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SLOVAK UNIVERSITY OF TECHNOLOGY BRATISLAVA  
FACULTY OF CIVIL ENGINEERING

# **Annual Report on the Activities of the Faculty of Civil Engineering for 2010**

**BRATISLAVA**

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SLOVAK UNIVERSITY OF TECHNOLOGY  
BRATISLAVA**

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# 1. FOREWORD

The Presidium of the Faculty is submitting an evaluation of the Faculty activities for the year 2010 in compliance with Act No. 131/2002 Coll. On Universities as well as an evaluation of the fulfilment of intents worded in the Long-Term Intents of Development of the Civil Engineering Faculty prepared for 2007 to 2011 and their specification for 2010.

At its session in June 2009, the Accreditation Commission of the Government of the Slovak Republic approved the conclusion report on the course of accreditation at the Slovak Technical University (STU), approving the concluding assessment of the STU, including the acknowledgment to award degrees in study branches. The Faculty of Civil Engineering of STU has obtained the entitlement to perform educational process and award degrees in all study programs and branches for which it applied. Unfortunately, the 2009/2010 academic year was marked by the way of implementing the conclusions of comprehensive accreditation into the process of education at the STU in Bratislava. The results of comprehensive accreditation were notified to the Faculty at the beginning of the winter semester, while it was necessary to change over to instruction according to the newly accredited study programs in the course of it. This event has distinctly intervened into the life of the Faculty, requiring extraordinary efforts on the part of guarantors of study programs, teachers of the faculty as well as workers of the study department of the Faculty. It also intervened into the plans of students and, in many cases, it meant supplementing study plans with new subjects.

The new structure of study programs reflects the current options and interests of the Faculty as well as the needs of building and surveying practice. Thanks to a relatively good and gradually still improving qualification structure, the Faculty does not currently have any issue with providing guarantors for the study programs under preparation. The upcoming comprehensive accreditation of universities in the Slovak Republic has been planned for 2013. In co-operation with the management of the University, the Presidium of the Faculty carried out an analysis of needs for guarantors as early as in the course of the year with respect to the expected structure of study programs, based on which the principles of staffing policy at the STU and its faculties have been prepared for 2010 to 2012.

In the past period, the process of introducing a system of quality control in the educational process started. The basic documents of the system – manuals of quality and quality policy – were prepared, discussed and approved within the Faculty committees. The system has been introduced in practice, particularly since the beginning of the 2009/2010 academic year. It is expected to bring a substantial contribution to improving the quality monitoring of the educational process, create efficient feedback, clearly stipulating competencies and powers of all control elements of the educational process, create efficient tools to remove shortcomings found out and finally enhance the quality of the educational process. Due to the short time of the system functioning, distinct changes in the educational process or in the utilisation of system tools are not able to be noticed. The Presidium of the Faculty expects just in this area a distinct shift and activation in all degrees of managing the educational process.

In compliance with provisions of the Act on Higher Education, the main assignment of universities is also to provide creative scientific investigations in addition to providing a university background. Results of scientific and

research activities of universities and faculties have been already reflected also in the calculation of the amount of subsidies on the part of the Ministry of Education of the Slovak Republic. It should be expected that this form of evaluation will be of higher significance in annual terms. Systematic research activity proven by publications is thus becoming one of the basic conditions of the faculty's success and qualification growth of its employees. That is why the Presidium of the Faculty systematically strives to establish suitable conditions for creative work at all stages of management. In the area of research, the past period can be positively evaluated with satisfaction from the perspective of activating a prevailing majority of the Faculty's workers. The activity of the Faculty's creative workers has been distinctly enhanced in the areas of presenting projects and obtaining grants. Financial support for these projects is not negligible either. In 2010, the Faculty was assigned EUR 1.3 million in total. A weak point of the Faculty still remains its low success in the area of acquiring international grants. Therefore, the Faculty Presidium has found it necessary to focus the attention of task force teams on foreign projects, so that the share of foreign grants constitutes at least 25% of the total grant support by the end of the new office period.

The year 2010 was extraordinarily rich in qualification procedures, primarily in the field of habilitations. The Scientific Board of the Faculty of Civil Engineering discussed and recommended for further proceeding 1 inauguration and 11 habilitations, approved the awarding of scientific/academic degree of philosophiae doctor "PhD" to 43 successful graduates, taking into consideration information on 20 successful graduates at study programs of the 3rd degree of studies.

The publishing activities of the workers of our Faculty have been on the same level of past years. One of the indisputably positive features is the fact that the Faculty of Civil Engineering has been permanently placed in the leading ranks in assessments of the STU with the highest number of publications. Nevertheless, the Faculty does not keep this position in terms of the number of publications per worker, which proves the fact that the high standard of the Faculty has been maintained just by some of the teachers. A permanent task remains for the future – to involve all employees in publishing activities. The preparation of accreditation files pointed out a need to increase the publication quality. In the future, there should be a focus especially on renowned magazines, primarily foreign ones that are best valued on the part of external assessors.

Thanks to the activities of its employees, the Faculty of Civil Engineering of the STU has been currently involved in all significant programs of the European Union, such as the TEMPUS-Tacis, SOCRATES-ERASMUS and LEONARDO da VINCI II educational programs or the scientific/research 6<sup>th</sup> Framework Program. Neither should we forget other international activities, primarily the CEEPUS program, nor the bilateral programs that were extended by Faculty workers in the course of past years on the basis of bilateral contacts with foreign partner universities.

In the previous period of time, interest in studies at the Faculty of Civil Engineering has stabilised on the part of foreign students, especially in the study program of Civil Engineering (CE) provided by the Faculty in the English language. The proportion of foreign students at the faculty is almost 10% in all forms of instruction, due to which our Faculty is already ranked among the most successful faculties in the Slovak Republic. It is pleasing that the

numbers of foreign students have been gradually increasing also in Master's and doctoral degrees of studies as well as in the numbers of students coming from the EU countries.

In the area of information technologies, it is pleasing to note that the network infrastructure of the faculty meets requirements in the IT field as worded in the Long-Term Intent of the STU. The options of monitoring and managing the network have been distinctly enhanced. At present, more than 700 active connection ports have been installed on the premises of the Faculty. Classrooms of the Centre of Information Technologies of the Faculty of Civil Engineering are accessible to students of the Faculty for individual work on PCs in the time outside of instruction or, as the case may be, for the use of network services, including unrestricted access to the Internet. 20 PC stands and a plotter centre serve exclusively for the individual work of students.

A wireless WiFi network in classrooms is available at the Faculty, where most lessons take place, in the atrium, library and reading room as well as in the Assembly Hall of Academician Bella. In the aforesaid premises, network access is possible when working with a notebook without the need for cabling. It is extraordinarily important to make sure of the requirement for comfortable access of students to the information system of the STU. The consulting activities of workers of the IT Centre of the Faculty is provided to students on a daily basis.

In 2010, the Faculty continued in its activities in the area of reconstruction and more significant repairs of classrooms, seminar rooms and laboratories that were fully funded by extra-subsidy resources. Thanks to support by the STU management as well as the acquisition of several projects oriented on the improvement of infrastructure or laboratories, the Faculty managed to improve the quality of equipment in laboratories with instruments in a significant way. New laboratories are under construction (an aerodynamic tunnel, hydrodynamic laboratory as well as a laboratory of metrology of surveying and cartographic activities), which have ambitions to become leaders in these particular areas in the Slovak Republic in the future.

In 2010, activities directed at the comprehensive reconstruction of its buildings were started up in full scope at the Faculty. In the course of the year, the Faculty supported by the STU management carried out reconstruction of the C unit of the Faculty of Civil Engineering and barrier-free access to all units of the Faculty of Civil Engineering. In the year evaluated, the Faculty acquired a building permit necessary to implement investment intents directed at building up the Centre of Regional Technical Education at the UVZ in Kočovce.

A pre-condition of successful implementation of investment intents in the future as well as of participation of the Faculty's employees in international scientific/research projects is the creation of a stable economic environment. From this point of view, it is important that the Faculty has attained a positive economic result for several successive years. Equally to other years, profit was planned for 2010, which was able to be achieved thanks to distinct economic results in business activities as well as growth in incomes from foreign students in the framework of major activities.

Within the past years, the Faculty gradually improved performance indicators, thus permanently keeping its position in the group of faculties with a technical focus. This positive trend is also assisted by a gradually improving qualification structure of the Faculty and a permanently growing interest of foreign students in studies at our Faculty. Keeping this trend will be possible in the future just by focusing on increasing quality indicators both in the field of education as well as that of science and research. Understanding and acceptance of these facts is the only way leading to the goal of the Faculty to be ranked among those accepted by the global academic public as well as in the tables of renowned international rating agencies.

In Bratislava, February, 2011

Prof. Ing. Alojz Kopáček, PhD.  
Dean of FCE STU

## 2. EXECUTIVE BODIES OF FACULTY

### 2.1 The Faculty's Self-Administration Bodies

In compliance with the Act on Higher Education, the Faculty has the following bodies of academic self-administration:

- a) The Faculty's Academic Senate,
- b) The Dean of the Faculty,
- c) The Scientific Board of the Faculty,
- d) The Disciplinary Proceedings Board for the Students.

#### 2.1.1 The Faculty's Academic Senate (AS)

In 2010, the Academic Senate of the Faculty was working in the following composition:

##### Employees' part:

Ing. Naďa Antošová, PhD – Economic Commission

Assoc. Prof. Ing. Rudolf Ároch, PhD - Organisational Committee

Assoc. Prof. Ing. Katarína Bačová, PhD – Pedagogic and Scientific-Research Commission

Assoc. Prof. Ing. Michal Božík, PhD – Chairmanship of the AS

Ing. Róbert Fencík, PhD – Social Commission

Prof. Ing. Ľudovít Fillo, PhD - Chairmanship of the AS

Mgr. Jozef Joštiak (to 22 October Mgr. Zita Herzánová)–  
Legislative Commission

Prof. Ing. Jozef Hraška, PhD – Social  
Commission/Chairman

Ing. Ľuboš Hruštinec, PhD - Economic Commission/  
Chairman

Assoc. Prof. Ing. Ján Ilavský, PhD – Organisational  
Commission/Chairman

Ing. Juraj Janák, PhD - Pedagogic and Scientific-Research  
Commission

Ing. Ján Ježko, PhD - Economic Commission

Assoc. Prof. RNDr. Martin Kalina, PhD – Legislative  
Commission

Assoc. Prof. Ing. Juraj Králik, PhD - Pedagogic and  
Scientific-Research Commission/Chairman

Prof. Ing. Viliam Macura, PhD – Chairman of AS

Assoc. Prof. Ing. Ľudovít Možiešik, PhD - Pedagogic and  
Scientific-Research Commission

Assoc. Prof. Ing. Vladimír Pavlík, PhD - Social Commission

Ing. arch. Peter Sedlák - Legislative Commission

Ing. Jana Šabíková, PhD - Organisational Commission

PhDr. Soňa Vašková, PhD (since 22 October 2010 Mgr.  
Viola Števo) - Economic Commission

Assoc. Prof. Ing. Juraj Veselský, PhD – Vice-Chairman of  
AS

JUDr. Jana Zajacová - Legislative Commission/Chairwoman

##### Students' part:

Bc. Ladislav Balog - Pedagogic and Scientific-Research  
Commission

Eduard Bartík - Social Commission

František Hric – Member of Chairmanship

Mária Kočnerová - Organisational Commission

Bc. Soňa Kolenčíková - Economic Commission

Bc. Tomáš Kopecký - Legislative Commission

Bc. Tomáš Martiš - Legislative Commission

Ing. Monika Matejková - Pedagogic and Scientific-Research  
Commission

Soňa Medvecká - Organisational Commission

Bc. Daniel Novotný - Pedagogic and Scientific-Research  
Commission

Bc. Gabriela Szántová – Chairwoman of the Students  
Association, member of Chairmanship

Jozef Žoldák - Social Commission

In the course of 2010, the following members finished their  
membership in the Academic Senate:

Dagmara Čehelová, Bc. Mária Ďuriníková, Miroslav  
Kolenčík and Ing. Ján Karel.

#### 2.1.2 The Dean of the Faculty

Prof. Ing. Alojz Kopáčik, PhD. – approved by the Academic  
Senate of the Faculty on 1 December 2006.

#### 2.1.3 Scientific Board of the Faculty

The composition of the Scientific Board for the office period  
of 2007-2011 was approved at the session of the AS on 16  
February 2007:

##### Members of the Scientific Board (SB):

1. Prof. Ing. Alojz Kopáčik, Chairman of the SB, Dean of  
the Faculty, Department of Surveying
2. Prof. Ing. Peter Turček, PhD, Vice-Dean for Science  
and Research, Department of Geotechnics
3. Prof. Ing. Ivan Baláž, PhD, Department of Steel and  
Timber Structures
4. Prof. Ing. Bystrík Bezák, PhD, Department of  
Transportation Engineering
5. Prof. Ing. Juraj Bilčík, PhD, Department of Concrete  
Construction and Bridges
6. RNDr. Ladislav Brimich, CSc., Director of Geophysical  
Institute SAS Bratislava
7. Assoc. Prof. Ing. Peter Černík, PhD, Statutory Director  
of STRABAG Development Slovakia, Ltd.
8. Assoc. Prof. Ing. arch. Elena Dohňanská, PhD,  
Department of Architecture
9. Prof. Ing. Jozef Gašparík, PhD, Department of Building  
Technology
10. Prof. Ing. Ján Hefty, PhD, Department of Theoretical  
Surveying
11. Prof. Ing. Jozef Hraška, PhD, Department of  
Overground Building Structures
12. Prof. Ing. Koloman Ivanička, PhD, Institute of  
Management STU
13. Prof. Ing. Jozef Kriš, PhD, Department of Sanitary and  
Environmental Engineering
14. Ing. Pavol Kusý, PhD, Director of Terraprojekt, a.s.  
Bratislava
15. Prof. Ing. Viliam Macura, PhD, Department of Land and  
Water Resources Management
16. Ing. Peter Matiašovský, CSc., Director of ÚSTARCH  
SAS Bratislava
17. Prof. RNDr. Radko Mesiar, DrSc., Department of  
Mathematics and Descriptive Geometry
18. Prof. Ing. Jozef Oláh, PhD, Vice-Dean for Public  
Relations, Department of Overground Building  
Structures
19. Prof. Ing. Dušan Petráš, PhD, Vice-Rector of STU,  
Department of Building Services
20. Prof. Ing. Anton Puškár, PhD, Department of  
Overground Building Structures
21. Prof. Ing. Ján Ravinger, DrSc., Department of Structural  
Mechanics
22. Prof. Ing. Ján Szolgay, PhD, Department of Land and  
Water Resources Management

23. Prof. Ing. arch. Štefan Šlachta, PhD, The Chief Architect of Bratislava, the capital city
24. Prof. Ing. Andrej Šoltész, PhD, Vice Dean for Foreign Relations, Department of Hydraulic Engineering
25. RNDr. Vlasta Štekauerová, CSc., Director of Hydrological Institute SAS
26. Assoc. Prof. Ing. Stanislav Unčik, PhD, Vice-Dean for Education, Department of Material Engineering
27. Ing. Andrej Vojtičko, PhD.

#### Honorary members of the Scientific Board:

1. Prof. Ing. Zdeněk Bittnar, DrSc., Dean of the Faculty of Civil Engineering, Czech University of Technology in Prague
2. Prof. Ing. Ján Čelko, CSc., Dean of the Faculty of Civil Engineering, University of Žilina
3. Ing. Andrej Ďurkovský, Mayor of Bratislava, the Capital City of Slovakia
4. Prof. Ing. Dušan Majdúch, PhD, Chairman of the Slovak Chamber of Civil Engineers
5. Ing. Zsolt Lukáč, President of the Slovak Association of Construction Entrepreneurs of Slovakia
6. Assoc. Prof. Ing. Alois Materna, CSc., MBA, Dean of the Faculty of Civil Engineering, Technical University of Ostrava
7. Dr.h.c. Prof. PhDr. Ľudovít Petránsky, DrSc., Dean of the Faculty of Architecture, STU Bratislava
8. Ing. Vladimír Stromček, Chairman of the Directorate of the Chamber of Surveyors and Cartographers,
9. Prof. Ing. Ingrid Šenitková, PhD, Dean of the Faculty of Civil Engineering, Technical University of Košice
10. Prof. RNDr. Ing. Petr Štěpánek, CSc., Dean of the Faculty of Civil Engineering, University of Technology of Brno
11. Ing. Arch. Juraj Šujan, President of the Slovak Chamber of Architects

Honorary members of the Scientific Board are leading representatives of the faculties of civil engineering in the Czech Republic and Slovak Republic, Faculty of Architecture of STU, professional chambers and the Union of Construction Entrepreneurs of Slovakia.

As these posts undergo changes also during their office periods, for which the Academic Senate approves the composition of the Scientific Board, the AS submitted a proposal to approve the structure of honorary members of Scientific Board bound to the offices without stating their names.

In compliance with the aforesaid, the following structure of honorary members of the Scientific Board was approved at the session of the Academic Senate on 22 October 2010:

- Dean of the Faculty of Civil Engineering, Czech University of Technology in Prague
- Dean of the Faculty of Civil Engineering, Brno University of Technology
- Dean of the Faculty of Civil Engineering, Technical University of Ostrava
- Dean of the Faculty of Civil Engineering, University of Žilina
- Dean of the Faculty of Civil Engineering, Technical University of Košice
- Dean of the Faculty of Architecture, STU Bratislava
- Chairman of the Slovak Chamber of Civil Engineers
- President of the Slovak Chamber of Architects
- President of the Slovak Association of Construction Entrepreneurs of Slovakia
- Chairman of the Directorate of the Chamber of Surveyors and Cartographers

#### At present, the honorary members of the Scientific Board are:

Prof. Ing. Alena Kohoutková, CSc., Dean of the Faculty of Civil Engineering, Czech University of Technology in Prague  
 Prof. Ing. Josef Vičan, CSc., Dean of the Faculty of Civil Engineering, University of Žilina  
 Ing. Andrej Ďurkovský, Mayor of Bratislava, the Capital City of Slovakia  
 Ing. Zsolt Lukáč, President of the Slovak Association of Construction Entrepreneurs of Slovakia  
 Prof. Ing. Dušan Majdúch, PhD, Chairman of the Slovak Chamber of Civil Engineers  
 Prof. Ing. Darja Kubečková Skulinová, PhD, Dean of the Faculty of Civil Engineering, Technical University of Ostrava  
 Assoc. Prof. Ing. arch. Ľubica Vítková, PhD, Dean of the Faculty of Architecture, STU Bratislava  
 Ing. Vladimír Stromček, Chairman of the Directorate of the Chamber of Surveyors and Cartographers  
 Assoc. Prof. Doc. Ing. Vincent Kvočák, PhD, Dean of the Faculty of Civil Engineering, Technical University of Košice  
 Prof. Ing. Rostislav Drochytka, CSc., Dean of the Faculty of Civil Engineering, University of Technology of Brno  
 Ing. arch. Juraj Šujan, President of the Slovak Chamber of Architects

#### 2.1.4 Disciplinary Proceedings Board for the Students

The Disciplinary Proceedings Board was approved by the Academic Senate of the Faculty on 24 April 2009 in the following composition:

**Chairman:** Assoc. Prof. Ing. Stanislav Unčik, PhD.

**Members:** Prof. Ing. Andrej Šoltész, PhD,  
 Assoc. Prof. Ing. Juraj Králik, PhD,  
 Bc. Monika Matejková, Bc. Tomáš Martiš,  
 Bc. Mária Ďuriníková

#### 2.2 Advisory Bodies to the Dean

##### 2.2.1 Presidium of the Faculty

Since the beginning of the office period 2007 – 2011, the Presidium of the Faculty has been working in compliance with the Statutes of the Faculty in the following composition:

1. Prof. Ing. Alojz Kopáčik, PhD - The Dean
2. Prof. Ing. Andrej Šoltész, PhD - The First Vice Dean, Vice Dean for Foreign Relations
3. Prof. Ing. Peter Turček, PhD - Vice Dean for Science and Research
4. Assoc. Prof. Ing. Stanislav Unčik, PhD - Vice Dean for Education
5. Prof. Ing. Jozef Oláh, PhD - Vice Dean for Public Relations
6. Prof. Ing. Milan Sokol, PhD - Vice Dean for Development
7. Ing. Kornélia Polakovičová/Ing. Tomáš Šatura – Secretary
8. Prof. Ing. Viliam Macura, PhD - Chairman of the Academic Senate
9. Bc. Monika Matejková/Bc. Gabriela Szántová - Chairperson of the Students' Association FCE STU
10. Ing. Miloslav Štujber - Chairman of the Trade Union Organisation

In 2010, alterations in 2 posts occurred: after Ing. Polakovičová retired, the post of Faculty Secretary was assumed by Ing. Tomáš Šatura, while the Chairperson of the Students Association of SvF STU became Bc. Gabriela Szántová.



