga	N. Adamko
10.	Software Protection	P. Krajčír	L. Jánošíková
11.	Use of the Open Source Software in Development of the WWW Pages	J. Kolčák	P. Fabián
12.	G-mail - Multimedia Guide	M. Sury	A. Szendreyová
13.	Opera - Multimedia Guide for Web Browser	P. Serdel	A. Szendreyová
14.	Thunderbird - Multimedia Guide	M. Dubec	A. Szendreyová
15.	Model of Traffic on the Crossing "Strečno"	J. Slavík	P. Cenek
16.	Outlook Express - Multimedia Guide	E. Mišeje	A. Szendreyová
17.	Multi-Media Presentation to Compare software Windows Movie Maker	M. Polc	M. Lekýr
18.	Analysis of the Web 2.0 Issues and its Opportunities	M. Kubica	P. Fabián
19.	Dynamic Web Application for Local Child Doctor	I. Hujo	M. Lekýr
20.	Software Support for Keeping the Inventory in a Building - Data Administration	J. Kostolný	M. Lekýr
21.	Editor Data for Display Units on Vehicles in Public Transport	M. Luhový	M. Koháni
22.	System for Processing of Conference Papers in th WWW Environment	M. Panák	P. Fabián
23.	Adobe Light-Room - Processing of Digital Photography	M. Vladár	M. Lekýr
24.	Mozilla Firefox Web Browser - Multimedia Guide	M. Slašťan	A. Szendreyová
25.	Google Chrome Web Browser - Multimedia Guide	L. Bruno	A. Szendreyová
26.	Processing of the Audio Component in the Multimedia Systems	M. Hriň	P. Fabián
27.	Teaching Aid for Discrete Mathematics	P. Meliš	A. Szendreyová
28.	Dynamic Web Application for Company "Esthé Klinika"	T. Zigo	M. Lekýr
29.	Software Support for Keeping the Inventory in a Building - User Interface	P. Cagaň	M. Lekýr
30.	Use of Communication Techniques in Marketing	L. Sliacký	M. Žarnay

## **VII. MASTER THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	Decision Support Tool for Placing of Supermarkets in Private Service System	M. Múdry	J. Janáček
2.	Decision Support Tool for Solving P-Centre Problem in Public System	D. Koblka	M. Koháni
3.	Comparison of Versions of Banker-Rs Algorithm	J. Marek	M. Žarnay
4.	Application for Keeping Record of Alcohol in an Establishment	T. Pekár	M. Lekýr
5.	Simulation Model of a Road Traffic - Conceptual Design and Vehicle Animation	M. Guoth	P. Cenek
6.	Decision Support Tool for Centres Location in Private Service System	P. Bučo	J. Janáček
7.	Decision Support Tool for P-Median – like a Problem Task	M. Pulc	P. Matis
8.	Simulation Model of Road Traffic - Vehicle Kinematics and Dynamics	L. Horník	P. Cenek
9.	Decision Support Tool for Design of Public Systems with Limited Accessibility	J. Glončák	P. Matis
10.	Generating Values of Dependent Random Variables	M. Vavro	J. Slavík
11.	Composite Object Simulating in 3D	A. Kopek	M. Lekýr
12.	Using Genetic Algorithm for the Multi-Commodity Distribution System Design	Ľ. Ferianc	M. Koháni
13.	Web Application Framework	O. Hatala	Ľ. Jánošíková
14.	Using Scatter Search Algorithm for the Multi-Commodity Distribution System	M. Beňo	M. Koháni
15.	Simulation Model of a Road Traffic - Infrastructure Editor	V. Mlatko	P. Cenek
16.	Simulation of Passenger-Rs Behaviour in Transportation Terminals	V. Bellanová	N. Adamko
17.	Tabu Search Algorithm for Solving of the “Many-to-Many” Distribution System	J. Danko	M. Koháni
18.	Simulation Model of Road Traffic - Vehicle Conflict Avoiding Algorithms	M. Gutten	P. Cenek