## 2.2.2 The Dean's Council

In 2010, the same alterations came about as in the Presidium of the Faculty, while other positions remained without any change:

### List of members of the Dean's Council:

1. Prof. Ing. Alojz Kopáčik, PhD - The Dean
2. Prof. Ing. Andrej Šoltész, PhD - The First Vice-Dean, Vice-Dean for Foreign Relations
3. Prof. Ing. Peter Turček, PhD – Vice-Dean for Science and Research
4. Assoc. Prof. Ing. Stanislav Unčík, PhD – Vice-Dean for Education
5. Prof. Ing. Jozef Oláh, PhD – Vice-Dean for Public Relations
6. Prof. Ing. Milan Sokol, PhD – Vice-Dean for Development
7. Ing. Kornélia Polakovičová/Ing. Tomáš Šatura - Secretary
8. Prof. Ing. Viliam Macura, PhD - Chairman of the Academic Senate
9. Bc. Monika Matejková/Bc. Gabriela Szántová - Chairperson of the Students' Association FCE STU
10. Ing. Miloslav Štujber - Chairman of the Trade Union Organization
11. Prof. Ing. Juraj Bilčík, PhD - Department of Concrete Construction and Bridges
12. Prof. Ing. Bystrik Bezák, PhD - Department of Transportation Engineering
13. Prof. Ing. Ján Hefty, PhD - Department of Theoretical Surveying
14. Prof. Ing. Štefan Sokol, PhD - Department of Surveying
15. Prof. RNDr. František Baliak, PhD - Department of Geotechnics
16. Prof. Ing. Ján Szolgay, PhD - Department of Land and Water Resources Management
17. Prof. Ing. Peter Dušička, PhD - Department of Hydraulic Engineering
18. Prof. Ing. Anton Puškár, PhD - Department of Building Construction
19. Prof. Ing. Ján Brodniansky, PhD - Department of Steel and Timber Structures
20. Assoc. Prof. Ing. Jozef Čizmar, PhD - Department of Mapping and Land Consolidation
21. Prof. RNDr. Radko Mesiar, DrSc. - Department of Mathematics and Descriptive Geometry
22. Assoc. Prof. RNDr. Jozefa Lukovičová, PhD - Department of Physics
23. Prof. Ing. Norbert Jendželovský, PhD - Department of Structural Mechanics
24. Prof. Ing. Jozef Gašparík, PhD - Department of Building Technology
25. Prof. Ing. Jozef Kriš, PhD - Department of Sanitary and Environmental Engineering
26. Assoc. Prof. Ing. Oľília Lulkovičová, PhD - Department of Building Services
27. PhDr. Dagmar Špíldová - Department of Languages
28. PaedDr. Ján Masarovič - Department of Physical Education
29. Ing. Katarína Heretiková, PhD - Department of Humane Sciences
30. Assoc. Prof. Ing. arch. Elena Dohňanská, PhD - Department of Architecture
31. Assoc. Prof. Ing. Milan Nič, PhD - Institute of Forensic Engineering
32. Ing. Vladimír Priechodský, PhD – Central Laboratories

## 2.2.3 Industrial Board

Ing. Daniel Baláž, Managing Director of Saint-Gobain Construction Products, Ltd., Division Weber, Terranova  
Ing. Imrich Béreš, Prvá stavebná sporiteľňa, a. s. Bratislava, (Chairman of the Board of Directors)

Ing. Anton Bezák, PhD, Managing Director of Ingsteel, Ltd., Bratislava  
Ing. Mikuláš Bobik, CSc., Director of Applied Precision, Ltd., Bratislava  
Ing. Ľuboš Fussek, Director of Baumit, Ltd.  
Ing. Marek Gáliik, CSc., Managing Director of the Trnava Water Company, a.s. Piešťany  
Ing. Daniel Gemeran, Chairman of the Directorate and Managing Director of the Bratislava Water Supply a.s. Bratislava  
Ing. Peter Halász, Director of Jaga Group v.o.s. (unlimited liability company), Bratislava  
Ing. František Hirner, Statutory and Managing Director of ZIPP, Ltd., Bratislava  
Ing. Anton Holos, PREMAC, Ltd., Bratislava  
Ing. Oto Hornáček, Managing Director of Hornex, a.s. Bratislava  
Ing. Jozef Hric, Chairman of the Directorate and Managing Director of TUBAU, a.s. Žilina  
Ing. Miloš Klein, Statutory of Wienerberger – The Slovak Brick Factory, Ltd.  
Ing. Marián Kmeť, Director of SOLHYDRO, Ltd., Bratislava  
Ing. František Kmiť, Director of PREMAC, Ltd., Bratislava  
Ing. arch. Gabriel Koczkáš, Chairman of the Directorate and Managing Director of Dopravoprojekt a.s.  
Ing. Pavol Kontra, PhD, Managing Director of VKÚ a.s. Harmanec  
Ing. Zsolt Lukáč, President of ZSPS (The Association of Construction Entrepreneurs of Slovakia)  
Ing. Ján Majerský, PhD, Director of Proma, Ltd., Žilina  
Ing. Dušan Mráz, President of Doprastav a.s. Bratislava  
Ing. Ladislav Németh, Chairman of the Directorate of Bala, a.s. Holice  
Ing. Pavel Obenau, Assistant to the Vice President of DDP Group, DOAS a.s.  
Prof. Ing. František Ohrablo, PhD, Honorary Chairman of the Alumni Club of FCE, STU in Bratislava  
Ing. Jozef Pekarovič, Director of NP Publications, Bratislava  
Prof. Ing. Dušan Petráš, PhD, Vice-Rector for Public and Foreign Relations, STU  
Ing. Ladislav Piršel, PhD, Statutory and Managing Director of Johnson Controls International, Ltd.  
Ing. Slavomír Podmanický, Managing Director of Reming Consult Slovakia  
Ing. Peter Pochaba, Managing Director of ABC Klíma, Ltd., Bratislava  
Ing. Jozef Ružanský, PhD, Managing Director of DREVONA a.s. Bratislava  
Assoc. Prof. Ing. Peter Suchánek, PhD, REHAU, Ltd., Bratislava  
Vladimír Šablica, Statutory Director of TONDACH, Slovakia  
Ing. Dušan Šamudovský, PhD, Managing Director of Doprastav, a.s.  
Ing. Miroslav Trnovský, Statutory of SkyBau, Ltd., Žilina  
Ing. Gabriel Tuhý, Director of Regotrans-Ritttheyer, Ltd., Bratislava  
Ing. Vladimír Uhlík, Managing Director of Geodesy a.s. Bratislava  
Ing. Anton Viazanko, Director of Durisol-Stav, Ltd.  
Ing. A. František Zvrškovec, President of Divident Group Slovakia, Bratislava  
Prof. Ing. Alojz Kopáčik, PhD, Dean of FCE STU Bratislava  
Prof. Ing. Jozef Oláh, PhD, Vice-Dean for Public Relations FCE STU Bratislava  
Prof. Ing. Peter Turček, PhD, Vice-Dean for Science and Research FCE STU Bratislava  
Prof. Ing. Andrej Šoltész, PhD, Vice-Dean for Foreign Relations, the Chairman of the Alumni Club of FCE  
Assoc. Prof. Ing. Stanislav Unčík, PhD, Vice-Dean for Education FCE STU Bratislava  
Prof. Ing. Milan Sokol, PhD, Vice-Dean for the Development of FCE STU Bratislava

### 3. EDUCATION

The 2009/2010 academic year was marked by the conclusion of the process of comprehensive accreditation at the STU in Bratislava. Results of the comprehensive accreditation were announced at the beginning of the winter term while it was necessary to change over to instruction according to the newly accredited study programs during the term. This event has distinctly intervened into the life of the Faculty, requiring extraordinary efforts on the part of guarantors of study programs, teachers of the faculty as well as workers of the study department of the Faculty. It also intervened into the plans of students and, in many cases, it meant supplementing study plans with new subjects.

#### 3.1 The structure of the study programs

In the 2009/2010 academic year, instruction started in the initial structure of study programs. Nine study programs were opened towards a Bachelor's degree, 14 towards a

Master's degree and 13 study programs towards a doctoral degree. Studies in 11 scientific branches were concurrently running in doctoral degree study.

As a consequence of comprehensive accreditation, the structure of study programs at the SvF STU was altered (Table 3.1). Study programs at the Bachelor's degree level retained their original names; however, study plans were slightly changed in some cases. More distinct alterations occurred at the Master's degree level, where a reduction of study programs came about from 14 to 12 and at doctoral level, where the number of study programs was decreased from 13 to 9.

The study programs of the economics and management of construction engineering (Master's degree) and sectoral and cross-sectional economies (doctoral degree) were shifted to the Institute of Management as a consequence of comprehensive accreditation.

**Table 3.1** The structure of the study programs

Initial study programs	Study programs after comprehensive accreditation
<b>Bachelor's degree study programs</b>	
Geodesy and Cartography	Geodesy and Cartography
Building Structures and Architecture	Building Structures and Architecture
Structural and Transportation Engineering	Structural and Transportation Engineering
Hydraulic Engineering and Water Resources Management	Hydraulic Engineering and Water Resources Management
Environmental Engineering	Environmental Engineering
Civil Engineering	Civil Engineering
Building Technologies and Management	Building Technologies and Management
Mathematical and Computational Modelling	Mathematical and Computational Modelling
<b>Master's degree study programs</b>	
Geodesy and Cartography	Geodesy and Cartography
Building Structures and Architecture	Building Structures and Architecture
Architectural Constructions and Design	Architectural Constructions and Design
Load-bearing structures of overground constructions	Load-bearing structures of overground constructions
Technical facilities of buildings	Technical facilities of buildings
Technology of environment of buildings	Technology of environment of buildings
Load-bearing structures of utility constructions	Civil-engineering structures and Transportation Engineering
Transportation Engineering	
Water constructions and water management	Water constructions and water management
Implementation of constructions	Technology of constructions
Civil engineering	-
Landscape engineering	Landscaping and landscape planning
Mathematical-computer modelling	Mathematical-computer modelling
Economics and management of construction engineering	-
	Environmental construction engineering

Original study programs	Study programs after comprehensive accreditation
<b>Doctoral degree study programs</b>	
Surveying and Cartography	Geodesy and Cartography
Theory and structures of overground constructions	Theory and structures of overground constructions
Theory and technology of environment of buildings	Theory and technology of environment of buildings
Theory and structures of civil-engineering constructions	Theory and structures of civil-engineering constructions
Medical engineering	Water-management engineering
Engineering hydrology	
Hydraulic engineering	
Applied mechanics	Applied mechanics
Technology of constructions	Technology of constructions
Landscaping	Landscaping
Applied mathematics	Applied mathematics
Judicial engineering	-
Sectoral and cross-sectional economies	-

**Table 3.2** Scientific branches of doctoral degree study

<ol style="list-style-type: none"> <li>1. Geodesy and surveying cartography,</li> <li>2. Theory and structures of overground constructions,</li> <li>3. Theory and structures of engineering constructions,</li> <li>4. Hydrology and water management,</li> <li>5. Hydraulic engineering,</li> <li>6. Medical/technical constructions,</li> </ol>	<ol style="list-style-type: none"> <li>7. Applied mechanics,</li> <li>8. Technology of constructions,</li> <li>9. Studies of non-metallic materials and building matters,</li> <li>10. Applied mathematics,</li> <li>11. Sectoral and cross-sectional economies.</li> </ol>
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### 3.2 Acceptance procedure

#### 3.2.1 Bachelor's degree study

The admission procedure for Bachelor's degree study was organised according to admission study principles usual for admission to studies of longer periods. Conditions of admission were published sufficiently in advance in materials of the Faculty, University, in the mass media and on the University's website. Studies at the Faculty were also promoted through the Akadémia education fair. Materials about the Faculty of Civil Engineering, study programs and admission procedure were sent to all secondary schools in the Slovak Republic.

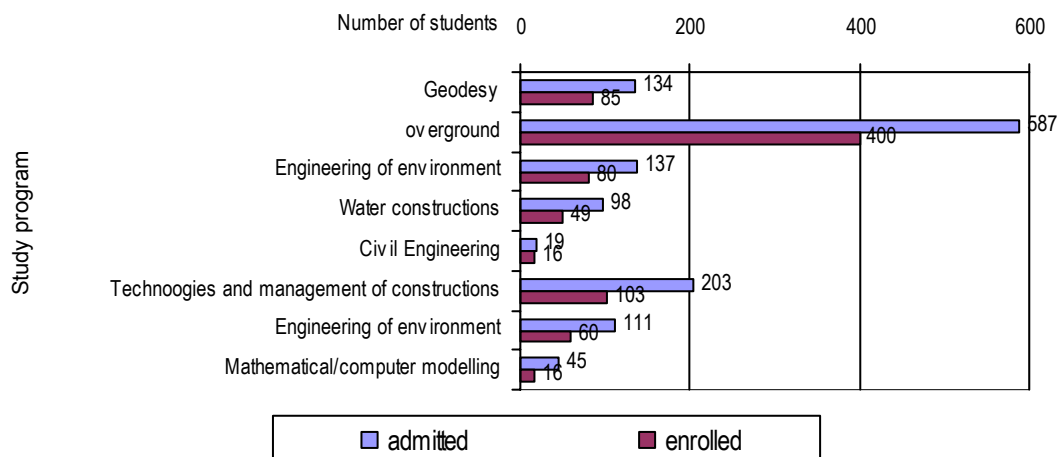
1,742 candidates applied for studies at the SvF STU, of which 954 satisfied conditions to be admitted without sitting the admission exam. Nevertheless, a certificate of school-

leaving exam was not submitted by 126 applicants. Altogether, 778 applicants were invited for the admission exam, of which 582 turned up for the exam. The total number of admitted students was 1,334. An investigation into the decision was asked for by 35 non-admitted applicants, while all decisions were confirmed by the rector of the STU. An overview of the admission procedure for separate study programs is shown in Chart 3.1.

From among the total number of students enrolled in the 1st year of the Bc. degree study, 57.7% are school leavers from secondary grammar schools, 42.2% school leavers from secondary technical schools and 0.1% school leavers from vocational apprenticeship schools or other secondary schools, as the case may be.

Women represent 31% of the total number of students enrolled in the 1<sup>st</sup> year.

Chart 3.1 - Breakdown of students admitted to the 1st year in the academic year 2010/11



### 3.2.2 Master's degree study

The admission procedure for Master's degree study was carried out in compliance with the order of the admission procedure of the STU and principles of admission procedure of the FCE STU. Application forms for study programs towards a Master's degree were filed by 30 June 2010. A basic condition to be admitted for a Master's degree course of study was to pass the Bachelor's degree course of study and obtain the degree of Bc. Other conditions were differentiated depending on the mutual linkage of study programs. In cases when there was an interest in the studies of the study programs which were linked, applicants were admitted without passing the admission exam. An exception was the study program of overground constructions and architecture, where applicants had to succeed in the talent exam.

In the case of interest in a study program that was not immediately linked up to the study program of the Bachelor's degree course of study, the applicants underwent an admission exam within the scope of a state exam of the Bachelor's degree course of study that constitutes a basis for the particular Master's degree course of study.

Altogether, 662 applicants showed an interest in a Master's degree course of study at the FCE STU, of which 591 students met the criteria at the time of filing application forms to be admitted without sitting an admission exam (on condition of successful completion of Bc studies), out of which 507 applicants were eventually admitted.

The total number of applicants admitted for Master's degree studies amounts to 557. An overview of admission procedures for separate study programs is shown in Table 3.3.

admitted to separate study programs on the basis of study results, results of the admission interview and language test. When setting up the waiting lists, there were also considered the needs of individual working places and the load capacity of tutors at the working places.

The Faculty of Civil Engineering was assigned 48 scholarship posts for full-time postgraduate students, which were distributed to individual study programs upon an agreement with guarantors in the following way: theory and structures of civil-engineering constructions - 8, applied mechanics - 1, water-management engineering - 8, landscaping - 3, geodesy and cartography - 6, theory and structures of overground constructions - 6, theory and technology of environment of buildings - 4, applied mathematics - 5, and technology of constructions - 7.

Admitted candidates were enrolled in their studies as of July 20, 2010. Two of the admitted applicants for studies in the end did not turn up, thus two substitute candidatures advanced to their posts.

### 3.3 Assessment of success rate in studying

The basic quantitative indicators of success in studies are the numbers of students enrolled in separate years and study programs (Table 3.4).

Table 3.4 shows a distinct decrease of students passing into the second year of study, which is manifested as a long-term trend. This decrease is caused by a high percentage of students who did not manage the study demands, leaving as early as in the course of the first year. In the past academic year, the decrease of students in the first year

**Table 3.3** Breakdown of applicants for Master's degree studies according to study programs

Study program	Number of applicants	Admitted students	Enrolled students
GAK	83	65	51
AKP	122	103	99
TZB	52	45	43
TPB	22	19	20
PSA	42	37	34
NKPS	54	53	51
IKDS	43	40	39
VSVH	40	33	31
TS	127	106	103
ES	16	16	16
KKP	48	37	31
MPM	13	7	7
<b>FCE in total</b>	<b>662</b>	<b>561</b>	<b>525</b>

### 3.2.3 Doctoral studies

The examination for acceptance into doctoral study was held on June 24 and 25, 2010. A language proficiency test formed the first part of the examination (24 June 2010). The admission exam itself was oral in the form of an interview in the presence of the admission committee. 105 candidates applied for full-time doctoral studies and 18 candidates for part-time study. 105 candidates participated in the exam in the form of full-time studies and 16 in the form of part-time studies. Admission committees set up a waiting list for being

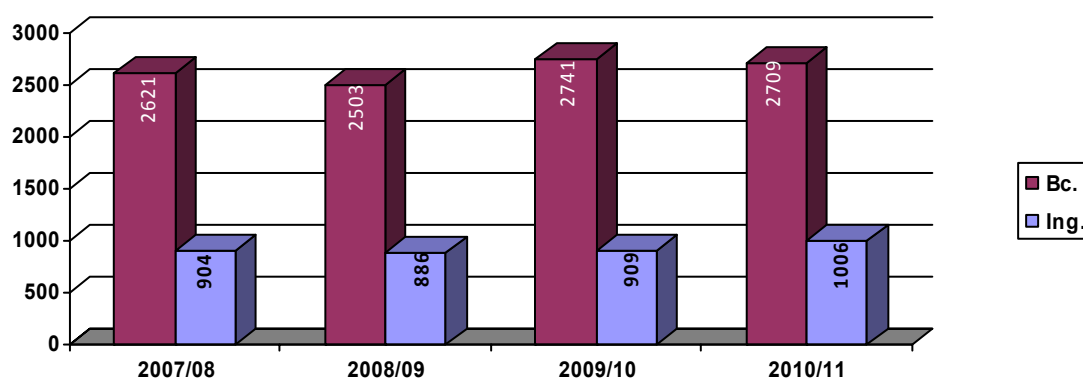
after the winter term represented 14.2%, and after the first year of studies 25.2%.

The problems of success in the third year have kept persisting. Out of the total number of 967 students finishing in 2010, 49.5% of students concluded their studies with a Bachelor's degree. In 2009, it was 70%, and in 2008 67%. These results are distorted by a high number of foreign students in the CE study program, who did not conclude their studies. When evaluating the success rate of studies

**Table 3.4** The number of students according to years

Year	Number of students			
	2007/08	2008/09	2009/10	2010/11
1 <sup>st</sup> Bc.	996	883	845	<b>892</b>
2 <sup>nd</sup> Bc.	759	696	666	<b>664</b>
3 <sup>rd</sup> Bc.	821+45ex	700+3 ex	907	<b>765</b>
4 <sup>th</sup> Bc.	-	221	323	<b>388</b>
1 <sup>st</sup> Ma	456	475	440	<b>520</b>
2 <sup>nd</sup> Ma	420+28ex	408+3 ex	468+1ex	<b>486</b>
Total	3,452 + 73ex	3,383+6 ex	3,649+1ex	<b>3,715</b>

**Chart 3.2** - Total number of students of the 1<sup>st</sup> and 2<sup>nd</sup> study degree in 2007/08 - 2010/11



without the CE program, 58.55% of students concluded their studies. Upon such an evaluation, the success rate in studies is the lowest within the past three years. The lowering success rate of studies was probably affected by the impact of accreditation and alteration of study plans during the winter term, causing a higher load of students and in many cases supplementary exams for graduating students as well.

Quality indicators of study are practically the same as in the previous year. In the past year, our graduates acquired 6 Awards of the Rector and 17 Awards of the Dean.

The best students from individual study programs closely related to the particular industrial sector have been given an award from a government minister on an annual basis. As two ministries were cancelled, only the Award of the Minister

of Posts, Transport and Telecommunications and the Award of the Geodesy, Cartography and Cadastre Authority of the Slovak Republic were awarded in the past academic year. Further, in the past academic year, 11 graduates were awarded an honorary mention of the Dean for excellent final theses and 7 graduates for excellent Bachelor's essays. Three graduates acquired the Award of the Slovak Chamber of Civil Engineers and one graduate received the Award of the Chamber of Surveyors and Cartographers. Two graduates from Master's degree studies received the UNICERT language certificate.

On the occasion of the International Students' Day, the 32 best students of the Faculty were rewarded by the Dean of the Faculty, who rewarded their study results with extraordinary scholarships.

**Table 3.5** Commendations

Commendation	2005/06	2006/07	2007/08	2008/09	2009/10
<b>Bachelor's degree study</b>					
Award of Dean	2	3	2	5	8
Award of Rector	-	-	-	5	2
<b>Civil-engineering studies (Ing.)</b>					
Design studio Award of Dean	5	2	4	4	4
Award of Rector	4	16	15	19	9
Award of Govt. Minister	3	7	6	1	4
	4	3	3	3	2

In 2010, 61 PhD students successfully finished their studies, of which 39 were in full-time (including 1 foreign governmental scholarship holder) and 22 in part-time forms of study.

Out of the total number of 61 graduates, there were 41 PhD students of scientific branches which will not be continued (21 full-time and 20 part-time PhD students of study programs) and 20 doctoral students (18 students in full-time study – of which there was 1 foreign student, and 2 part-time PhD students).

### 3.4 Student mobility

Short-time exchanges of students and long-term study stays continued in the 2009/2010 academic year as well. The Faculty of Civil Engineering of STU along with the Faculty of Architecture of STU rank among the most active faculties within the Slovak Technical University. The Faculty provides for passing part of the studies (usually 1 semester) abroad in the framework of the Erasmus EU program.

In the 2009/2010 academic year, 21 of our students travelled to study at foreign universities out of the total number of 42 signed up within the Socrates-Erasmus program. This form of study is designated primarily to the best students. Therefore, it is necessary to choose capable candidates both in terms of expertness as well as language proficiency and to prepare a study program and check the fulfilment of all particulars according to the criteria of ECTS (European Credit Transfer System), so as to avoid unnecessary issues in the initial stages of arranging a stay abroad.

A more generous judgement of equivalence subjects studied abroad would be of help to students interested in studies abroad, considering the harder conditions of studies in a foreign language as well as the issue of the very composition of study abroad, so that it would be equal with that at the home Faculty.

A factor that would not increase interest in study is the rule of the rector's office on the necessity to acquire at least 20 credits from abroad, with the grant being cut in the opposite case.

It is agreeable that in the past academic year interest to study at our Faculty was also maintained with students from foreign universities in the framework of the Erasmus program.

The Faculty admitted students from Bilbao (Spain), 2 students from Leon (Spain (GZA), Granada (Spain, CE), 2 students from Vilnius (Lithuania, CE), Ljubljana (Slovenia, GZA), Dresden (Germany, VHK), 2 students from Ústí nad Labem (Czech Republic, Environment) and Budapest (Hungary, GTE).

The acceptance of foreign students is helped by an offer of study programs in English (CE) as well as an improvement in information for foreign applicants on the Internet.

### 3.5 Student scientific conference

In the 2009/2010 academic year, the Student Scientific Conference took place on 28 April 2010. The competition was run in 15 sections with the participation of 197 students

with 177 works. 88 distinguished experts from the Faculty and in practice were working in expert commissions. The 59 works ranked in the 1st to 3rd positions were commended as were the 4th and 5th positions in sections with more than 11 works. 11 works were proposed to be awarded the Prize of the Literature Fund (LF). The ranking of works placed in unawarded positions was not specified.

This year, the 11<sup>th</sup> year of the competition of the student scientific expert activities (ŠVOČ) of the faculties of civil engineering of the Czech Republic and Slovak Republic, took place at the Faculty of Civil Engineering of the Czech Technical University (ČVUT) on 20 May 2010. There were competing students from the faculties of civil engineering of the Czech Technical University of Prague (ČVUT Praha), Technical University (VTU) of Brno, Mining College of the Technical University (VŠB TU) of Ostrava, University of Žilina (ŽU), Technical University (TU) of Košice and Slovak Technical University (STU) of Bratislava. The competition was carried out in ten sections, where 22 works for each faculty were presented. Chart 3.3 shows an overview of positions of separate faculties in the first three ranks.

The 2nd year of the contest of the Student Scientific Conference of the Slovak Technical University (ŠVK STU) took place in 2010. The university round of the contest is organised in the branches in which instruction is run on several faculties of the University. Students of the Faculty of Civil Engineering (SvF) took part in the contest within the sections of applied mathematics and in language sections. Students of the Faculty of Civil Engineering took the first three ranks in the section of applied mathematics.

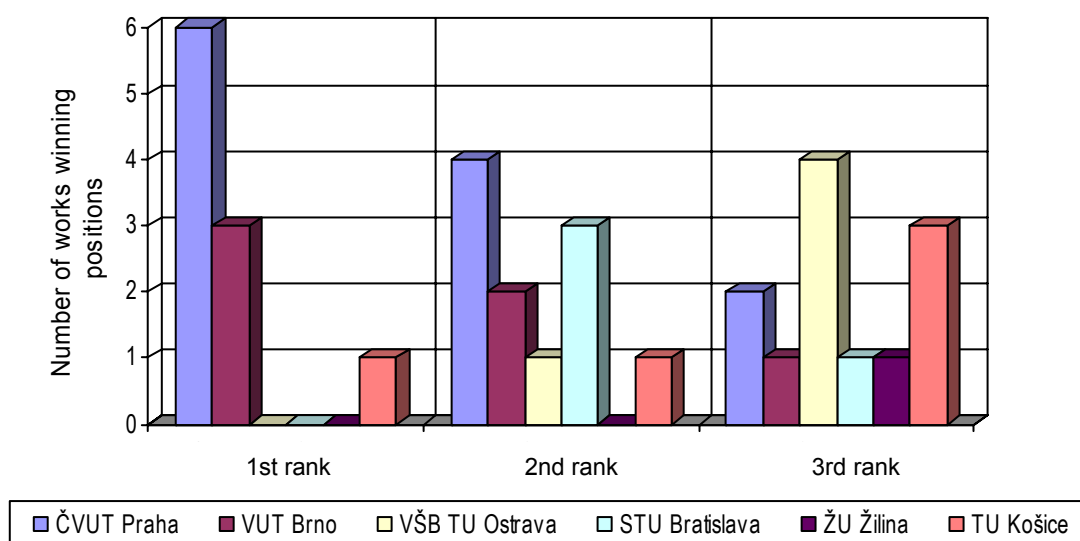
In addition to participation in the aforesaid faculty, university and international contests, the students of the Faculty took part in competitions organised by other faculties and universities in 2010:

- A student of the study program of mathematical-computation modelling, Bc. Juraj Hrabovský, successfully participated in the contest of the Student Scientific Conference (ŠVK) at the Faculty of Electrical Engineering and Informatics (FEI) of the STU and he won in the section of applied mechanics, winning the Award of the Dean of the FEI.
- The Czecho-Slovak round of the contest of Students' Scientific Expert Activities (ŠVOČ) in the section of applied mathematics took place in Ostrava. A student of our Faculty took second place.
- On 20 – 23 May 2010, the MDG department organised the 2nd year of the ISCAMI international student conference, whereas the expert sponsorship of the conference was assumed by the EUSFLAT international association (European Society for Fuzzy Logic and Technology). Altogether, 62 students from 6 countries (Slovak Republic, Czech Republic, Italy, Spain, Kazakhstan and Turkey) took part in the conference with 55 presentations. Individual sections were presided over by experts from the Czech Republic, Poland and India. 12 students of the FCE STU took an active part in the conference and 8 workers of the KMDG SvF STU department participated in its organising (both in its expert as well as social parts).

**Table 3.6** Student Scientific Conference number of works

Department	Number of works of the Department	Number of students	Section	Number of works in the section	Number of positions awarded	Number of board members
ARC	6	6	Architecture	6	3	5
DOS	9	10	Transportation Engineering	9	3	5
FYZ	13	23	Physics in Construction Engineering	13	5	5
GDE	1	1	Geodesy and Cartography	7	3	5
GZA	5	6				
MPU	1	1				
HTE	7	7	Hydraulic Engineering	7	3	5
BKM	3	4	Civil-engineering Structures	9	3	5
MTI	1	1				
GTE	5	5				
JAZ	16	17	Languages	16	5	5
KPS	8	10	Building Structures	8	3	6
KDK	11	11	Steel and Timber Structures	11	5	5
MDG	11	11	Mathematical and Computation Modelling	11	5	5
SME	9	10	Structural Mechanics and Geotechnics	9	3	5
TZB	10	13	Technical Equipment of Buildings	10	3	5
TES	23	23	Technology of Buildings	23	5	10
VHK	15	15	Water Resources Management	15	5	5
ZEI	23	23	Sanitary and Environmental Engineering	23	5	12
<b>TOTAL</b>	<b>177</b>	<b>197</b>	<b>15</b>	<b>177</b>	<b>59</b>	<b>88</b>

Chart 3.3 - Overview of number of works winning positions



### 3.6 Managerial activities and supervision in education

Providing quality education is a primary mission of universities. The management of the Faculty is fully aware of the quality of the educational process being dependent to a high degree on the quality of management and supervision of this process at all levels. That is why it pays appropriate attention to the system of management of education quality. Educational matters are discussed at each session of the Presidium of the Faculty and Dean's Council on a regular basis. Principal and conceptual documents touching the educational process are also approved by the academic senate of the Faculty and Scientific Board. Major elements of management and supervision activities have been embedded in the fundamental document – the system of quality control of the educational process.

A lower degree of managing the educational process is represented by educational-scientific councils that have been established with every Bachelor's degree study program. These councils direct the educational process in the framework of the particular linked up Bachelor's degree study program and Master's degree study program. The chairperson of the educational council is a guarantor of the relevant Bachelor's degree study program. Also, students have their representation in the councils of separate study programs.

The guarantor of a study program occupies an irreplaceable position in the process of quality control of education at the level of the study program. The position of the guarantor within the structure of the Faculty, its powers, rights and obligations is stipulated by the Statutes of the Guarantor of the Study Program. A basic tool to control quality, which is available to guarantors of study programs, is the results of study in a study program and the evaluation of education quality by students of each study program.

Regular meetings of the guarantor with students of their study program belong among the basic duties of the guarantor of a study program. The aim of these meetings is mutually informing on events within the framework of the study program and finding a fast solution to possible issues. The guarantor informs students on the contents of the study program, obtains information from students, primarily on the quality of lectures and exercises, issues related to rooms and schedules, etc. Subsequently, they address problems in co-operation with guarantors of subjects or, as the case may be, with heads of departments, while more serious issues are resolved with the appropriate vice-dean.

An integral part of managing the educational process is its control by means of inspections. The aim of inspections is, on the one hand, to check the quality of the educational process from the point of view of keeping the time earmarked for instruction, contents of the subject, preparation by the teacher, the intelligibility of explanation, etc.; on the other hand, the goal of inspections is to help young teachers.

From the perspective of quality control of the educational process, the inspection activities of guarantors of each study program is of big importance. These activities belong among their basic duties.

Despite considerable efforts of the Presidium of the Faculty and despite the fact the inspection activities are also defined in the establishing document of quality control of educational process – the system of quality control and quality of inspection activities has not been managed to be kept to the generally required standard.

### 3.7 Evaluating the quality of the teaching process and the assessment of teachers by students

In compliance with the Act on Universities, the evaluation of quality of the educational process belongs among the fundamental rights of students. The Presidium of the Faculty of Civil Engineering of the STU understands the evaluation of the educational process by students not only as a right of students, but also a tool of improving the quality of the educational process, and therefore it has been striving to create space for this evaluation for several years.

In the 2009/2010 academic year, the evaluation of the educational process was run through AIS. The poll was made accessible to students within the months of May and June, i.e. before the end of the summer term and during the exam period. This term seemed optimal based on experiences of the previous year. The principles of evaluation were prepared by the Association of Students (Students' Parliament). The Association of Students collaborated in devising questionnaires with the Presidium of the Faculty and with experienced educationalists. The questionnaire and organisational provisions of evaluation were discussed by the Presidium of the Faculty. In addition to the faculty questionnaire that was focused on acquiring information on the quality of instruction in separate subjects, a university questionnaire was also made accessible to students with a focus on the evaluation of the overall standard of education at the Faculty.

Despite promotion of the poll by the student organisation as well as an e-mail message that was received by each student of the Faculty, participation in the poll was very low. The number of potential respondents who could take part in the poll was 3,626. 457 students, i.e. 12% out of the total number of students, took part in the Faculty poll on evaluating the subjects of the winter term. 306 students participated in the evaluation of subjects of the summer term, representing an 8% involvement. Participation in the university poll was even lower, where the questionnaire was completed only by 198 students, representing 5%. The involvement of students in separate study programs and years of study varied very much. Out of the total number of subjects taught, 481 in the winter term and 522 in the summer term, just 281 of them were evaluated in the winter term and 256 in the summer term. Altogether, 466 subjects were not evaluated at all. The average number of evaluations per subject was 5.12 in the winter term and 3.7 in the summer term.

It follows from the results of the poll that an overwhelming majority of teachers evaluated has been perceived by students in a positive way. There have been also less positive assessments. It has happened that a teacher has been evaluated positively by some students or, as the case may be, very positively, and in a negative way by some other students.

The results of evaluation are accessible to members of the Presidium of the Faculty. All guarantors of study programs have access to results of the evaluation within the framework of their study programs. Their obligation is to discuss possible negative evaluations with heads of the appropriate departments. The heads of departments will be obliged by the Presidium of the Faculty to address the cases at issue. The heads of departments will inform the Presidium of the Faculty on measures adopted.

The results of the poll confirmed the falling interest of students in this way of evaluating the quality of the educational process. Despite the timely and massive



information as well as optimum time when the poll took place, it was not possible to acquire a sufficient number of respondents. With such a participation rate, the poll cannot meet its function of being a certain form of feedback necessary to enhance the quality of the educational process.

The Presidium of the Faculty was informed on the views of students about the quality of the educational process also via representatives of students in the academic senate and in the Presidium of the Faculty as well as directly by students at meetings on the occasion of Students' Day in the winter term. Comments and proposals by students were addressed by relevant Vice-Deans or by the Dean of the Faculty, as the case may have been. The students got the space to express their views on the quality of the educational process also at the session of the academic senate.

### **3.8 Area of student grants and loans**

#### **3.8.1 Social scholarships and loans**

The social agenda of students, to which belongs the payment of scholarships and loans for students, is besides the care of study matters ensured by the study department of the Faculty. In the 2009/2010 academic year, a social scholarship was received by 338 students. The amount of scholarship varied from 10 to 260 €. The total amount paid as social scholarships amounted to 488,445 €. In the 2009/2010 academic year, loans were drawn down by 43 students of the Faculty of Civil Engineering of the STU.

#### **3.8.2 Merit scholarships**

In the past academic year, incentive performance-based as well as extraordinary scholarships continued to be paid. Incentive performance-based scholarships for results of studies in the 2009/2010 academic year were awarded to 308 students, of which 221 students were in Bachelor's degree courses of study and 87 students in Master's degree courses of study. A scholarship was awarded to students in higher years of studies (not to those in the first year of study). A scholarship in the amount of 700 € was awarded to 153 students (110 in the Bc. degree course of study and 43 in the Master's degree course of study) and a scholarship in the amount of 350 € was awarded to 153 students. One student was awarded a scholarship amounting to 325 € and one in the amount of 324 €.

Waiting lists were put together in compliance with rules for the awarding of incentive scholarships approved in the

academic senate of the Faculty of Civil Engineering. In the Bachelor's degree course of study, waiting lists were created independently by separate study programs, while a common waiting list was for all study programs in the Master's degree course of study.

For excellent study results (the Dean's Award), extraordinary incentive scholarships were awarded to 9 graduates from the Master's degree course of study and 8 graduates from the Bachelor's degree course of study in the amount of 250 €. Six students, holders of the Dean's Award, were proposed to be awarded extraordinary scholarships by the Rector of the Slovak Technical University. For excellent concluding theses, extraordinary scholarships were awarded to 11 graduates of the Master's degree course of study in the amount of 150 € and 7 graduates of the Bachelor's degree course of study in the amount of 100 €. For excellent results in the last year of study, incentive scholarships were awarded to 20 students in the amount of 700 € and 20 students in the amount of 350 €. For representing the Faculty in sports, one student was awarded a scholarship amounting to 200 € and 21 students in the amount of 100 €. For activities carried out in favour of development of the Faculty, extraordinary scholarships were awarded to 10 students in the amount of 100 to 200 €. For results in research, one scholarship was awarded in the amount of 100 €. On the occasion of Students' Day, extraordinary scholarships were awarded to 32 students – the best students in study programs and years of studies.

### **3.9 Lifelong learning**

Linked to study branches or, as the case may be, study programs, the Faculty of Civil Engineering offers courses of further education, whose aim is gradually to create an integral system of lifelong education. In the 2009/2010 academic year, the Faculty of Civil Engineering of the Slovak Technical University (SvF STU) offered to the expert public 18 courses that were attended by more than almost 400 trainees (Annex No. 1).

The quality of separate courses may be assessed as very good. The courses were met with high interest by trainees who appreciated the good standard of preparation and advancement of the courses as well as the study materials provided. In the framework of the courses, much attention was paid on the part of lecturers to the preparation of text in the form of CDs for many of the courses or in the form of printed background materials. Accredited courses are provided with study literature in the form of university textbooks.