## **OTHER ACTIVITIES**

- **Cenek,P., Klima,V., Janáček,J., Slavík,J.:** Members of Scientific Board of FRI, ZU
- **Tarábek,P.:** Organization of CTU Open Contest and FRI ACM Contest 2009 in programming
- **Fabián,P.:** Member of Organization Committee of Workshop of Project Socrates/Minerva BlendXL

## **Department of Management Theories**

**Head of Department:** Assoc. Prof. Ing. Jozef Strišš, PhD.

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**Administrative Department:** Oľga Doricová

**Teaching Staff:** Assoc. Prof. Ing. Martina Blašková, PhD.  
RNDr. Mária Brezániová, PhD.  
Ing. Jana Dicová, PhD.  
Ing. Jozef Gajdošík  
Prof. Ing. Štefan Hittmár, PhD.  
Ing. Radoslav Jankal, PhD.  
Assoc. Prof. Ing. Jaroslav Král, PhD.  
Ing. Milan Kubina, PhD.  
Mgr. Jakub Soviar, PhD.  
Assoc. Prof. Ing. Jozef Strišš, PhD.  
Assoc. Prof. Ing. Josef Vodák, PhD.  
Ing. Viliam Lendel, PhD.  
Ing. Jana Magdolenová, PhD.

**PhD Students:**

Ing. Monika Kormancová  
Ing. Radka Majerová  
Ing. Mgr. Zdenka Sidónia Natšínová  
Ing. Jaroslava Štaffenová  
Ing. Michal Varmus  
Ing. Lukáš Richter  
Ing. Karolína Mužíková  
Ing. Jozef Herčko  
Ing. Jozef Gajdošík  
Ing. Dana Stredáková  
Ing. Monika Kerestešová  
Ing. Peter Archel  
Ing. Jozef Mikuš  
Mgr. Anna Havranová  
Ing. Andrea Pohanková  
Ing. Michal Salaj



## **II. EQUIPMENT**

Management laboratory

## **III. PhD.-Program**

- GAJDOŠÍK Jozef: *Innovation of CRM in the relation with the government development*
- KORMANCOVÁ Monika: *Talent management as a tool for improving business performance*
- MAJEROVÁ Radka: *Model of planning in management on the base of human resource effectiveness*
- MUŽÍKOVÁ Karolína: *Usage of game theory in management decision making*
- NATŠINOVÁ Zdenka Sidónia: *Decision tables in management decision-making*
- ŠTAFENOVA Jaroslava: *Organizational Models Of Learning Organization*
- VARMUS Michal: *Innovation strategy in the enterprise services*
- KERESTEŠOVÁ Monika: *Dynamical model of planning in management and motivating human potential in organization*
- POHANKOVÁ Andrea: *Modelling of managerial decision taking and motivation programs*

## **IV. RESEARCH PROJECTS**

### **State Grant Projects – VEGA**

- HITTMÁR, Š.: *Knowledge Management*
- BLAŠKOVÁ, M.: *Dynamical Model of Motivation of Human Potential*

### **International Research - MVTS**

## **V. COOPERATION**

### **V.1 Cooperation with Institutes and Enterprises in Slovakia**

- The Railways of the Slovak Republic (ZSR)
- Slovak Rail (ZSSK)
- Slovak Rail CARGO
- Technical university in Zvolen
- University of Matej Bell in Banská Bystrica
- Tento, Žilina
- VW Slovakia, Bratislava.
- MASM, Žilina
- Wurth Holding, Bratislava
- Lugera&Maklér, Trenčín

### **V.2 Cooperation with Foreign Institutes and Enterprises**

- University of Pardubice, CZECH REPUBLIC
- OSŽD Warsaw, POLAND
- L'Institut Supérieur Logistique Industrielle Groupe ESC Bordeaux, FRANCE
- Telecom SudParis EVRY, FRANCE