## 4. SCIENCE, TECHNOLOGY

In the spirit of the proclamations of the Ministry of Education of the Slovak Republic, according to which accreditation results as well as preliminary results of the year just finished should be taken into account, the very favourable results of 2009 provided hope for a higher subsidy from the state budget. Nonetheless, the start to 2010 did not signal much optimism. Levelling in the form of wiping out the quality and assessment parameters was a distinctly demotivating element for creative workers in the beginning of 2010. Despite that, when summarising the results in the area of science and research, the Presidium of the Faculty expresses its gratitude to all creative workers who, regardless of the marginal conditions, contributed to the relatively successful year of 2010 practically in all measurable indicators.

### 4.1. Activities of the Faculty's Scientific Board

The Scientific Board of the Faculty plays an irreplaceable role in the form of directing the research activities of the Faculty. It consists of 27 ordinary and 11 honorary members. Its stable composition was also reflected in the systematic work of 2010 when it met four times, whereas its major conceptual materials comprised the regular evaluation of the Annual Report for the previous year, the approval of study plans for the upcoming academic years well as related staffing (guarantors of subjects, composition of state-exam committees, supervisors, etc.), current issues of accreditation, the assessment of educational and research activities of the Faculty for the previous year.

A significant part of work of the Scientific Board is created by approving qualification procedures whose overview can be found in Table 4.1.

**Table 4.1** Proposals for qualification promotion approved by the Scientific Board in 2010

	Associate Professors	Professors	Emeritus Professors	Guest professors	PhD
12 March 2010	Barloková (ZEI) Füri (TZB) Olbríemek (KPS) Rychtáriková (KPS)				3+0*
18 June 2010	Krivá (MDG) Škultétyová (ZEI)	Králik (SME)	Ohrablo (KPS)		2+8*
8 October 2010	Stanko (ZEI) Bašková (TU KE)			Bezák (KDK)	8+9*
10 December 2010	Psočný (SME) Hulínová (TES) Jankovichová (TES)		Bartoš (GDE)		30+2*

Note: \*Number of defended PhD theses according to new study programs

### 4.2 Science and research activities

The most stable areas of research are performed under the VEGA and APVV agencies, from where the largest resources of research funding are obtained. Unfortunately, the streamlining measures of the Ministry of Education of the Slovak Republic has had a negative impact upon the Faculty. An overview of resolved projects has been prepared in Table 4.2. It would be very short-sighted to be satisfied with the results achieved, as there are even more successful faculties in the Slovak area in terms of recalculating financial resources per creative worker. A detailed analysis of the bulk and structure of research projects shows that not all departments have been involved to the same extent in resolving the grant projects. When comparing the share of foreign grants to domestic ones, such an assessment has an even less optimistic impact. The share of 14% of foreign grants compared to domestic ones is not agreeable for the Faculty, which claims a foremost rank in the Slovak market of science and research. The task for the next year will be to challenge the workers of the Faculty to file foreign grants in distinctly higher numbers. The starting points in the area of research are considerably limited in Slovak conditions. In past years, research in the

Slovak Republic has been stricken by streamlining measures both in the form of freezing new challenges in various agencies as well as by cutting subsidies from the state budget. It should be considered that support for university research will probably stagnate in upcoming years. Projects subject to EU approval are ever more strictly judged and, at the same time, it should be expected that resources of funding will not be enhanced. Despite these generally more demanding conditions, it is necessary to more distinctly increase efforts in getting involved in international projects. This is reflected not only in direct support for research tasks, but also in a better revaluation upon calculating the state subsidy. The Presidium of the Faculty finds it necessary to concentrate the attention of task forces on foreign projects, so that they constitute a share of at least 25% of the entire grant support by the end of the new office period. The success of research is, to a considerable degree, subject to the intellectual power and planned capacity earmarked to solve a scientific task. That is why the Presidium of the Faculty recommends the heads of research consider the options of accumulating their capacities in the framework of departments, among departments as well as in research areas outside of the Faculty.

**Table 4.2** Projects resolved at the Faculty in 2010

Agency	Number	Years of solution	Financial funds assigned from the state budget in 2010		Financial funds assigned from another source €
			Current €	Capital €	
VEGA	23	2008 - 2010	126,802	52,005	
	10	2009 - 2011	83,686	33,905	
	15	2010 - 2011	90,173	70,177	
	2	2008-2010 with SAV and FEI	6,235	2,842	
	2	2009-2011 with SAV and FEI	2,404	1,700	
<b>Total:</b>	<b>52</b>		<b>30,300</b>	<b>160,629</b>	
KEGA	1	2008 - 2010	1,132		
	1	2009 - 2011	26,556	9,136	
	1	2010 - 2012	2,036		
<b>Total:</b>	<b>3</b>		<b>29,724</b>	<b>9,136</b>	
APVV	6	2008 - 2010	377,647	2,655	
	3	2008 - 2011	84,777		
	2	2009 - 2012	65,980		
	1	2009 - 2010	1,294		
<b>Total:</b>	<b>11</b>		<b>529,698</b>	<b>2,655</b>	
APVV – cooperation with other organisations	3	2008 - 2010	49,425.76		
	1	2010 - 2011	10,110.00		
<b>Total:</b>	<b>4</b>		<b>59,535.76</b>		
Structural funds of ESF	4	2010			5,690
Projects of state program of research and development	2	2010	20,000		
International research projects	10				144,461
International education programs	7				42,603
Norwegian financial mechanism	1				129,652
<b>Total:</b>			<b>968,257.76</b>	<b>172,420</b>	<b>322,406</b>

Chart 4.1 Financial funds assigned from the state budget for projects solved in 2010 - current expenditures

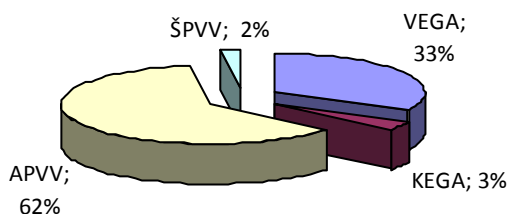
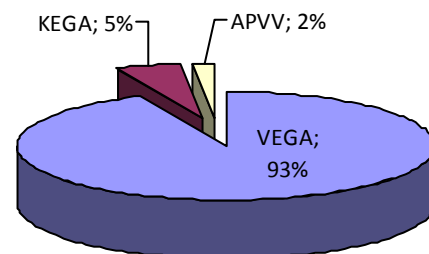


Chart 4.2 Financial funds assigned from the state budget for projects solved in 2010 - capital expenditures



### 4.3 Publishing activities

The results of research activities are directly related to the publishing of acquired new knowledge. The issues of the registration of publishing activities were discussed at the session of the Dean's Council several times during the year. Summary figures are shown in Table 4.3.

Compared to 2009, the number of subsidised titles quite slightly increased in the evaluation of the absolute number of publications. However, these total figures do not reflect the quality of outputs. Primarily the number of publications per creative worker should be analysed as well as the structure of publications.

**Table 4.3** Publishing activities for 2010 – subsidised publications

Department	Number of publications	Number of workers		Recalculation of publications	
		University	University+PhD	publ/University	publ/University+PhD
BKM	85	13.40	33.40	6.343	<b>2.545</b>
DOS	30	8.90	13.90	3.371	<b>2.158</b>
GZA	47	10.56	21.56	4.451	<b>2.180</b>
GDE	45	9.04	15.04	4.978	<b>2.992</b>
GTE	78	17.07	29.07	4.569	<b>2.683</b>
VHK	157	11.13	38.13	14.106	<b>4.117</b>
HTE	72	8.92	16.92	8.072	<b>4.255</b>
KPS	151	34.51	65.51	4.375	<b>2.305</b>
KDK	50	12.95	22.95	3.861	<b>2.179</b>
MPU	15	4.89	7.89	3.067	<b>1.901</b>
MDG	162	39.76	54.76	4.074	<b>2.958</b>
FYZ	20	5.60	5.60	3.571	<b>3.571</b>
SME	84	16.87	22.87	4.979	<b>3.673</b>
MTI	23	7.08	15.08	3.249	<b>1.525</b>
TES	86	15.17	31.17	5.669	<b>2.759</b>
ZEI	71	10.94	25.94	6.490	<b>2.737</b>
TZB	134	15.39	35.39	8.707	<b>3.786</b>
ARC	29	12.16	34.16	2.385	<b>0.849</b>
USZ	12	3.20	9.20	3.750	<b>1.304</b>
JAZ	20	7.87	7.87	2.541	<b>2.541</b>
TVY	0	6.80	6.80	0	<b>0</b>
HUV	8	5.50	5.50	1.455	<b>1.455</b>
<b>The whole FCE</b>	<b>1,379</b>	<b>281.73</b>	<b>522.73</b>	<b>4.895</b>	<b>2.638</b>

Chart 4.3 Comparison of the total number of subsidised publications with their recalculation per workers (University)

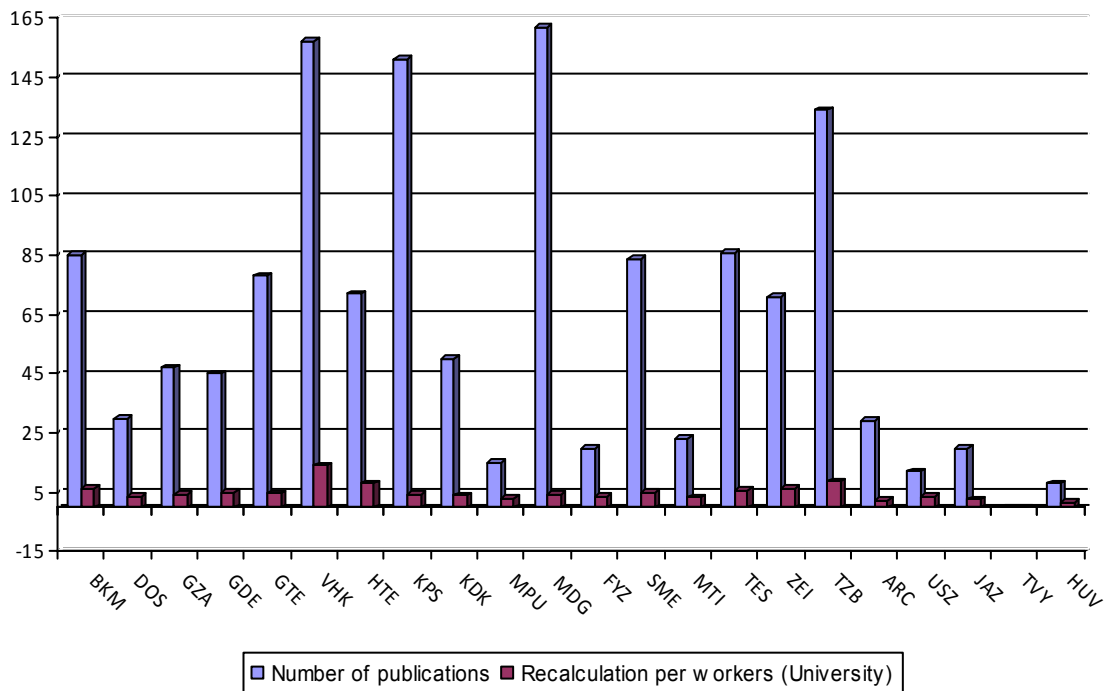
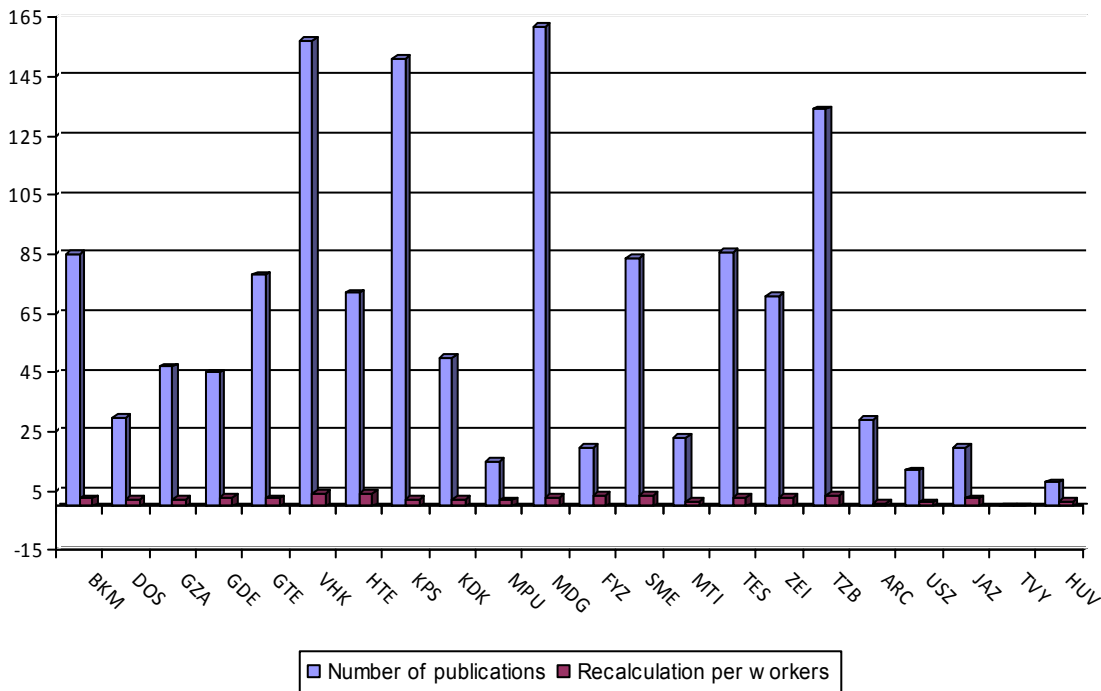
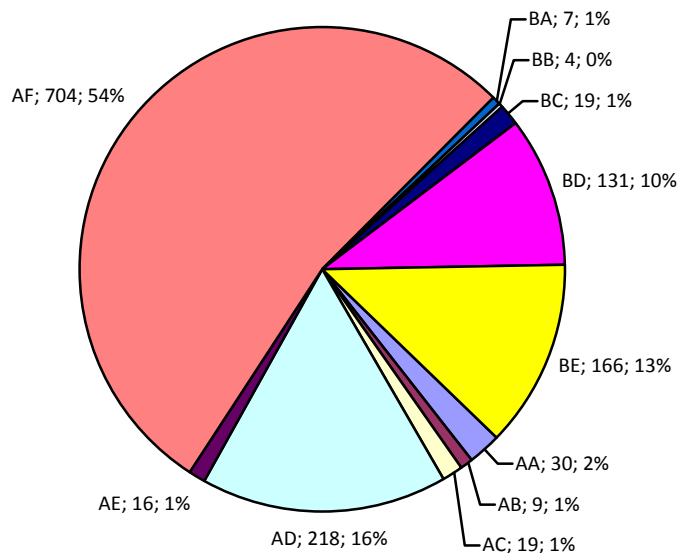


Chart 4.4 Comparison of the total number of subsidised publications to their recalculation per workers (University+PhD)



While the number of employees at the Faculty remained practically unaltered, the number of PhD students increased by 42. Nevertheless, the number of publications at the Faculty does not correspond to this increase. As the number of outputs of creative workers as well as PhD students is important from the point of view of accreditation, a decrease in the performance of the Faculty should be stated (in recalculating per worker, including PhD students). In addition to the number of publications, the category of outputs is also of importance. It follows from the aggregate register of publications that several departments focused on extensive development with the quality of publications retreating to the background. As well, development over the previous four years could be compared here. Chart 4.5 presents the numbers of publications in subsidised categories for 2010.

Chart 4.5 - Numbers of publications in subsidised categories in 2010



#### 4.4 Specialist, expert and expert evidence activities

The resolution of so-called contractual research has had a long-term tradition at our Faculty. The point is in passing the latest knowledge onto construction practice via solving non-routine tasks. In terms of the number of assignments and their financial volume, there may be observed a gradually decreasing interest in this form of activity (Charts 4.6 and 4.7). However, the Presidium of the Faculty supports this activity, as it proves there is interest from the practical world in the expert activities of our workers. It is pleasing to note an improvement in the financial volume of the fixed-job contracts in 2010.

Expert evidence activities are a significant integral component of the Faculty's activity directed outwards. We should admit a lower level of interest in the work of certified experts, which is also associated to the market being filled with sworn experts. Therefore, it is the task of the Institute of

Certified Expertise, in addition to usual expert opinions, to look for new forms of activities in the community of certified experts. The success of certified expertise activities was affected to a considerable extent by the late payment of invoices on the part of the courts of justice.

Chart 4.6 - Comparison of the number of fixed-job contracts concluded within 2007 to 2010

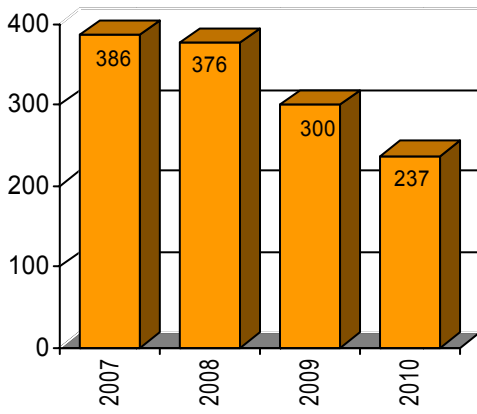
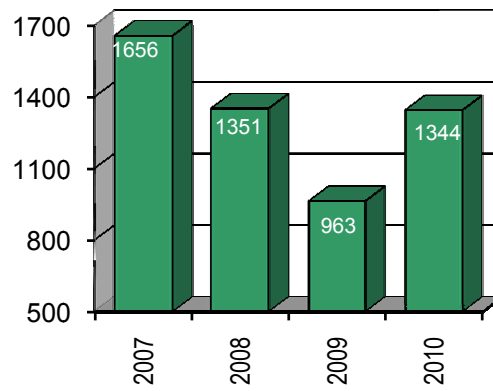


Chart 4.7 - Comparison of financial volume of fixed-job contracts concluded within 2007 to 2010 (thousand €)



## 5. HUMAN RESOURCES

The area of human resources and the continuing development of the personnel of the Faculty and its specific workplaces are considered one of the fundamental priorities that subsequently determines the further development of the Faculty in all sectors of its life. Therefore, requirements for the qualification and expert structure, age structure as well as professional orientation of all the Faculty's employees should be clearly defined. The basic goal must aim towards building up a research university that provides all levels and forms of technical education and maintains the Faculty's dominant position in the area of providing education, science and research as well as an assurance of expert competence in the sectors of civil engineering, geodesy and cartography in Slovakia.

A gradual reduction in the numbers of staff at the Faculty continued in 2010, which had fallen from 607 in 2002 to 496 in 2010.

However, the structure of the teachers remained at almost the same level: professors account for approximately 18% of teaching staff, associate professors account for 25%,

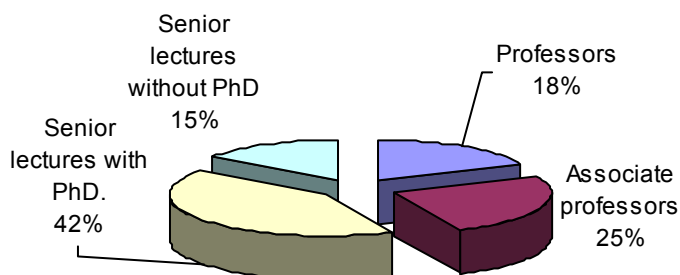
senior lecturers with the degree of PhD 42%, and senior lecturers without PhD account for 15%. The average age of the university's teachers is 51 and it significantly varies if separate categories are analysed in detail. For example, the average age of the professors is 56, associate professors are on average 56 years of age, senior lecturers with the scientific degree of PhD are 44 and senior lecturers without a PhD are on average 49 years of age (Table 5.1).