- European Polytechnical Institute, LLC., Kunovice, CZECH REPUBLIC
- Hexpert, CZECH REPUBLIC
- University of Vienna, AUSTRIA
- BOC Unternehmensberatung GmbH, Wien, AUSTRIA
- Central Connecticut State University, New Britain, USA
- Faculty of Public Administration of Mykolas Romeris University, LITHUANIA
- Częstochowa University of Technology, POLAND
- Higher Hanseatic School of Management in Slupsk, POLAND
- Ecole Nationale des Techniciens de l'Équipement Valenciennes, FRANCE
- Politecnico di Milano, ITALY
- RWTH Aachen, GERMANY
- TU Delft, NETHERLANDS
- University of Limerick, IRELAND
- University of Minho, Guimaraes, PORTUGAL
- Bradford, West Yorkshire Innovative Technology Institutes, UNITED KINGDOM
- Aalborg University, DENMARK
- University of technology, Espoo, FINLAND
- Estonian Agricultural University, Tartu, ESTONIA
- Masaryk University Brno, CZECH REPUBLIC
- University of Ljubljana, SLOVENIA
- University of West Hungary, Székesfehérvár, HUNGARY
- VŠB - TU Ostrava, CZECH REPUBLIC

### V.2.1. Foreign Visitors to the Department

- Mr. Stanisław Borkowski, Mrs. Joanna Rosak - Czestochova University of Technology, POLAND
- Mr. Milan Slavík - BOC Unternehmensberatung GmbH, Wien, AUSTRIA
- Ing. Konrad Gebocki - Czestochova University of Technology, POLAND
- 

### V.2.2. Visits of Staff Members to Foreign Institutions

- Mrs. Martina BLAŠKOVÁ - Mykolas Romeris University, LITHUANIA

### V.3 Membership in Slovak Organizations and Societies

Assoc. Prof. Ing. **Jozef STRIŠŠ**, PhD.

- Slovak Marketing Society
- Czech and Slovak Society of University Marketing Teachers

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

Ing. **Jozef GAJDOŠÍK**

- Slovak Association for System Integration

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

- APICS Association for Operations Management (global organization for academics and professionals)
- EDEN European Distance and E-learning Network (EU network of academics and professionals)

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

- The Management Trainers' Association.
- Slovak Marketing Society.
- Slovak Science-technical Association.
- Supply Chain Council

RNDr. **Mária BREZÁNIOVÁ**, PhD.

- Slovak Marketing Society.

## **VI. BACHELOR THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	Planning in Management Enterprise	T. Murárik	J. Dicová
2.	Efficiency of Telecommunication Services by Household Users in SLOVAKIA	M. Lukáč	R. Jankal
3.	Marketing Plan of Enterprise Services	A. Kocúrová	M. Varmus
4.	Analysis of Enterprise Life Cycle	M. Hromada	J. Dicová
5.	Creation and Realization of Enterprise Goals	P. Hamšík	J. Dicová
6.	Utilization Possibilities of Knowledge in Decision-Making Process of Enterprise	M. Thomková	M. Hrubizna
7.	Warehouse Management Systems	J. Medvecký	J. Král
8.	Marketing Plan with Focus on marketing Communication	J. Šípek	J. Vodák
9.	Proposal for Using of State Grants and EU Funds for Building Reconstruction and Restoration of Technical Infrastructure Faculty of Management Science and Informatics, University of Žilina	B. Dobrucká	J. Gajdošík
10.	Warehouse Management Systems	P. Adamčík	J. Král
11.	Evaluation of Job Performance in the Enterprise	P. Kočiová	R. Majerová
12.	Possibilities of Creativity in Marketing	M. Šeliga	V. Lendel
13.	Marketing Research Implemented in Profit Organization EXPRES FINANCE	M. Knopová	V. Lendel
14.	Product Innovation in Conformity with Market	D. Magátová	J. Strišš
15.	Quality of Relationship with Customers and Preferences	A. Karpišová	J. Strišš
16.	Analysis of Customer Managed Company	V. Herudová	V. Lendel
17.	Marketing Research Implemented for Non-Profit Organization	V. Hastík	V. Lendel

No.	Theme	Student	Supervisor
18.	Activities of Service Company for Target Group of Customers	V. Hertelová	J. Strišš
19.	Marketing Plan for Non-Profit Organization	R. Fapšo	J. Vodák
20.	Marketing Plan of Business Company	M. Fučelová	J. Soviar
21.	Concept of Introduction of New Product to the Market	M. Janíčková	J. Strišš
22.	Marketing Analysis as Supporting Tool of Management	A. Chodelka	V. Lendel
23.	Marketing Plan of Non-Profit Organization	P. Krištofík	J. Soviar
24.	Information Tools for Building of CRM in the Company	F. Švec	M. Kubina
25.	Using the Marketing IS for the Segment of SME	L. Šupica	M. Kubina
26.	Measurement of Customer Satisfaction Company MORGAN, Ltd.	M. Bullová	V. Lendel
27.	Possibilities in the Utilization of Knowledge Management in the Enterprise	J. Kurtulík	M. Hrubizna
28.	Role of the Regulatory Authorities on the Market of Telecommunication Services	J. Rautner	R. Jankal
29.	Application of Marketing Tools in a Chosen Firm	D. Mikuška	M. Brezániová
30.	Possibilities of Utilization of Selected Decision-Making Methods	J. Stuchlý	J. Dicová
31.	Marketing Plan of Business Company	L. Viteker	J. Soviar
32.	Marketing Plan of Business Company	K. Kožíková	J. Soviar
33.	Analysis of Purchasing of Chosen Firm	P. Juríček	M. Brezániová
34.	Analysis of Electronic Communication Sector and Situation of Telecommunications	S. Kupčuláková	R. Jankal
35.	Choosing Customers Segments and their Characteristics	T. Vrabček	J. Strišš
36.	Possibilities of Internet Usage in Marketing Research	V. Zuščák	V. Lendel
37.	Increase of Volume of Marketability by Using the Tools of Marketing	J. Krištoffy	M. Kubina
38.	Marketing Plan of Non-Profit Organization	T. Lodňan	J. Soviar
39.	Plan of Marketing Actions Improving Comfort of Customer in Public Road Transport	J. Oriechčíková	J. Strišš
40.	Analysis of Purchasing of Chosen Firm	M. Husárová	M. Brezániová
41.	Possibilities of Bank-Loans for SME and Preparing of Business Plan	M. Fabšíková	J. Magdolenová
42.	Marketing Plan of Business Company	T. Mihálik	J. Soviar
43.	Recruitment of Human Resources at the Enterprise	E. Czastek	R. Majerová
44.	Possibilities of Utilization of Selected Methods	O. Kozáková	J. Dicová

## **VII. MASTER THESIS**

<b>No.</b>	<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
1.	Warehouse Management System	M. Adámek	J. Král
2.	Proposal of more Efficient Coursing of Key Processes of Human Potential	J. Fábrik	M. Blašková
3.	Decision Process for Kaufland's Customers before Choosing New Products	R. Bartoň	J. Strišš
4.	Creation of New Model for e-Government Information System in Slovak Republic	J. Kuruc	J. Vodák
5.	Application of Quality Management Methods and Tools in Manufacturing Business	I. Kvocera	J. Král
6.	Application of Quality Management Methods and Tools in Manufacturing Business	K. Kostolányi	J. Král
7.	Increasing Effectiveness of Managerial Processes for Real Business Company	M. Celec	J. Vodák
8.	Creating and Evaluation of Communication Campaign in the Company "Invest Svederník"	M. Štefan	J. Strišš
9.	Possibilities of Enhancement Decision Process of Customers through Electronic Technology	P. Milan	J. Strišš
10.	Dynamic Internet Portal of Managerial Theory Department	T. Kubinec	Š. Hittmár
11.	Proposal of System of Strategic Motivating Human Potential	M. Hlaváčik	M. Blašková
12.	Increasing Effectiveness of Internal Processes by Quality Function Deployment	P. Vojtková	J. Vodák
13.	Model of Information Streams in Selected Enterprise Processes	J. Manduch	Š. Hittmár
14.	Proposal of Relationships between System of Appraisal and System of Motivation	M. Murínová	M. Blašková
15.	Internet Utilization in Corporate Marketing	P. Pilát	J. Soviar
16.	Application of Selected Methods in Management of Enterprise	L. Malý	J. Dicová
17.	Decision Process of Customer in Relation to Internal and External Factors	M. Palušek	J. Strišš
18.	Design of Aimed Approach to Key Customer Using CRM	O. Kasaj	J. Strišš
19.	Inventory Planning and Control of a Selected Logistics Segment in the Business	D. Čatloš	J. Král
20.	Marketing Activities Directed at Supporting of the Core Selling Products	M. Mančuška	M. Kubinba
21.	Develop and Brand of Company or Brands of Products	M. Halaj	M. Kubina
22.	Marketing Activities Directed at Supporting of the Core Selling Products	M. Palúch	M. Kubina
23.	Benefit of Building and Supporting of Trading Brands for Company	E. Vančová	M. Kubina