A high share of the category of senior lecturers without a scientific degree has still been preserved. While their number is gradually decreasing, it is still too high. The Presidium of the Faculty permanently strives to support young workers and their staying at the Faculty, e.g. successful PhD graduates are preferably accepted by the Faculty. The average age of the workers of research and development is 46 years of age. The technical/administration employees have an average age of 52 at the Faculty's departments. 72 administration and technical workers with an average age of 46 years are working at the Dean's office and Library (Table 5.2).

**Table 5.1** Development in the age structure of the Faculty's teachers for the period 2007 to 2010

	2007			2008			2009			2010		
	No.	%	Aver. age	No.	%	Aver. age	No.	%	Aver. age	No.	%	Aver. age
<b>University teachers</b>	<b>274</b>	<b>100</b>	<b>51</b>	<b>267</b>	<b>100</b>	<b>51</b>	<b>262</b>	<b>100</b>	<b>50</b>	<b>261</b>	<b>100</b>	<b>51</b>
Professors	37	14	60	45	17	60	41	16	60	46	18	56
Associate professors	71	25	54	63	23	56	65	25	56	66	25	56
Senior lecturers with a PhD	111	41	45	106	40	46	111	42	46	111	42	44
Senior lecturers without a PhD	55	20	55	51	19	48	45	17	50	38	15	49
Lecturers	0	0	0	2	1	23	0	0	0	0	0	0

Chart 5.1 - Structure of teachers



**Table 5.2** Development in the total number of the Faculty's employees from the point of view of their age for the period 2007 to 2010

	2007		2008		2009		2010	
	Number	Average age	Number	Average age	Number	Average age	Number	Average age
University teachers	274	51	267	51	262	50	261	51
Employees of research and development	64	43	74	45	73	46	67	46
<i>of which are researchers with a university background</i>	<b>55</b>	<b>42</b>	<b>68</b>	<b>45</b>	<b>66</b>	<b>46</b>	<b>59</b>	<b>45</b>
Technical/administration employees at the departments	35	52	36	51	36	51	32	52
Dean's office, KIC, CIT	69	45	70	46	72	46	72	46
Unskilled staff	85		85		77		64	
<b>Total number of employees</b>	<b>527</b>		<b>532</b>		<b>520</b>		<b>496</b>	

Through its strong-willed efforts, the Presidium of the Faculty managed to cut the number of senior lecturers without a PhD. However, the average age in this category is not satisfactory, as it has distinctly increased. This proves the fact that a group of our colleagues over 49 years of age is further stagnating.

With regard to providing a broader variability of forms of education, the Presidium of the Faculty stressed the need for visiting professors and associate professors from the institutes of the Slovak Academy of Sciences, sectoral research and development facilities as well as top design organisations or practices as the case may be. All proposals were discussed and approved by the Scientific Board of the Faculty. The influx of personalities from abroad, who should be preferably working in the Master's and Bachelor's degree courses of study as specialists in selected problems related primarily to addressing theses and PhD dissertations, was not as distinctive as the Presidium of the Faculty wished it to be. In the past period, there have been registered the first cases of "guest" professors and associate professors of the Faculty from abroad as an expression of appreciation of the standard of expert competence of the Faculty outside of the territory of Slovakia as well as within the country.

The Presidium of the Faculty paid special attention to the increase in the number of PhD students, particularly from among the best graduates of the Master's study programs, with good language proficiency and at the same time already having some experience of international student mobility; funds other than those assigned by the Ministry of Education of the Slovak Republic were also used for this purpose. The success rate gradually increased in studies of the third degree, even though it is still has not achieved the required standard. In the process of comprehensive accreditation, the Faculty acquired the accreditation for carrying out 4-year study programs of the 3rd degree. The Presidium of the Faculty expects from this step that the success rate of PhD students will be enhanced in a distinct way and that an overwhelming majority of students will conclude their studies within the designated time, as this category of colleagues is becoming almost the only source and perspective in the gradual replacement of employees of the Faculty and thus in its natural rejuvenation.



## 6. INTERNATIONAL COOPERATION AND FOREIGN RELATIONS

The Faculty of Civil Engineering has been permanently involved in all significant programs of the European Union, such as in the fundamental education programs of TEMPUS and LLP (Lifelong Learning Program) that provide ours as well as foreign students an option to spend part of their university study at a foreign faculty within the EU's academic and entrepreneurship area. The Faculty has also been involved in the currently running 6th framework program for research and development; also, we should not forget other international activities, primarily the CEEPUS II program, the programs of the "Visegrad Four", the Norwegian Financial Mechanism and the ever strengthening interest of primarily PhD students in fellowship programs offered by the SAIA agency.

### 6.1 Tempus-Tacis Program

The Tempus-Tacis program is focused on the republics of the former Soviet Union, the Balkan countries as well as the countries of the Mediterranean and Asia. In January 2010, the TEMPUS Netwater project was successfully launched, whose guarantor is KZEI. It is concentrated on the instruction of educational and scientific workers from the universities on the territory of the Russian Federation. The expert focus of the project is directed at state-of-the-art technologies in treating and cleaning water. As many as 16 organisations have been involved in the project. Firstly, there are universities, research workplaces, governmental organisations as well as private companies. Another admitted project in the framework of this program has not started running yet due to the controversial political situation in Kirghizia. In addition to the workers of the international section, who provide for the organisation and dissemination of the project within the Faculty, the project has also been primarily engaged in by the workers of the Department of Sanitary and Environmental Engineering.

At present there are two TEMPUS-Tacis projects from the past which are still active, providing for the transfer of know-how in the ECTS (European Credit Transfer System) process and quality assessment at European universities for those in Kazakhstan and Kirghizia. In expert terms, their activities are assured by Associate Professor Dický.

### 6.2 The SOCRATES-ERASMUS program

The SOCRATES-ERASMUS program is the most important and significant program within the framework of education in the spirit of the Bologna declaration for EU countries, of which the Slovak Republic is a part. In September 2009, at the concluding plenary session of participants of the EUCEET III project in Paris, a plan of preparation for another undertaking of the project was approved under the working name of EUCEET IV, which should run within the established association of EUCEET. Participants in the session approved the framework contents of the project, binding the management of the association to prepare and hand over the draft project in Brussels. In 2010 the association management, in collaboration with coordinators

at separate faculties, prepared and handed the project over to the Commission in Brussels. At the moment, the project is in the stage of discussions and, based on preliminary statements, it should be approved by the end of the year.

### 6.3 Other thematic networks and other international programs

The Faculty of Civil Engineering is involved in other university networks on the level of its departments. Such a network is represented for instance by the BUP (Baltic University Programme) co-ordinated by the University of Uppsala. The program is focused on questions of sustainable development and environmental protection in the Baltic region. The responsible department for the task force at the Faculty of Civil Engineering is the Department of Land Water Management led by Associate Professor Kohnová.

Last year, the team around Prof. Szolgay succeeded within the COST program with the project of European procedures for flood frequency estimations for 2009 - 2013.

Furthermore, the Faculty of Civil Engineering of the Slovak Technical University is a member of the Slovak Academic Association for International Cooperation (SAAIC), an active member of the International Association of Civil Engineering Faculties (IACEF) based at the Czech Higher Technical School (ČVUT) in Prague and is a guest of the Permanent Conference of Civil Engineering Faculties in German-speaking countries (FTBeGV Federal Republic of Germany, Austria, Switzerland), a member of the LEONET network based in Vienna and a member of CIB – the International Council for Research and Innovation in Building and Construction.

The Association of Students of the Faculty of Civil Engineering (Students' Parliament), which is an associated member of the International Association of Civil Engineering Students (IACES), has established active contacts with the Association of Students of Civil Engineering Students in those countries.

### 6.4 Student mobility

It is gratifying to note that the interest of students of the Faculty of Civil Engineering in studies abroad unbelievably grew in the 2009/2010 academic year. Within the program of Lifelong Learning, 41 students of the Faculty of Civil Engineering spent a mobility study stay at a foreign university in the EU academic area in the 2009/2010 academic year. There were certain concerns of funding such a number of student stays on the university level, but all the stays were able to take place. In addition, an extension of the offer of bilateral contracts between the Civil Engineering Faculty of STU and EU universities has contributed to this development.

The development of student mobility of the Slovak Technical University in Bratislava in the framework of the SOCRATES-ERASMUS program within 2007 to 2010 can be followed in Table 6.1. The issue occurring at present is the excess of

**Table 6.1** Overview of the average monthly grant of a STU mobility student

Year	2006/2007	2007/2008	2008/2009	2009/2010
Average monthly grant in €	257	314	336	265
Total number of months	594	671	623	840
Number of students	95	98	92	135

students wanting to study at English-speaking universities and the lack of students wishing to study at German universities. The average grant for a student stay in 2009/10 was 265 € per month. Currently, students who travel abroad within the program of Lifelong Learning also receive a contribution from the Ministry of Education of the Slovak Republic in the amount of approximately 70 € per month.

### 6.5 Teacher mobility

In the 2009/2010 academic year, the Presidium of the Faculty decided on the nomination of two mobility study stays for teachers based on nominations from departments. However, just one of them was carried out. In this academic year, a grant assigned to the University was also extended to providing the opportunity to take part in mobility stays for administration staff of the faculties. One such stay was carried out by our Faculty.

### 6.9 Civil Engineering Study Program in English

Students in the study program of Civil Engineering can be currently broken down into three categories. The first group of students consists of Kuwaiti students of the Bachelor's degree course of study. The second category consists of students from Slovakia, Turkey and Greece, who study towards a Bachelor's degree in all years of the Bachelor's course of study. The third category are 2 Afghan students of the Master's degree course of study of the Civil Engineering program, who were later transferred to the study program of Civil Engineering Structures and Transportation Engineering. These students were scholarship holders in the framework of the ASIA Link program. In addition to that, several students were studying at the Faculty from Lithuania, Slovenia, Spain and Germany within the LLP-Socrates program.

**Table 6.2** Overview of implementing teachers' mobility in separate years at the Faculty of Civil Engineering

Academic year	Planned number of teachers	Implemented number of teachers	Grant for the Faculty in €
2006/2007	7	10	5600
2007/2008	5	6	3500
2008/2009	5	2	1400
2009/2010	2	1	1400
2010/2011	3 (Plan)	Plan	1350 (Plan)

### 6.6 The 6RP and 7RP Programs

Within framework programs, the Faculty of Civil Engineering still has not achieved such results as is the case in education programs. Currently, the last 6RP project HYDRATE is finishing under the leadership of Prof. Szolgay (Department of Land Water Management - KVHK). Within the 7RP plan for 2010 - 2012, the team of Prof. Petráš managed to get into the team of the PERFECTION project (Performance Indicators for Health, Comfort and Safety of the Indoor Environment).

### 6.7 The CEEPUS II Program

Within the declaration of the CEEPUS program of Central and East European countries (2008-20011), a project was approved for the Faculty of Civil Engineering, which was extended also for the next two years. It is focused on education in the whole sphere of civil engineering - Teaching and Learning Civil Engineering in the European Context under the leadership of Prof. Šoltész (Department of Hydraulic Engineering - KHTE), where the coordinator is UACEG Sofia and the number of partners has been extended to 10 universities in the past two years, especially from the Balkan area. This is again one of the options for the mandatory mobility of PhD studies of the Faculty of Civil Engineering and Master's degree study.

### 6.8 Norwegian financial mechanism

It is gratifying to note that one of the projects filed (2008 - 2010) was successfully solved under the leadership of Prof. Petráš in the framework of the Norwegian Financial Mechanism after a long decision-making process and it was successfully finished in 2010. The project was focused on the adoption of tools and software for energy industry certification, audits and the monitoring of buildings.

In the 2010/2011 academic year, as of 31 October 2010, we have registered altogether 141 foreign students in all study programs at the Faculty of Civil Engineering. Last year, the Faculty asked for re-accreditation of the Civil Engineering study program. The study plan of the engineering degree of the aforesaid study program was overworked in this respect and information sheets of the subjects in English were gradually elaborated. The Presidium of the Faculty understands this step as the beginning of a broader internationalisation of instruction at the Faculty of Civil Engineering of the Slovak Technical University. The accreditation proceeded successfully and in the 2011/2012 academic year we will be able to already admit students for this study program implemented in the English language.

### 6.10 The Cross-Border Program for International Cooperation

The INTERREG III program, in which the Faculty of Civil Engineering of STU was very successful, was renamed in the program period of 2007 - 2013 as Cross-border Cooperation Programs among the neighbouring countries of the Slovak Republic. Several calls to submit projects were announced in this program period. Prof. Bezák successfully entered the program with the ROSEMAN projects "Management of Security of Road Traffic in a Cross-Border Region" and "Transport Model AT-SK" in the framework of the cross-border collaboration of Austria and Slovakia; currently, the project is underway for the second year.

## 7. THE AREA OF PUBLIC RELATIONS

The area of public relations has acquired more and more importance and significance every year. In compliance with the long-term intent of the development of the Faculty of Civil Engineering of the Slovak Technical University, the area of public relations has been structured so as to cover all basic fields dedicated to study promotion, students, presentations of the Faculty at fairs, at expert and scientific events, the activities of the industrial board, competitions, media activities, social events and care of employees. Four times a year the Faculty issues a magazine called *Information*, which brings life at the Faculty closer to its readers among students, teachers, researchers and entrepreneurs among the public.

### 7.1 Promotion of the study programs and activities of the Faculty

The area of promotion of studies at secondary schools has been permanently bearing fruit. The Faculty regularly takes part in the international fair of education after leaving exams from secondary school as well as in the ACADEMY and VAPAC exhibitions with the aim of promoting the studies and providing materials on the accredited study programs. In 2010, this took place from 5 to 7 October 2010.

On 11 February 2010, an open day took place at the Faculty with the participation of more than 450 people from secondary schools. There were entire teams of students – from Bratislava, Trnava, Trenčín, Myjava, Považská Bystrica, Bytča, Prievidza, Partizánske, Žilina, Liptovský Mikuláš, Banská Bystrica, Nitra and Hurbanovo. These students had an opportunity to acquire more information on the admission procedure for Bachelor's study and, at the same time, they were made familiar with the contents of selected subjects as well as with the premises of our Faculty.

One of the most efficient forms of promoting and acquiring information on options to study at the Faculty of Civil Engineering of the Slovak Technical University is the Internet site of the Faculty. Therefore, it is important for the information on the site to be always current and complete in the future as well. We regularly publish a periodical review in full on the web site, the quarterly *Information*, which deals with life at the Faculty.

In 2010, 9 visits to secondary schools were made all over the territory of Slovakia with the aim of making the students familiar with the history and presence of the Faculty. The elaborated information materials with detailed contents of the study programs of Bachelor's study were distributed during the visits to the secondary schools and dispatched to another 26 schools.

The Faculty has tried to extend its helping hand to admitted students since the very beginning of their arrival at the alma mater. The Faculty has issued for them the publication "A Guide for First-Year Students at the Faculty of Civil Engineering" with useful information.

Exhibitions of students' work take place on a regular basis. The exhibitions present the entire methodology of instruction ranging from the preparation of building passports, through construction solutions up to the design of details. The expert public, which visited these exhibitions in considerable numbers, as well as the students highly appreciated the works exhibited.

The "Exchange of Job Opportunities" is organised for students finishing Bachelor's, Master's and doctoral studies on a regular basis (27 April 2010). This year, the Exchange was attended by 6 companies that came to offer the students available vacancies. The Faculty thus helps its

graduates assert themselves in practice after they conclude their studies. The Exchange pointed out two major requirements for employees to the positions offered, two basic pre-conditions of succeeding in an interview in the current labour market – proficiency in a foreign language and the conclusion of the Master's degree course of study. A no less important consideration of the relation between the Faculty and labour market is also the composition of study programs, which is not always identified with the interest of employees. The Exchange drew attention to more than 130 students who completed questionnaires for the companies.

In the past period of time, the promotion of lifelong education was also paid appropriate attention. The training courses of further education have been disclosed in the University booklet *Program of Training Courses of Further Education*. The information on the training courses has also been on the Internet sites of the appropriate departments that provide for the particular training course. These training courses have also been promoted via expert periodicals as well as at expert events (conferences, workshops, etc.) organised by the Faculty and departments.

### 7.2 Student competitions

The already traditional Students' Scientific Conference took place on 28 April 2010 with the participation of 197 students of the Bachelor's and Master's degree courses of studies with 177 works in 15 sections. Altogether 88 teachers, PhD students and renowned experts from practice were working in the expert committees.

The evaluation of the fourth year of the competition of bachelor's theses of the faculties of civil engineering and architecture in Slovakia, called "ABF Slovakia", took place on the grounds of the Faculty on 21 October 2010. The students of our Faculty received 4 awards, thus confirming the high standards of the Bachelor's theses at the Faculty of Civil Engineering of the Slovak Technical University.

The 10th year of the Sports day of the Faculty of Civil Engineering of the Slovak Technical University belonged among the traditional common activities of the Faculty and its students. It took place on 5 May 2010. In total 107 sportspersons took part, who were competing in six sports events. The ceremonial evaluation of the results was connected to the meeting and discussion in the club of the Faculty of Civil Engineering of the Slovak Technical University.

**The competition of PhD students is organised in the fall of each academic year on a regular basis.** The awarded authors of winning works are then allowed to present them at the JUNIORSTAV international conference in Brno with full financial coverage of expenditures. The financial award for our students is possible thanks to the support of the Faculty's sponsors, the Association of Graduates and Friends of the Faculty of Civil Engineering and primarily members of the Industrial Board of the Faculty of Civil Engineering.

Every year, competitions take place in the design of entertainment, recreation and relaxation zones and the architectural visualisation of buildings of porous concrete. These are student contests of the Xella company, which are organised with the assistance of the Faculty. As in previous years, the students of our Faculty took the leading places. The ceremonial awarding of prizes of this student contest took place on 25 March 2010.

This year, 9 of our students successfully participated in the

contest “Slovnaft – Brownfields“. Six students were awarded when they participated in the architectural competition “The Completion of the Old-City Town Hall in Prague“.

### 7.3 Care of employees and students

Most of the activities in the field of the care of employees is carried out in co-operation with the Independent Trade-Union Organisation (NOO) of the Faculty in the framework of fulfilling the Collective Agreement of the Slovak Technical University. The Presidium of the Faculty traditionally supports active collaboration with the NOO. The Collective Agreement signed between the University Trade-Union Organisation (UOO) and the Presidium of the Slovak Technical University has been extended at the Faculty in several items with an attachment.

Employees of the Faculty may use the sport facilities of the Faculty for recreational sports (swimming, football, basketball, volleyball, tennis, physical exercises for women and yoga) as well as the retraining facilities of the Faculty at **Kočovce** and in **Nižná Boca**. The retraining facility at **Nižná Boca** was closed for a long period of time due to operational reasons. The refurbishment of this facility was performed only this year. Each year in the form of a recreational exchange with the University of Žilina, our employees can spend time at their facility of Zuberec.

The Faculty provides meals to its employees and students on its own premises, also enabling other catering and refreshments at the Club of the Faculty of Civil Engineering, a snack bar or in the form of fast refreshment from slot machines on the premises of the Faculty. Our Faculty allows all the retired former employees of the Faculty to have meals in the dining rooms of the Slovak Technical University, contributing to their meals the amount of 55% of the funds out of subsidies.

There is available a company doctor as well as a dental department. At the same time, the Faculty contributes towards employees' spa treatment and regeneration/rehabilitation stays at spa resorts to the amount of 100 € as a maximum. This year, this contribution was paid to 12 employees of the Faculty.

The balance in the social fund as of 30 November 2010 was distributed to the employees of the Faculty as a contribution for regeneration.

The Faculty pays out bonuses to its employees on the occasions of life and work jubilees in the amount of 50% of their tariff salary.

The Faculty provides its employees a contribution in cases of long-term incapacity to work in the amount of a monthly salary. In 2010, this contribution was paid out to 4 workers. Upon the death of a family member (spouse or child) of an employee, the Faculty will provide him/her a financial contribution. Such a contribution was paid out to one worker this year.

A sensitive social issue is the accommodation of students at student hostels. It should be stated that the accommodation capacity of the Slovak technical University has been significantly cut, which has also affected the students of the Faculty of Civil Engineering. Having divided the accommodation capacities of the Slovak Technical University, our Faculty was assigned 1,493 places. Setting up a waiting list to provide accommodation is in the power of the Association of Students and then it is discussed and approved by the Presidium of the Faculty. The criteria for accommodation are study results as well as the distance from home to the place of the school. In the case of accommodation for first-year students, only the distance is taken into consideration. With regards to the decreasing accommodation capacity and the relatively high number of the students admitted, there have occurred problems in assigning accommodation especially to first year students.

### 7.4 Support for the development of civil engineering and architecture

As was the case in previous years, this year the experts of the Faculty took part in evaluation at the national competition organised by ABF Slovakia – **Construction of the Year**. As an expert sponsor and organiser of the competition, the Faculty provided the “Prize of the Faculty of Civil Engineering of the Slovak Technical University for Applying Science and Technology in the Implementation of the Construction Work” for this competition. In 2010, the Prize of the Faculty of Civil Engineering of the Slovak Technical University was awarded to the construction of the D1 Sverepec – Vrtižer highway, the 1st stage, km 0.000-4.900/the elevated road in the town of Považská Bystrica. The Faculty of Civil Engineering of the Slovak Technical University has traditionally taken part in the “**CONECORACIOENERGIA-CLIMA-THERM**“ fair (from 23 to 27 March 2010) and the “**DOMEXPO**“ fair in Nitra (from 22 to 25 April 2010). The Faculty is a co-organiser of both the events, which allows it to make these events accessible not only to its teachers but also to students. The regular organisation of a high number of expert events, conferences and workshops has contributed to the successful promotion of the Faculty in a distinct manner. In the past year, approximately 60 events were organised: Heating, the Day of Geometry, The Enclosing Shell of Low-Energy Buildings, Aspects of Renewal of the Countryside, Mobility, The Stability of Geodesic Instruments, Aqua, Potable Water, Sanhyga, Roofs, Internal Climate, Magia, Industry of Water Managers, Days of Concreters, Restoration of Concrete Structures, Structures of Overground Buildings, etc. The Faculty presents in this way the latest knowledge of science and technology acquired, thus reflecting them directly in practice.

### 7.5 Social events

On the occasion of the International Students' Day and the Day of the Struggle for Freedom and Democracy, a meeting of the best students of the Faculty with the Presidium of the Faculty of Civil Engineering of the Slovak Technical University took place in the second half of November 2010. On this occasion, 32 students were awarded.

Theatre performances belong among the regular social events organised on a yearly basis at the beginning of the academic year and on the occasion of Teachers' Day, a meeting with persons celebrating anniversaries (twice a year) and a meeting with professors of the Faculty also on the occasion of Teachers' Day. In 2010, the annual meeting with pensioners took place on 21 January in the presence of 126 former workers.

The Faculty keeps organising the “golden” graduation celebrations. At a reunion of former schoolmates, graduates from the Faculty from 50 years ago, the participants appreciated the form and social dimension of these sorts of events. In 2010, 121 of our graduates took part in these academic celebrations associated with awarding Memorial diplomas.

This year, an expert excursion of workers took place with a thematic focus on “**The Historical and Architectural Cultural Legacy in Slovakia**“.

In co-operation with the Association of Graduates and Friends of the Faculty of Civil Engineering of STU and the Union of Building Entrepreneurs of Slovakia, the Faculty of Civil Engineering of the Slovak Technical University organised the 8th representative ball on the premises of the City Hotel Bratislava. Every year, the most significant guests of the ball are graduates who concluded their studies at the Faculty of Civil Engineering 25 years ago. In addition to them, participants of the ball also included significant personalities of the Slovak building industry, geodesy and cartography, architecture, social life as well as employees and students of the Faculty.

## 8. INFORMATION AND COMMUNICATION TECHNOLOGIES

### 8.1 Academic information system

The Academic Information System (AIS) of the Slovak Technical University in Bratislava started fully working in educational activities in the first half of 2007. Since that time it has been concentrated in practically all registries of studies at the Faculty.

AIS was created using state-of-the-art information and communication technologies. It is of a modular structure, robust and scalable, ensuring sufficient flexibility in incorporating new requirements resulting from legislation amendments as well as of specific requirements of the Faculty. Access to AIS is enabled through all known web browsers (Netscape, Internet Explorer and others) and the most widespread platforms of UNIX and MS Windows on the basis of assigned access rights.

The fundamental study/administration information system has been designated for students and teachers to manage study issues. It provides options to process the study agenda and other data for research workers as well as general information for the general public. There have been gradually implemented modules for the work of teachers, students and study departments and other functionalities of the system to support the process of managing science and research (modules of admission procedure, scholarships, printing configurations, science and research). There is also a functional interconnection to the systems of IS STU: human-resources management and wages, a central register of students, assets, through the register of students to the system of manufacturing identity cards, the OLIB library system, a system of electronic mail and a system of payments via the State Treasury.

### 8.2 Program products - licences

In the area of information technologies for the needs of the Faculty, there have been purchased multi-licences for Microsoft Windows and Office program products, products from the AutoDesk company, Microstation, ANSYS and others. In concord with the gradual building up of the information system of the Slovak Technical University, the Faculty's computer network has been enhanced as has the connection of the Faculty to the node of SANET.

Based on an agreement of the IT Centre with authorised sellers of Autodesk and Nemetschek products, training in the **AutoCAD Revit 2010 and Nemetschek Allplan 2009** modern design software programs for architects and civil engineers is provided for in the faculty-wide computer classrooms of CITe during the semester. Software and staffing provisions for the training on the costs of its own are assured by the authorised sellers, while the training is provided free of charge for the Faculty's students.

Contracts between the Slovak Technical University and the Microsoft company (Microsoft Select and the Campus Agreement) permanently serve the needs of the Faculty. Licences and products are designated only for training purposes and University administration and are not appointed to perform business activities. In the course of 2009, they were supplemented with conditions on purchasing new products. The present Campus Agreement contract was concluded for the period to 30 June 2012. In the framework of the Agreement, the Slovak Technical University may utilise the following products for free:

- upgrade of the operational system of personal computers (with an option of a downgrade),
- MS Office in all versions and language and languages,

- terminal (client) licences of servers,
- desktop Optimization Pack (SW for remote management of PC).

Upon an agreement with the editorial staff of PC Revue, the workers of CIT provide for the students of the Faculty the free-of-charge distribution of the expert IT periodical journals PC Revue, DigiWare and InfoWare in the amount of several hundred copies. The aforesaid activity is a valuable benefit in improving the IT literacy of the Faculty's students.

### 8.3 The Faculty's PC network

The basis of the network infrastructure on the site of I. Karvaš meets requirements in the IT area, as worded in the long-term intent of the Slovak Technical University for 2003 - 2007. The connection of the Faculty's network to that of SANET and Internet by an optical line with a transmission speed of 10 Gbit/s is in the stage of implementation. Central elements of the network will be a powerful Cisco Catalyst 3560E router and Cisco Catalyst 2960 e-switch, which were procured in 2007 for the amount of up to 1,350,000 SKK (44,812 €). In this way, options for the monitoring and administration of the network were distinctly enhanced. In the course of 2009, the software upgrade and configuration of the topologically most important active elements of the skeleton of the Faculty's computer network were carried out. Its benefit is in providing a centralised management, centralised monitoring and a more efficient administration.

Twenty PC stands serve exclusively for the individual work of students, which are in operation continually. Their installation was finished this year. A wireless Wi-Fi network is available at the Faculty's classrooms, where most instruction takes place, as well as in the atrium, at the library and information centre as well as in the assembly hall. There is possible network access for work with a notebook without the necessity to use any wiring. In 2009, the workers of the IT Centre of the Slovak Technical University installed 20 new connection points designated for the individual work of students with notebooks. It is of special importance to make sure of the requirement of comfortable access for students to the information system of the Slovak Technical University. In 2008, the implementation of a workplace of CAD and GIS graphic inputs/outputs was launched for the price of approximately 880,000 SKK (29,210 €). The workplace will be available to students as well as to the departments of the Faculty.

Since 2009, there has been a fully functional eduroam project at the Faculty of Civil Engineering. Eduroam is an international project dealing with support for mobility and roaming at the academic and research workplaces. The major idea of eduroam is to enable members of the academic community to get seamlessly connected to a computer network in any academic institution. Connection to the network is based just on a user name and password, which the user has in his/her home institution. The networks included in the eduroam project have been implemented as wireless networks (WiFi) according to the standard 802.11b (11Mbit/s) or 802.11g (54Mbit/s). In 2009 in the environment of the Faculty of Civil Engineering, the WiFi network was improved in the most exposed spaces of the Faculty in Unit B. There were gradually installed 5 new up-to-date Cisco access-points. The CIT workers are supplementing coverage with the WiFi signal depending on current needs. They also provide consultancy activities for students on setting up their notebooks.

### 8.4 The Faculty's IT classrooms

Currently, PC computer technology is prevalingly used at the Faculty for lessons and the individual work of the students. Altogether, 6 classrooms with a faculty-wide sphere of activity are available to the students. A specialised classroom of CAD systems can be found at the Faculty. During the semester, the classrooms are in operation for 12 to 14 hours daily for lessons or the individual work of students as the case may be. Computers in the classrooms are of the Celeron/Pentium 4 category, min. 2.2 GHz, containing 512 MB - 2 GB of operation memory, having hard disks of a size of more than 80 GB and LCD monitors of 17 - 22 inches as a minimum.

Basic instruction in the Windows operation system, Office administration programs, and the AutoCAD and MicroStation graphic programs is run in the classrooms as are primary application expert programs arranged for staff by each department. The consultation activities of expert workers of the Centre of Information Technologies of the Faculty are provided to the students on daily basis. The attendance rate of the CIT computer classrooms is currently about 1,500 students a week, i.e. in total more than 20,000 students in a semester and 40,000 students yearly.

### 8.5 Library and Information Centre

The Library and Information Centre of the Faculty of Civil Engineering of the Slovak Technical University is a modern library with a creative academic atmosphere and a high attendance rate, which has become a centre of individual education as is the case of modern university libraries of significant foreign universities.

Due to an increased interest of students in the services of KIC, the library and information centre of the Faculty of Civil Engineering has extended the working hours of the study room and borrowing department.

The attendance rate of the KIC study room achieved a total of 48,714 users in 2010.

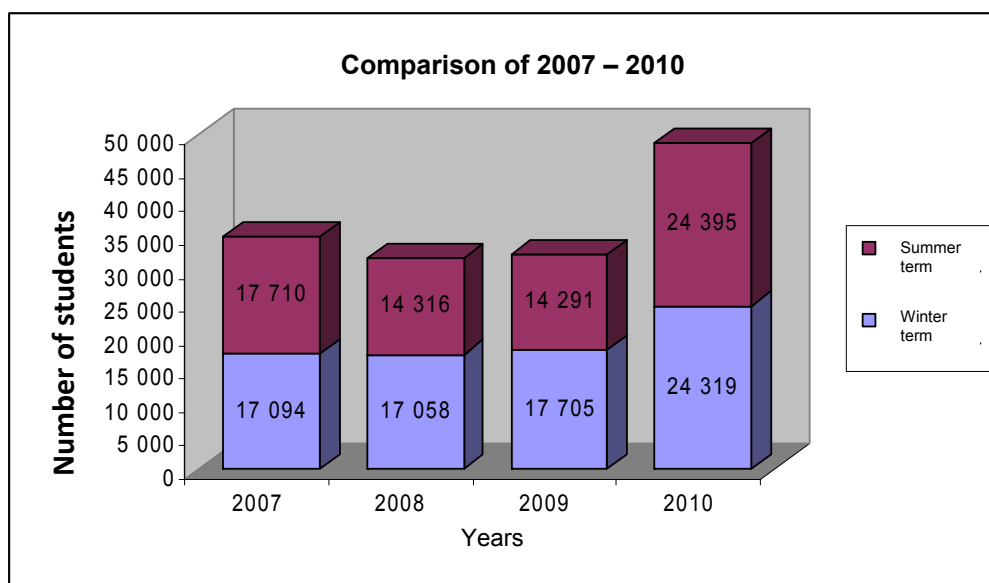
#### 8.6.1 Services of KIC for educational and research workers

The library and information centre provides library processes centrally for the whole Faculty and, in addition to students, it provides a wide range of services also to teachers, research workers and PhD students. In addition, in 2010 KIC continually provided targeted services to this

**Table 8.1** Overview of attendance rate to the KIC study room within 2007 - 2010

	Month/Year	2007	2008	2009	2010
<b>Winter semester</b>	September	934	1,617	1,575	3,454
	October	5,267	5,204	5,364	7,405
	November	4,143	4,767	5,286	6,754
	December	3,331	3,572	3,988	4,637
	January	3,419	1,898	1,492	2,069
<b>Summer semester</b>	February	4,138	2,751	2,836	4,026
	March	4,457	3,031	4,391	7,147
	April	3,613	3,777	2,556	5,053
	May	3,568	3,177	3,156	5,960
	June	1,934	1,580	1352	2,209
	<b>Total</b>	<b>34,804</b>	<b>31,374</b>	<b>31,996</b>	<b>48,714</b>

**Chart 8.1** Overview of attendance rate of students to the KIC study room by semesters within 2007 - 2010



significant target group depending on their expert specialisation.

The library and information centre have increased accessibility to the new reference service “Ask the library” to students, teachers and expert public via the on-line web form on the main website of the Faculty of Civil Engineering of the Slovak Technical University:

[http://www.svf.stuba.sk/generate\\_page.php?page\\_id=3825](http://www.svf.stuba.sk/generate_page.php?page_id=3825).

### 8.6.2 Activities of the Faculty’s KIC to raise information literacy/retrieval in databases

In 2009, the KIC of the Faculty of Civil Engineering implemented the pilot year of a series of information workshops for first-year students on a voluntary basis. In total, 100 students of the first year of the Bachelor’s degree course of study showed an interest in completing the KIC comprehensive information workshop for a duration of 3 hours at the beginning of the 2009/2010 academic year, while there were twice as many students – 200 in the second year of information workshops in the 2010/2011 academic year, which represents a 100% increase in interest on the part of students.

Based on the progressive approach of the Presidium of the Faculty of Civil Engineering of the Slovak Technical University to the up-to-date principles of the preparation of PhD students for a scientific career, in the winter term of 2009/2010 the library and information centre of the Faculty of Civil Engineering was also able to implement the pilot year of instruction in the subject “The Methodology of Scientific Work, Part 1: Acquiring and Saving Scientific Information” for the students of the first year of PhD study in the framework of the study syllabus.

Through the progressive inclusion of an expert subject in the study syllabus of PhD studies, the Faculty of Civil Engineering of the Slovak Technical University became one of the pilot faculties in Slovakia in introducing this specialised subject for PhD students, being a source of inspiration for other faculties and academic libraries in Slovakia.

### 8.6.3 Offer of KIC in the area of databases/electronic information resources

The library and information centre of the Faculty of Civil Engineering provides students, teachers and research workers of the Faculty a broad range of titles of expert databases and electronic information resources on-line, directly via the IP addresses of the KIC database centre and via the IP addresses of all computers at the departments and workplaces of the Faculty of Civil Engineering.

In 2006, of considerable expert benefit was the purchase of the licence of the ASCE (American Society of Civil Engineers) full-text scientific library, which provides on-line access to the ASCE proceedings and to the archives of the full texts of 32 key journals in the field of civil engineering, most of which are Current Contents processed. Access to the full texts of all articles of the titles of the above-mentioned journals and proceedings from ASCE conferences covers 15 years retrospectively, including the complete production of scientific ASCE proceedings up to the latest issues of 2010.

To raise awareness and utilisation of the ASCE Research Library database, KIC established an independent page on the main website of the Faculty of Civil Engineering about the database with links to the table of contents of the database:

[http://www.svf.stuba.sk/generate\\_page.php?page\\_id=2099](http://www.svf.stuba.sk/generate_page.php?page_id=2099)

### Foreign expert databases accessible in the framework of national licences/STU licences:

Since 2008, the national information system of support for research and development in Slovakia ensures access to electronic information resources for all the Slovak universities in the framework of the project of the Ministry of Education of the Slovak Republic and the co-ordinator of the project CVTI SR. The Faculty’s KIC promotes all the above-mentioned databases by posters, through the web and by providing training courses.

- **ACM/Association for Computing Machinery** – nation-wide licence in the framework of the NISPEZ project,
- **APS Journals** - university-wide licence by mediation of the Slovak Technical University,
- **Engineering Village 2** – university-wide licence from the funds of the Slovak Technical University,
- **IEEE/IET Electronic Library (IEL)** – nation-wide licence in the framework of the NISPEZ project,
- **Knovel** – nation-wide licence in the framework of the NISPEZ project,
- **ProQuest Central** – nation-wide licence in the framework of the NISPEZ project,
- **ScienceDirect** – nation-wide licence in the framework of the NISPEZ project,
- **SCOPUS** - nation-wide licence in the framework of the NISPEZ project,
- **SPRINGERLink** - nation-wide licence in the framework of the NISPEZ project,
- **Web of Knowledge** - nation-wide licence in the framework of the NISPEZ project,
- **Wiley InterScience** - nation-wide licence in the framework of the NISPEZ project,
- **Elektronische Zeitschriftenbibliothek** – access to the full texts of 61,000 titles of freely accessible as well as licensed titles of expert electronic journals.

### 8.6.4 Free trial accesses of KIC to databases

The KIC of the Faculty of Civil Engineering regularly appeals to producers of foreign expert databases and publishing houses of expert literature in electronic form with a request for free trial access for the period of 1 month or for a longer period of time for all students and teachers of the Faculty through computers of the KIC database centre or via IP addresses directly at the departments/workplaces of the Faculty of Civil Engineering, thanks to which the bulk of accessible quality expert and scientific information increases without any financial claims free of charge.

Students and teachers of the Faculty of Civil Engineering were able to actively utilise free trial accesses through the offer of the Communication and Information Centre (KIC), which represents total financial savings in the amount of several tens of thousands EUR for the bulk of information, data and full texts made accessible:

- **RefWorks** – comprehensive on-line system to collect and manage information from literature, www sites and databases, integrated in a majority of resources (May 2010),
- database **ProQuest Dissertations & Thesis** (May 2010),
- database **IWA/International Water Association** – access to full texts (November 2010),
- database **ebrary Academic Complete** – access to full texts of 50,000 expert monographs in electronic form (November 2010).

## 9. UPGRADING OF CLASSROOMS, REPAIRS AND RECONSTRUCTIONS

The corner stone of the contemporary ensemble of the buildings of the Faculty of Civil Engineering was laid in 1964. Separate units were approved and handed over to operation gradually until 1972. The condition of their interiors but especially that of their exterior parts and sheathing gradually became critical; in many cases, the buildings stopped meeting their initial function, jeopardising employees, visitors as well as passers-by. At a time of ever increasing costs of energy, the buildings' operation was becoming unsustainable from the economic point of view.

Besides current maintenance and the gradual reconstruction of classrooms, laboratories and sporting facilities, the Faculty had to address barrier-free access to all the premises, the improvement of the quality of catering for students and employees as well as the optimisation of parking for cars of employees and visitors.