No.	Theme	Student	Supervisor
24.	Using of Individual Differences of Personality at Creation of Motivation of Employees and Managers	L. Kozáková	M. Blašková
25.	Proposal of Motivation Programme of Employees and Managers in the SLOVAC, Ltd. Pravenec	M. Marko	M. Blašková
26.	Increasing of Effectiveness Internal Processes in the Real Company by Theory of Constrains	T. Dunajský	J. Vodák
27.	Inventory Planning and Control of Selected Logistics Segment in Manufacturing Company	M. Rybárik	J. Král
28.	Motivation and Motivating of Employees and Managers at the KINEX-KFL Company	M. Trúchla	M. Blašková
29.	Advertising Planning System for Print Media	M. Valášek	J. Král
30.	Increasing of Effectiveness Strategic Processes by Theory of Constrains	M. Kunaj	J. Vodák
31.	Model of Information Process Flows for Solution of Human Resources and Finances in Enterprise	P. Gašpierik	Š. Hittmár
32.	Model of Information Flows of Supplier and Customer Relationship in Enterprise	M. Mrázek	Š. Hittmár

### **VII. OTHER ACTIVITIES OF DEPARTMENT**

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

- Editor-in-chief of the Scientific Journal Human Resource Management & Ergonomics
- Co-founder of the Scientific Journal - Human Resource Management & Ergonomics
- Member of Scientific Committee of the Scientific Journal - Human Resource Management & Ergonomics
- Scientific guarantee of International Scientific Conference (Management of the Human Potential in Company 2009)
- Member of Academic Senate Faculty of Management Sciences and Informatics
- Member of the Council of Higher Education Institutions of the Slovak Republic

Ing. **Jozef GAJDOŠÍK**

- Member of Academic Senate Faculty of Management Sciences and Informatics
- General Editor SSSI magazine „System Integration”.

Prof. Ing. **Štefan HITTMÁR**, PhD.

- Member of Scientific Council of Faculty of Management Sciences and Informatics, University of Žilina
- Member of Scientific Council of Faculty of Special Engineering, University of Žilina, Žilina
- Member of Scientific Council of Transport Faculty, University of Pardubice, Pardubice
- Member of Scientific Council of TnU AD v Trenčíne, Trenčín
- Member of Scientific Council of AOS GMRŠ Liptovský Mikuláš, Liptovský Mikuláš
- Member of Editorial Board EDIS ŽU
- Member of Committee No 13 Ministry of Education SR for VEGA projects
- Member of Committees for Preparing Conferences (EU - opportunities for development of transport)
- Member of work unit No 8 of Accreditation Kommission

Assoc. Prof. Ing. **Jozef STRIŠŠ**, PhD.

- Member of Science Council of Faculty of Management Science and Informatics, University of Žilina
- Member of Draft Committee of Faculty Journal “Journal of Information, Controls and Management Systems”, University of Žilina
- Member of Committees for Preparing Conferences (EU - opportunities for development of transport)

## **Department of Software Technologies**

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**Administrative Department:** Bc. Iveta Červená

**Teaching Staff:**      Ing. Patrik Hrkút  
                                 Ing. Emil Kršák, PhD.  
                                 Ing. Ján Ružbarský, PhD.  
                                 Mgr. Ing. Ľuboš Sadloň, PhD.  
                                 Prof. Ing. Karel Šotek, PhD. - Visiting Prof.  
                                 Ing. Marek Tavač  
                                 Ing. Viliam Tavač, PhD.