### 9.1 Upgrading of classrooms

A significant activity in the area of upgrading of textbooks was the reconstruction of the workshop classroom No. B102 – its extension and enlargement of its capacity to more than 40 persons. Within the reconstruction, the floor was replaced and the partition removed, thus enlarging its capacity. There were also added new rows of chairs, a new board and other accessories. The total amount of reconstruction totalled 22,904 €.

While the equipment of classrooms of the departments belongs primarily under the control and powers of the departments themselves, a fund for the refurbishment of department classrooms was established in the past years, from which contributions are regularly directed to the investment activities of the departments. In 2007, about 500,000 SKK (16 597 €) were used to restore the Department of Geodesy, Department of Mathematics, Descriptive Geometry and Department of Technology of Constructions. Also, activities were supported which had been carried out at the turn of 2007 - 2008 (Department of Structural Mechanics). The rules of drawing down from the fund were revised at the end of the year, so that the workplaces could also apply for the funds for laboratories and partially also for equipment in classrooms. Such an in-house "grant" system for the development of department classrooms is planned to be continued in the upcoming years as well.

### 9.2 Relaxation rooms for students

The work on the arrangement and humanisation of the atrium in Unit A (2 324 €) was completed. There were arranged working and relaxation spaces for students in the connection corridors between Units B and C on the 2nd and 3rd floors. Spaces in Unit B and those behind the Assembly Hall were also arranged in a similar standard. It is suitable to direct the attention of the students to the option of their utilisation. The total amount spent on these arrangements was 12,282 €.

The painting of the vestibule close to the lecture halls, the replacement of lighting fixtures for 2,987 €, the completion of the Faculty's exhibition room and the gradual repair of common communication spaces of Unit B, gradually continuing also in 2009 and 2010, are among the smaller activities undertaken.

### 9.3 Reconstruction of the central laboratories

In the summer months of 2008, work was carried out on the design of the reconstruction of the facade – the insulation of

the roof and hydraulic adjustment of heating in the premises of the Central Laboratories (CL) in the quarter of Trnávka. The Faculty obtained a contribution from the EkoFond ecological fund to the amount of 116 thousand € to perform this project totalling 500 thousand €.

In the first half of 2009, reconstruction of the main building and the load-bearing structures laboratory of the Central Laboratories of the Civil Engineering Faculty in Trnávka was carried out. The construction was successfully finished and ceremonially opened in the third quarter of 2009. The hydraulic adjustment of the heating system was performed in 2010. Concurrently, preparations were made to obtain the contribution from the EkoFond in the amount of 116,000 €, which the Faculty gained in 2010.

The central laboratories in Trnávka are currently experiencing a period of restructuring. Positive incentives to revive them should be the building of two new significant integral parts of the central laboratories, particularly an aerodynamic tunnel and a laboratory of geodesy. In the course of 2010, there was some intensive work done on the design preparations of these laboratories. In the end of 2010, the construction of the aerodynamic tunnel was launched with investment costs of roughly 500 thousand €.

In 2009, the building, technical and software arrangements were finished on the utilisation of parking lots and on access ramps leading to the site of the central laboratories in Trnávka, including the fencing of the site in the total value of 32,800 €.

### 9.4 Barrier-Free Access to Faculty Central Premises (FCE STU)

Another project of the Faculty implemented in the past period of time was the project of barrier-free movement within the Faculty, which has been currently submitted to the Tatra banka Foundation with an application for co-funding through a non-repayable grant. Based on public procurement, a manufacturer was chosen in the months of May to October 2009. The implementation of the work itself was launched in November 2009. Two new traverses were built: one connecting the space of the main porter's lodge with Unit C, and the other one above the porter's lodge to make access to the dining room simpler. Two new elevators were installed, one of them heading to the dining room and connecting the classrooms in Unit B; the other lift was reconstructed in Unit A. Expenses to manufacture one of the lifts for physically handicapped persons were refunded by the Tatra banka Foundation in the amount of 34,000 € in the first half of 2010. In addition, three lavatory facilities were refurbished, a turnstile system was built for the controlled entry of employees, students and visitors to the Faculty, the atrium was revitalised and a brand new space for a snack bar situated in the atrium was built. This entire investment cost about 800 thousand € with VAT. The ceremonial approval of the construction took place in the middle of July 2010.

### 9.5 Electronic monitoring system of buildings and parking lots

The electronic monitoring system contributes to the improvement of the Faculty's operation, which covers the workplaces with PC stands as well as the most exposed spaces of the Faculty. The system is based on the utilisation of LAN-cameras (currently 15 pieces) and their continual recording on a server.

At present, introductory work is underway on the implementation of the 1<sup>st</sup> stage of the supply of the



electronic monitoring system of the Faculty's parking lots as well as entrances to the parking lots. There was prepared a design of alteration of traffic organisation – static as well as dynamic, which was implemented in the autumn after being approved by the relevant institutions. Within the framework of this project, the traffic situation in front of the Faculty was more clearly organised, lockable parking spaces (14 pieces) were built as well as spaces for physically handicapped persons and for an ambulance. In addition to this solution, twelve new parking spaces were built in front of Unit A along with a staircase to make it accessible, thus extending the total number of parking spaces in the surroundings of the Faculty up to 167. The replacement of control terminals of the entrance to the parking lots was also significant along with the camera system and connection to the central database of the registry of entry and departure. Any entry and departure of a vehicle from the parking area is recorded via a parking card and so it is possible to flexibly manage the entitlements to entry of individual persons.

### **9.6 Reconstruction and sheathing of Unit C**

The condition of fillings and facades of the Faculty's major premises has demanded a general overhaul and reconstruction already for a longer period of time. Contract drawings were prepared in 2007. At the beginning of 2008, the Faculty started arranging the building permit in co-operation with workers of the Faculty, particularly those from the Department of Structures of Overground Constructions and the Department of Technology of Constructions. Building intent and subsequently the design for the building permit of the "Reconstruction of the Facades and Heating of Units B and C" was finished by the end of 2008 and all necessary formalities were gradually arranged at the Rector's Office of the Slovak Technical University for opening this investment project.

In the first half of 2009, the terms of reference were prepared in detail for the manufacturer of this demanding work, which were several times commented and consulted with the designer and the Rector's Office of the Slovak Technical University and subsequently redesigned. Then the public tender was successfully run and at the close of the summer the company Ingsteel, a.s., came out as the winner and the constructor of the work for the price of 5 million € (including VAT). An agreement on the drawdown of a loan from the Rector's Office of the Slovak Technical University was signed so as to be able to refinance a large part of these costs. In the end of 2009, a contract with the constructor was signed and afterwards work was done on the preparation of the design for implementation, the co-ordination of the construction schedule and production of trial specimens of facade segments.

The work was carried out to full capacity, but the building schedule was kept only thanks to the co-operativeness of our employees and the professional approach of the contractor company. The construction was executed exactly according to the contractual deadlines in November 2010. It is necessary to appreciate the fact that the price of this large investment remained unchanged within the scope of the original design in accordance with the public tender upon preserving the required quality parameters.

In the months of August to October 2009, the reconstruction and hydraulic regulation of heating in Unit C was simultaneously carried out for the total amount of 195,000 € (including VAT). The manifolds of central heating were repaired and four zones of heating that can be independently regulated were created in the framework of reconstruction. The Faculty is still waiting for the reconstruction of heat-delivery stations (OST). This reconstruction should be carried out after the heating period

finishes in the course of 2011. An integral part of the reconstruction of the heat-delivery station will also be the option of connecting the system of the ceiling heating in Unit C – which is critical for the air-conditioning of the rooms in this unit. The aggregate implementation of these works is an inevitable pre-condition of utilising the advantages of the new sheathing of Unit C and attaining maximum energy savings in the future, which are estimated to be as much as 150 thousand € yearly.

### **9.7 Regional Centre of Technical Education in Kočovce**

In 2008, a project for the Regional Centre of Technical Education in Kočovce was prepared; documentation for the zoning and planning decision (250,000 SKK (8,298 €)) was finished in May and submitted for approval. The zoning and planning procedure was started immediately after, the result of which was an approving decision on the location of the construction, which was obtained by the Faculty in November. At the close of 2008, the design for the building permit (SP) of the construction in question started to be prepared, which was preceded by engineering-geologic surveying (102,000 SKK (3,386 €)). The design for the building permit was finished in December (490,000 SKK (16,265 €)) and submitted to the Construction Office still before Christmas. In the first months of 2009, the design of landscaping was finished (100,000 SKK (3,319 €)), as was the budget of the construction (20,000 SKK (664 €)).

In the first half of 2009, the Faculty in co-operation with the Rector's Office of the Slovak Technical University applied for funds to implement this project from structural funds.

At the turn of 2008 and 2009, the Faculty managed to acquire the rightful building permit for this construction. In the fall of 2009, the works on preparation of the university-wide grant from the EU structural funds were finished, of which a considerable part has been earmarked for construction of the Regional Centre of Technical Education in Kočovce. Within the framework of the aforesaid grant, the Faculty should obtain 1,500,000 € to perform the work as well as another 300,000 € for information and communication technologies associated with equipping the Centre.

Implementation of the construction is planned for 2011, including information and communication technology equipment, by which the training facility in Kočovce will become a modern site for training and performing conferences and workshops.

### **9.8 Sports Centre at Trnávka**

In the last months of 2009, a feasibility project of the sports centre at Trnávka was prepared, which was built at the place of a former dumping site for building waste. Within this centre, two tennis courts and one playing area for beach volleyball were built in 2010 and changing rooms were reconstructed for the total costs of 840 thousand € inclusive of VAT. The sports site at Trnávka was opened in July 2010 and lessons of those sports were moved to this site, which were carried out until then in leased premises.

### **9.9 Furnishing of the Library and Information Centre and Information and Communication Centre**

In the course of the year, it was possible to provide equipment to the Library and Information Centre (KIC), which was missing furniture, in the total amount of 32,400 €. The implementation of air conditioning in the Library and Information Centre will be an integral part of investment activities in upcoming years. In total 15,600 € were invested in the Centre of Information Technologies.

## 10. ECONOMIC PERFORMANCE

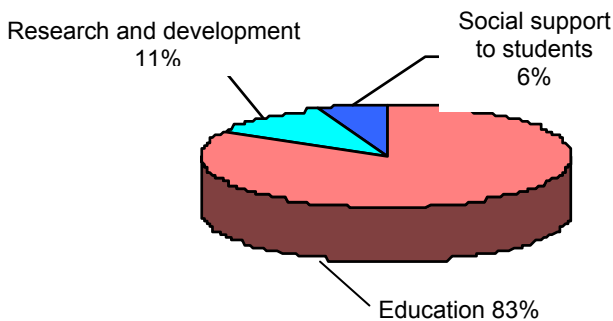
The Faculty of Civil Engineering manages in compliance with the Act No. 131/2002 of the Collection of Laws on Universities as amended by later regulations, with funds from subsidy and extra-subsidy resources and based on the budget planned for 2010. The economic result for 2010 is planned as a positive one and the Faculty should finish its economic performance with a profit. The positive economic result of the major activities is due to incomes primarily from tuition fees from foreign students and profit from the business activities for providing services and rental.

Based on the Agreement on the Provision of Subsidies from the State Budget of the Ministry of Education of the Slovak Republic for 2010 and subsequently in compliance with the methodology of the Slovak Technical University for 2010, the Faculty of Civil Engineering was provided financial resources:

- to execute accredited study programs,
- for research and development activities, and
- for social support to students.

The percentage distribution of the allocated subsidy from the Ministry of Education of the Slovak Republic in 2010 is expressed by Chart No. 10.1.

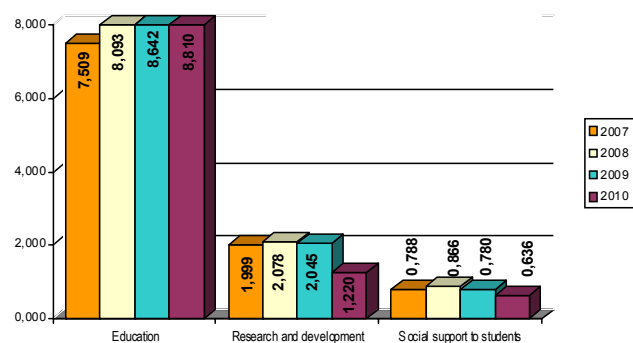
**Chart 10.1** Percentage allocation of subsidies from the SR ministry of Education in 2010



The extra-subsidy resources of the Faculty are used as a supplementary source to cover current expenditures for energy, repairs and the operation of the Faculty. Based on the analysis of results of drawing down the financial means for the operation of the Faculty in the previous years and an analysis of options of real streamlining measures, a proposal was prepared and approved by the academic senate for the financial coverage of assumed costs for the Faculty's operation in the framework of current expenditures (for goods and services). The assumed costs amounted to **1,625,353 €**, of which the assumed costs of energy are **1,037,000 €**. The subsidy covers the costs just to the amount of **1,049,804 €**. The coverage of the remainder of the assumed costs amounting to approximately **575,549 €** was proposed to be done from the following resources:

- from resources in the framework of business activities,
- from incomes of major activities, primarily from tuition fees of foreign students,
- from economic results for 2009, and
- from contributions from current expenditures of the sub-program 077 12 – research and development activities.

**Chart 10.2** Survey of subsidies allocated by the Ministry of Education of the Slovak Republic from 2007 to 2010 in millions of €



**Table 10.1** A survey of subsidies allocated by the Ministry of Education of the Slovak Republic to the Faculty of Civil Engineering from 2007 to 2010

	2007		2008		2009		2010	
	€	%	€	%	€	%	€	%
Education	7,508,763	73	8,093,274	73	8,642,401	75	8,810,257	83
Research and development	1,998,671	19	2,077,541	19	2,044,877	18	1,220,004	11
Social support to students	787,957	8	865,565	8	780,027	7	636,944	6
<b>Total</b>	<b>10,295,391</b>	<b>100</b>	<b>11,036,380</b>	<b>100</b>	<b>11,467,305</b>	<b>100</b>	<b>10,667,205</b>	<b>100</b>

A survey of subsidies allocated by the Ministry of Education of the Slovak Republic to the Faculty of Civil Engineering for 2007 to 2010 is illustrated in Table No. 10.1 and Chart No. 10.2.

The **total subsidy** as of 30 October 2010 is provided in the amount of **11,402,809.57 €**, of which current expenditures amount to 11,230,389.06 € and capital expenditures amount to 169,765 €.

More detailed information on the results of economic performance will be the subject of the Annual Report of Economic Performance for 2010.

In Bratislava, on 11 January 2011

## 11. ANNEX

### Annex 1 – Courses of lifelong education in the academic year of 2009/2010

#### A. Quantitative summary of implemented activities:

##### a) non-accredited activities

Name of the course	Number of trainees	Number of courses	Scope (lessons)	Number of graduates
Energy audit and certification of buildings – Practical seminar I. Košice 26 May 2009	27	1	8	27
Energy audit and certification of buildings – Practical seminar I. Žilina 27 May 2009	23	1	8	23
Energy audit and certification of buildings – Practical seminar I. Bratislava 28 May 2009	32	1	8	32
Energy audit and certification of buildings – Practical seminar II. Košice 23 June 2009	28	1	8	28
Energy audit and certification of buildings – Practical seminar II. Žilina 24 June 2009	25	1	8	25
Energy audit and certification of buildings – Practical seminar II. Bratislava 25 June 2009	34	1	8	34
Energy audit and certification of buildings – Training of trainers 1, 26 – 27 February 2009	26	1	15	26
Energy audit and certification of buildings – Training of trainers 2, 2 – 3 April 2009	16	1	15	16
Energy audit and certification of buildings – Training of trainers 3, 20 – 21 May 2010	21	1	16	21
Energy audit and certification of buildings – Training of trainers 3, 17 June 2010	17	1	8	17
Technologies for the construction and maintenance of road pavements	24	1	24	24
Aggregate – Quality and production	13	1	24	13
New technologies for the construction of roads and conditions to introduce products in the market	20	1	12	20
Preparatory training course for authorised surveyors and cartographers	12	2	16	12
Global satellite navigation systems in geodesy and cadastre – May 2010	5	1	28	5

##### b) Accredited activities

Name of the course	Number of trainees	Number of courses	Scope (lessons)	Number of graduates
Specialised training for certified experts in the branch of civil engineering	37	1	360	-
Special training on the method of performing certified expert activities (expert minimum for certified experts)	18	2	30	18
Special training on the method of performing interpreting and translating activities (expert minimum for interpreters and translators)	10	2	30	10
UNICert German language	24	2	52	14
UNICert English language	15	1	52	4

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# DEPARTMENT OF CONCRETE STRUCTURES AND BRIDGES

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Design of Composite Structures  
Design of Concrete Bridges I, II  
Design of Concrete Members (Slovak and English)  
Design of Concrete and Masonry Members  
Design of Concrete Structures I, II  
Execution of Concrete Structures  
High - Rise and - Span Structures  
Masonry Structures and Bridges  
Prestressed Concrete  
Reinforced and Prestressed Members  
Repair of Concrete Constructions  
Special Problems of Concrete Structures

#### Optional Subjects

Design of Masonry Structures  
Design of Environmental Constructions  
Experimental Testing of Concrete Structures  
Modeling of Civil Engineering Works

#### Recommended subjects

Modeling of Concrete Structures

## 2. Theses

### 2.1 Bachelor theses

8

### 2.2 Graduate theses

KIŠAC, M.: Multifunctional Building, Cast-in-Situ Reinforced Concrete Structure  
Supervisor: Benko, V.

MÁTEL, O.: Load-Bearing Structure of an Underground Garage  
Supervisor: Gramblička, Š.

MÍTKO, J.: Cellular Ceiling Design of a Office - Shopping Center  
Supervisor: Šoltész, J.

PETRUŠKOVÁ, S.: Multifunctional Building, Cast-in-Situ Reinforced Concrete Structure  
Supervisor: Borzovič, V.

V. VLHOVÁ, Ľ.: "VINOHRADIS Green Park", Residential Building: Cast-in-Situ RC Combined Bearing Structure with Stiffening Cores  
Supervisor: Abrahom, I.

BUCHTA, M.: Bridge on Road R1 Nitra – Selenec  
Supervisor: Borzovič, V.

HÁGER, P.: Bridge over Fast Highway Road R1, Stage Selenec – Beladice  
Supervisor: Halvoník, J.

JAZSKÓOVÁ, A.: Load-Bearing of RC High-Rise Office Center Building  
Supervisor: Gramblička, Š.

LACO, J.: Design of Railroad Arch Bridge  
Supervisor: Fillo, Ľ.

PATÁČIK, B.: High-Rise Concrete Building with a Twisted Shape  
Supervisor: Fillo, Ľ.

RONTŠINSKÝ, Ľ.: Bridge on Fast Highway Road R1, Nitra West - Selenec  
Supervisor: Halvoník, J.

STERANKA, R.: Concrete and Masonry Structure of a Three-Storey Building  
Supervisor: Fillo, Ľ.

ŠTEFÁNEK, T.: Highway Bridge on D1 at km 1,65, Jabloňov – Studenec Stage  
Supervisor: Halvoník, J.

VERBOVSKÝ, J.: Prestressed Railway Bridge over the Nosice Dam  
Supervisor: Halvoník, J.

VRABLEC, T.: Railway Bridge on the Púchov – Žilina Railway Line  
Supervisor: Borzovič, V.

### 2.3 Doctoral theses

GAJDOŠOVÁ, K.: Strengthening Slender Reinforced Concrete Columns with the Use of Fibre - Reinforced Polymers

## 3. Research

### 3.1 Research projects

VEGA 01/0651/08, Non-Linear Design Methods for Concrete and Composite Structures (2008-2010, Fillo, Ľ.)

VEGA1/0180/08, Factors Influencing the Surface Layer Properties of a Concrete Element from the Point of View of Its Execution and Surrounding Environmental Effects (2008-2011, Hudoba, I.)