**Researchers:**        RNDr. Hynek Bachratý, PhD.  
                                 Ing. Ondrej Bartl, PhD.  
                                 Ing. Miroslav Gábor  
                                 Assoc.Prof.. Ing. Miroslav Hrnčiar, PhD

**PhD Students:**      Ing. Michal Abaffy  
                                 Ing. Miroslav Gábor  
                                 Ing. Ján Janech  
                                 Ing. Marek Tavač  
                                 Ing. Matej Uram

## **II. EQUIPMENT**

### **II.1 Teaching and Research Laboratories**

Laboratory of Object Technologies

Laboratory of Control Process Developing

### **II.2 Servers:**

ZEUS	Fedora Core
VAII	Gentoo
HERMES	Gentoo
ATLAS	Gentoo
TITAN	MS Windows 2008 Server
JASON	MS Windows 2003 Server
PERSEUS	MS Windows 2003 Server
POSEIDON	MS Windows 2003 Server



### **III. PhD-Programme**

<b>Theme</b>	<b>Student</b>	<b>Supervisor</b>
Knowledge Search in Semantic Defined Environment	P. Hrkút	K.Matiaško
Service specifications and its effects on quality management	M. Uram	M. Hrnčiar
Object and temporal database transformation	M.Tavač	K.Matiaško
Database Distribution Process Control	J. Janech	K. Matiaško
Modelling and Simulation of Technological Processes	M. Abaffy	K. Šotek, Ľ. Sadloň

### **IV RESEARCH PROJECTS**

- EASYWAY – Improving Safety and Mobility by Intelligent Network Operations and Traveller Services on the European Road Network
- GTN – Software development for remote control of railway transport transit corridors
- ZONA, SENA – The systems for creation of railway timetables
- KANGO – Comprehensive application for modelling of on-line train diagram design
- ERES – Software development for design modelling of electronic interlocking plant for Austrian railways OBB
- HANIS – Navigation system for rescue vehicles of the fire brigade
- VIS – The system for the shortest path computations in Europe railways transport networks

### **V. COOPERATION**

#### **V.1 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

#### **V.2 Cooperation with Foreign Institutes and Enterprises**

- University of Pardubice, The Jan Perner Transport Faculty, Department of Informatics in Transport, Czech Republic
- INT - National Institute of Telecommunications, Evry, France
- TUD - University of Technology Dresden, Germany
- Czech Railways
- AŽD Prague, Czech Republic

#### **V.2.1. Foreign Visitors to the Department**

- BARWALD Werner, Prof., University of Technology, Dresden, Germany
- BAUMANN Stephan, Ass. Prof, University of Technology, Dresden, Germany

### V.3 Membership in Slovak Organizations and Societies

#### O. Bartl:

- Slovak Society for Operations Research

#### M. Hrnčiar:

- Slovak Society for Quality

#### E. Kršák:

- SANET – ADMIN

#### M. Gábor:

- Intelligent Transport Systems Association Slovakia

#### H. Bachratý:

- Union of Slovak Mathematicians and Physicists

### V.4 Membership in International Organizations and Societies

#### M. Hrnčiar:

- Austrian Society for Process Management

### V.5 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

## VI. BACHELOR THESIS

No.	Theme	Student	Supervisor
1.	Data-Sharing Extension in Windows Environment	O. Šňahničan	J. Ružbarský
2.	Interactive Smart Portal for Mathematical Games of NIM Type	D. Halušková	H. Bachratý
3.	Methods for Solving and Generating of SUDOKU Puzzles	L. Belák	H. Bachratý
4.	Language Translation management System	T. Galovič	J. Janech
5.	Sport Airport Information System	A. Majer	J. Ružbarský
6.	Truck Transport Information System	M. Csomos	J. Ružbarský
7.	College Information System	T. Chabada	J. Ružbarský
8.	Information System for Classroom Searching	M. Matloň	P. Hrkút
9.	Computer Network Simulator	M. Bendík	V. Tavač
10.	Order Monitoring Portal	V. Tuček	T. Koššiba

No.	Theme	Student	Supervisor
11.	Design and Implementation of Web Portal for Presentation, Seeking and Storing	L. Hriňa	H. Bachratý
12.	Bock Borrowing System	T. Motyčák	V. Tavač
13.	Information System for Management of Human Resources	J. Palček	J. Janech
14.	Graphic Object Collision management	J. Minarovský	J. Ružbarský
15.	WWW Application for Checking the Best Prices on the Product Market	J. Belica	V. Tavač
16.	Consumption Tax - Part of Firm Information System	L. Ďurčák	J. Ružbarský
17.	Quality Assurance in Support Processes	M. Matulová	M. Hrnčiar
18.	Administrative and Control Jukebox System	D. Novák	M. tavač
19.	Software Application for the Faculty Department Schedule Creation	D. Hamza	Ľ. Sadloň
20.	Software Application for the Ordering in Restaurant	E. Mečiar	Ľ. Sadloň
21.	ASP.NET Dynamic Data - Technology for Creation of Data-Driven Web Pages	Ľ. Zachar	B. Oliva
22.	Web Application for Generating Timetables for Mathematical Camps	R. Lobell	V. Tavač
23.	Mashup Applications for Web 2.0 Platform	M. Meško	P. Hrkút

## **VII. MASTER THESIS**

No.	Theme	Student	Supervisor
1.	Model Driven Object - Relational Mapping	K. Daňo	M. Tavač
2.	Restaurant Information System	M. Ferletjak	V. Tavač
3.	Object-Relational Mapping Methodologies Comparison	M. Príbeli	M. Tavač
4.	Security Subsystems for Distributed Intelligent Transportation System	M. Oboňa	E. Kršák
5.	Software for On-Board Unit with Support of Fleet Management	M. Trnovský	E. Kršák
6.	Design and Development of Plugging System for UML.FRI Case	T. Bača	J. Janech
7.	Communication System for Developing of Telematic Application IDS	M. Cundrák	E. Kršák
8.	Reusable Software for Preparation and Presentation Map Data	M. Chlapečka	E. Kršák
9.	Framework for Support of Development of Applications Base Entirely on Plug	V. Doboš	J. Janech
10.	Timetable Construction Tools - Station Track Occupation Plan	M. Plica	M. Gábor
11.	Automatic e-Mail Processing for Use in Faculty Portal	M. Valihora	P. Hrkút

No.	Theme	Student	Supervisor
12.	Database Applications Deployment and Maintenance Application Block	M. Urban	M. Tavač
13.	Possibilities of Software Application Transformations	J. Králik	J. Ružbarský
14.	Advanced Generation of Vegetables in Parallel Processing	M. Tomka	Ľ. Sadloň
15.	Internet Application Security	M. Niepel	P. Hrkút
16.	Information System for University Library	M. Mokryš	P. Hrkút
17.	Static and Dynamic Data Visualization in Web Environment	J. Rybárik	J. Ružbarský
18.	3D Model of Faculty Building	B. Boďa	P. Hrkút
19.	XML Forms Generating and Post-Processing	F. Bereň	P. Hrkút
20.	Undo/Redo Subsystem for UML.FRI CASE Development	P. Odlevák	J. Janechú

#### **IV. OTHER ACTIVITIES:**

##### **M. Hrnčiar:**

- President of Slovak Society for Quality
- Member of the Editorial Board of the revue “Kvalita”
- Member of the Slovak Technical Committee K22 - Quality

##### **E. Kršák:**

- Administrator of Certificate Authority FRI-ZU
- Registrar of internet domains TLD sk

##### **H. Bachratý:**

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

##### **J. Ružbarský:**

- Coordinator of Partnership among *University of Applied Sciences Dresden, Germany* and FRI ŽU Žilina

##### **K. Šotek:**

- Member of editors board of journal Transport
- Member of committee for science and research on Ministry of Transport CR

##### **M. Tavač:**

- Oracle Database: SQL Certified Expert

*Facilities of the Faculty and University of Žilina*



Faculty of Management Science and Informatics - general view



Entrance in the Faculty



Information Centre



Courses



Laboratory works



Laboratory of Dep. of Informatics



Seminars Rooms of University



Lecturer and Conference Halls of University



Refectory



Dining room



Fitness Centre of University



Fitness Centre



Library of University



Students Hostels

*Student's life in leisure*

**FRIFEST – Festival for students and Employees of the Faculty in May 13<sup>th</sup>, 2009**