VEGA 1/0306/09, Application of Probabilistic Methods to Improve the Reliability of Concrete Structures (2009-2011, Bilčík, J.)

### 3.2 International cooperation

#### Visit of staff members to foreign institutions

BILČÍK, J.: Seminar on Execution and Control of Repair of Concrete Structures, Prague, Czech Republic, 1.02.2010

FILLO, Ľ. - HALVONÍK, J.: Seminar: Design of Concrete Structures According to EC2 Part 2 – Prestressed Concrete, Prague, Czech Republic, 23.2.2010

FILLO, Ľ. - HALVONÍK, J.: Seminar: Design of Concrete Structures According to EC2 Part 1, Prague, Czech Republic, 20.4.2010

BILČÍK, J. - FILLO, Ľ. - GAJDOŠOVÁ, K. - CUPÁKOVÁ, Ľ.: Concrete Day 2010 Conference, Vienna, Austria, 22.-23.04.2010

BILČÍK, J.: XX International Symposium on Repair of Concrete Structures, Brno, Czech Republic, 20.-21.05.2010

FILLO, L. - HALVONÍK, J. - GRAMBLIČKA, Š.: Participation in Congress *fib* Washington, USA, 29.5.-9.6.2010

FILLO, L.: Session TG1.1 *fib*, Washington, USA, 30.5.2010

BELLOVÁ, M. - BENKO, V. - FILLO, L. - HALVONÍK, J. - HARVAN, I.: 1st International Workshop on "DESIGN OF CONCRETE STRUCTURES USING EN 1992-1-1", Czech Technical University in Prague, Czech Republic, 16.-17.9.2010

BILČÍK, J. - GAJDOŠOVÁ, K.: Conference on Testing and Quality in the Building Industry, Brno, Czech Republic, 5.-6.10.2010

FILLO, L.: 29<sup>th</sup> Session CEN TC250 SC 2, Madrid, Spain, 6.-7.10.2010

BELLOVÁ, M. - ČABRÁK, M. - HALVONÍK, J.: Meeting of the Concrete Structures and Bridges Department Representatives from the Czech and Slovak Republics, Technical University in Ostrava, Czech Republic, 7.-8.10.2010

FILLO, L.: Chairman of the Evaluation Commission for Best Realizations in the Czech Republic. Czech Concrete Society, Prague, Czech Republic, 27.10.2010

FILLO, L.: Seminar: Design of Concrete Bridges According to ČSN EN 1992 (Eurocode 2), Prague, Czech Republic, 2.11.2010

ABRAHOIM, I. - BELLOVÁ, M. - BENKO, V. - BORZOVIČ, V. - DOLNÁK, J. - FILLO, L. - HALVONÍK, J. - PAULÍK, P. - VÖRÖS, Š.: Concrete Days 2010, Hradec Králové, Czech Republic, 23.-24.11.2010

#### **Membership in international professional organizations**

BILČÍK, J.: American Concrete Institute

FILLO, L.: Representative of the Slovak Republic in CEN TC 250 – SC2 Eurocodes – Design of Concrete Structures

FILLO, L.: Member of Task Group *fib* TG 1.1 Design Application

FILLO, L.: Honorary Member of Czech Concrete Society, Hradec Králové, Czech Republic, 25.11.2009

HALVONIK, J.: Representative of the Slovak Republic on CEN TC 250 – SC1 Eurocodes – Actions on Structures

HALVONIK, J.: Representative of the Slovak Republic on CEN TC 250 Eurocodes

## **4. Publications**

### **Books**

BELLOVÁ, M. - OLBRÍMEK, J. - OSVALD, A. - PROCHÁZKA, J. - ŠTEFAN, R. - ŠTUJBEROVÁ, M.: Structural Fire Design According to the Eurocodes. Examples. Introduction of the Eurocodes into Practice, Bratislava, Engineering Consultative Centre of the Slovak Chamber of Civil Engineers, 2010, ISBN 978-80-89113-70-5, 148 pp. (in Slovak)

BELLOVÁ, M. - OLBRÍMEK, J. - OSVALD, A. - PROCHÁZKA, J. - ŠTEFAN, R. - ŠTUJBEROVÁ, M.: Structural Fire Design According to the Eurocodes. Theory. Introduction of the Eurocodes into Practice, Bratislava, Engineering Consultative Centre of the Slovak Chamber of Civil Engineers, 2010, ISBN 978-80-89113-69-9, 218 pp. (in Slovak)

BENKO, V.: Reliability of Structures (According to Eurocodes), Issue – 1, Bratislava, The Slovak Chamber of Civil Engineers, 2010, ISBN 978-80-89113-84-2, 84 pp. (in Slovak)

OLBRÍMEK, J. - BELLOVÁ, M. - ŠTUJBEROVÁ, M. - OSVALD, A.: Fire Resistance-Grading Tables of Building Constructions According to the Eurocodes, Bratislava, Slovak Standards Institute (SÚTN), 2010, ISBN 978-80-88971-91-7, 107 pp. (in Slovak)

### **Parts of Books**

FILLO, L. - HALVONÍK, J.: Post-Tensioned Floor Slab with Unbonded Tendons. In: Design of Concrete Structures According to ČSN EN 1992 (Eurocode 2) Part 2, Prestressed Concrete, Prague, Czech Concrete Society, 2010, ISBN 978-80-87158-21-0, pp. 211-230 (in Slovak)

FILLO, L.: Pre-Tensioned Roof Girder. In: Design of Concrete Structures According to ČSN EN 1992 (Eurocode 2) Part 2, Prestressed Concrete, Prague, Czech Concrete Society, 2010, ISBN 978-80-87158-21-0, pp. 231-244 (in Slovak)

FILLO, L. - HALVONÍK, J.: Ultimate Limit States. In: Design of Concrete Structures According to ČSN EN 1992 (Eurocode 2) Part 2, Prestressed Concrete, Prague, Czech Concrete Society, 2010, ISBN 978-80-87158-21-0, pp. 139-152 (in Slovak)

GRAMBLIČKA, Š.: Reinforcing of Cast-in-Situ Reinforced Concrete Bearing Structures. In: Stavebnícka ročenka 2010, Bratislava, Jaga, 2009, ISBN 978-80-8076-076-2, pp. 78-83 (in Slovak)

### **Textbooks**

HALVONÍK, J. - BORZOVIČ, V.: Concrete Bridges I. Design of Reinforced Concrete Road Bridges According to Eurocodes, Issue 1, Bratislava, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-227-3323-6, 215 pp. (in Slovak)

HARVAN, I.: Reinforced Concrete Supportig Structures. Design According to European Standards. 2. Edition, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-227-3234-5, 292 pp. (in Slovak)

### **Journals**

BENKO, V.: Computer-Aided Design of Buildings Against Earthquakes. In: Österreichische Ingenieur-und Architekten - Zeitschrift, ISSN 0721-9415, 155. Jahrgang, Heft 1-3 (2010), pp. 25-29 (in German)

BILČÍK, J. - GAJDOŠOVÁ, K. - OLIVOVÁ, K.: Strengthening Columns with Carbon Fibre - Reinforced Polymers. In: Inžinierske stavby, ISSN 1335-0846, Vol. 58, No. 2 (2010), pp. 145-149

BILČÍK, J. - BORZOVIČ, V.: Design of Underground Garages. In: Stavba, ISSN 1335-5406, Vol. 13, No. 4 (2010), pp. 70-74 (in Slovak)

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BILČÍK, J.: Protection and Repair of Concrete Constructions after EN 1504. In: Materiály pro stavbu, ISSN 1213-0311, Vol. 16, No. 7 (2010), pp. 52-53 (in Slovak)

- BILČÍK, J. - LÖRINCZ, A.: Robust Concrete Structures. In: Stavebnictví, ISSN 1802-2030, Vol. 4, No. 2 (2010), pp. 56-59 (in Slovak)
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- CHANDOGA, M. - JAROŠEVIČ, A. - PLOTENÝ, P. - REPÁK, M.: Detailed Monitoring of the State of Stress in Strands of Stay Cables of the Extradosed Bridge at Považská Bystrica. In: Inžinierske stavby, ISSN 1335-0846, Vol. 58, No. 2 (2010), pp. 134-139 (in Slovak)
- CHANDOGA, M. - SEDLÁK, J. - PRÍTULA, A. - KUCHARÍK, J.: Loading Test of the Extradosed Bridge Segment in Považská Bystrica. In: Inžinierske stavby. - ISSN 1335-0846. - Vol. 58, No.2 (2010), pp. 140-144 (in Slovak)
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- GRAMBLIČKA, Š.: Reinforced Concrete and Composite Steel-Concrete Columns to Withstand High Loads. In: Stavebnictví, ISSN 1802-2030, Vol. 4, Nos. 6-7 (2010), pp. 47-53 (in Slovak)
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- HARVAN, I.: Heavy Structural Concrete: Properties and Technical Parameters. In: Stavebné materiály, ISSN 1336-7617, Vol. 6, No. 4 (2010), pp. 38-41 (in Slovak)
- KÓŇA, D.: River House in Bratislava. In: Beton. Technologie - Konstrukce - Sanace, ISSN 1213-3116, Vol. 9, No. 5 (2009), pp. 30-33 (in Slovak)
- PAULÍK, P. - BÚCI, M.: Bridge Built by the Incremental Launching Technology near the Village of Štrba – Lessons Learned from Construction. In: Inžinierske stavby, ISSN 1335-0846, Vol. 58, No. 2 (2010), pp. 40-44 (in Slovak)
- SEDLÁK, J. - CHANDOGA, M.: Experimental Research on the Stress and Strain States of a Continuous Beam Model of the Viaduct in Prešov. In: Inžinierske stavby, ISSN 1335-0846, Vol. 58, No. 2 (2010), pp. 74-77 (in Slovak)
- Conferences**
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- BARTÓK, A.: Haiti Earthquake 2010 – Basic Facts and Impact upon Structures. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, pp. 365-370 (in Slovak)
- BELLOVÁ, M.: Influence of the Surface Reinforcement on the Verification and Control of Beams. In: Design of Concrete Structures Using EN 1992-1-1: First International Workshop, Prague, Czech Republic, 16.-17.9.2010, Czech Technical University, ISBN 978-80-01-04581-7, pp. 125-133
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- BENKO, V. - FILLO, L.: Reliability of Slender Concrete Columns Designed by Nonlinear Analysis. In: Design of Concrete Structures Using EN 1992-1-1, First International Workshop, Prague, Czech Republic, 16.-17.9.2010, Czech Technical University, ISBN 978-80-01-04581-7, pp. 163-168
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- BILČÍK, J.: Lifetime Management of Concrete Constructions. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, pp. 55-62 (in Slovak)
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- BOHUNICKÝ, B. - ČUHÁK, M.: Checking the Width of Cracks without Explicit Calculations in Accordance with STN EN 1992-1-1. Bent One-Sided Reinforced Cross-Section. Simplified Calculation of Tensile Reinforcement Bars. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, pp. 339-344 (in Slovak)
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- GRAMBLIČKA, Š. - MATIAŠKO, S.: Design of Composite Steel-Reinforced Concrete Columns with the Use of High - Strength Concrete. In: Concrete in Slovakia 2006-2010, Proceedings of SNC *fib* Conference, Žilina, 17.-18.2.2010, Bratislava, Jaga Group, ISBN 978-80-8076-082-3, pp. 227-234 (in Slovak)
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- GAJDOŠOVÁ, K. - BILČÍK, J.: Experimental Investigation of Slender Columns Resistance, Strengthened with CFRP Materials In: Investigation and Quality in Civil Engineering 2010, Reviewed Proceedings of Conference, Czech Republic, 5.-6.10.2010, Brno University of Technology, ISBN 978-80-214-4144-6, pp. 25-32 (in Slovak)
- GAJDOŠOVÁ, K. - BILČÍK, J.: Verification of Strengthening Effects of CFRP Materials for Slender RC Columns. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, pp. 381-384 (in Slovak)
- HALVONÍK, J. - BORZOVIČ, V. - DOLNÁK, J.: Lessons Learned in the Design of Prestressed Concrete Bridges According to the Eurocode. In: Design of Concrete Structures Using EN 1992-1-1: First International Workshop, Prague, Czech Republic, 16.-17.9.2010, Czech Technical University, ISBN 978-80-01-04581-7, pp. 61-71
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- HALVONÍK, J. - FILLO, Ľ. - BORZOVIČ, V.: Railway Bridge in Trenčín Designed by Cantilever Balance Method. In: Concrete in Slovakia 2006-2010, Proceedings of SNC *fib* Conference, Žilina, 17.-18.2.2010, Bratislava, Jaga Group, ISBN 978-80-8076-082-3, pp. 468-475 (in Slovak)
- HARVAN, I.: Appraisal of Perpendicular Compressive Forces on Walls of Prefabricated Houses According to STN EN 1992-1-1. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 295-300 (in Slovak)
- HARVAN, I. - ABRAHOIM, I.: Calculations of Time-Dependent Prestressing Losses According to EN 1992-1-1. In: Design of Concrete Structures Using EN 1992-1-1: First International Workshop, Prague, Czech Republic, 16.-17.9.2010, Czech Technical University, ISBN 978-80-01-04581-7, pp. 53-60
- HARVAN, I. - ABRAHOIM, I.: Punching Foundation Structures According to EN 1992-1-1. In: Design of Concrete Structures Using EN 1992-1-1: First International Workshop, Prague, Czech Republic, 16.-17.9.2010, Czech Technical University, ISBN 978-80-01-04581-7, pp. 47-52
- HUĐOBA, I. - PAULÍK, P.: Degradation of High Performance Fibre - Reinforced Concrete Elements in a NH4NO3 Environment. In: Concrete in Slovakia 2006-2010, Proceedings of SNC *fib* conference, Žilina, 17.-18.2.2010, Bratislava, Jaga Group, ISBN 978-80-8076-082-3, pp. 407-412 (in Slovak)
- HUĐOBA, I.: Execution of Concrete Structures in Context of the New Standard STN EN 13670. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 477-480 (in Slovak)
- KÓŇA, D. - HALVONÍK, J.: Redistribution of Bending Moments on Composite Concrete Beams. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 273-278 (in Slovak)
- KOVAČOVIC, M.: Shear Resistance Between Concrete Surfaces Cast at Different Times. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 289-294 (in Slovak)
- PAULÍK, P. - PÁNIK, M.: Use of Radioactive Reinforcement in Bridge Construction. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 241-246 (in Slovak)



SEDLÁK, J. - CHANDOGA, M.: Experimental Analysis of the Effects of High Eccentric External Prestressing on Continuous Beams. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 399-404 (in Slovak)

SEDLÁK, J. - CHANDOGA, M.: Experimental Monitoring State of the Stress and Strain of a Continuous Beam with the High Eccentricity of External Tendons. In: Concrete in Slovakia 2006-2010, Proceedings from SNC *fib* Conference, Žilina, 17.-18.2.2010, Bratislava, Jaga Group, ISBN 978-80-8076-082-3, pp. 235-241 (in Slovak)

ŠOLTÉSZ, J. - KRÁL, E.: FEM Model of Seismic Stop with Dumping. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 333-338 (in Slovak)

ŠOLTÉSZ, J. - ABRAHOIM, I.: Vinohradis Residential Complex in Bratislava. In: 15th Conference on Statics of Buildings 2010, Piešťany, Slovak Republic, 8.-19.3.2010, ISBN 978-80-970037-3-9, pp. 183-190 (in Slovak)

ŠOLTÉSZ, J. - ABRAHOIM, I.: Vinohradis A,B Residential Complex in Bratislava. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 83-88 (in Slovak)

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VÖRÖS, Š.: Shear Analysis of Lightweight RC Slabs. In: Concrete Days 2010 Conference, Bratislava, Slovak Republic, 21.-22.10.2010, Slovak University of Technology in Bratislava, 2010, ISBN 978-80-8076-089-2, ISBN 978-80-8076-089-2, pp. 405-410 (in Slovak)

# DEPARTMENT OF TRANSPORTATION ENGINEERING

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Airport Infrastructures  
Diagnosis and Reconstruction  
Diploma Thesis  
The Environment and Transport  
Excursions  
Modeling and Graphics in Road Construction  
Project: Road Constructions  
Railways  
Roads in Urban Areas  
Road Intersections  
Design Studio of Urban Planning I  
Design Studio of Urban Planning II  
Design Studio of Spatial Planning  
Prognoses and Scenarios for the Development of Transport  
Transport Prognosis

#### Optional Subjects

Experiment and Testing  
Ecology of Urban Settlements and Urban Transportation  
Planning  
Selected Chapters on Roads and Motorways  
Pavement Mechanics  
Transport Construction  
Urban Transportation Planning  
Urban Planning I

## 2. Theses

### 2.1 Bachelor's theses

20

### 2.2 Graduate theses

GALO, P.: Reconstruction Variants for the Long Life of Pavements  
Supervisor: Gschwendt, I.

BODIŠ, M.: Simplified Project for DUR in the Včeláre – Šaca Section  
Supervisor: Bačová, K.

DEREVJANÍK, D.: Study of Pavement Structures for PPP Projects  
Supervisor: Bačová, K.

BALUVHA, I.: Study of Road II/564 Left-Tlmače Alignment with Connection to R1  
Supervisor: Bačová, K.

BIELICKÝ, L.: Design of Road Rehabilitation in a Designated Part of Road  
Supervisor: Gábor, P.

DIKO, P.: Design of Expressway R4 – North Eastern Bypass of Prešov  
Supervisor: Bartošová, L.

GRAMBLIČKA, T.: Proposed Road Rehabilitation in a Designated Part of a Road on the Basis of Data from Diagnostics of the Roads  
Supervisor: Ing. Gábor, P.

MÜLLEROVÁ, B.: Design of General Traffic Masterplan  
Supervisor: Ondrovič, M.

HARTLOVÁ, V.: Design of South Road Bypass of Vajnory to Road I/61  
Supervisor: Bačová, K.

LAMPRECHT, T.: Study of Tram Line Connection Between Raca - Komisarčky - Zlaté Piesky Turnaround in View of the Upcoming Urbanization of the Area  
Supervisor: Ing. Gábor, P.

SITÁRIK, J.: Design of General Traffic Masterplan  
Supervisor: Ondrovič, M.

### 2.3 Doctoral theses

ĽOS, P.: Modelling the Accessibility of a Transport Infrastructure  
Supervisor: Bezák, B.

## 3. Research

### 3.1 Research projects

CENEX subcentre CETIS - Centre of Transport Infrastructure of Settlements  
(Project No.: 26240120002)  
(Bezák, B.)

Road Safety Management – ROSEMAN  
(Project No.: 00022)  
(Rakšányi, P.)

Sustainable Spatial and Energy Transport Construction  
(Project No.: 1/0580/09)  
(Bačová, K.)

Austria-Slovakia Traffic Model  
(Project No.: 00043)  
(Bezák, B.)

### 3.2 International cooperation

#### Visit of staff members to foreign institutions

Bezák, B.: Vienna, Austria, 5 days  
Rakšányi, P.: Vienna, Austria, 2 days  
Neumannová, M.: Vienna, Austria, 4 days  
Ondrovič, M.: Vienna, Austria, 5 days  
Fajta V.: Vienna, Austria, 2 days  
Dohnal: Vienna, Austria, 1 day  
Nemček, M.: Vienna, Austria, 2 days  
Kapusta, V.: Vienna, Austria, 2 days  
Frešo, P.: Vienna, Austria, 1 day  
Štefunková, S.: Brno, Czech Republic, 2 days  
Bezák, B.: Ostrava, Czech Republic, 2 days  
Bezák, B.: Subotica, Serbia, 4 days  
Bezák, B.: Mikulov, Czech Republic, 2.5 days  
Kapusta, V.: Mikulov, Czech Republic, 2 days  
Bezák, B.: Karlove Vary, Czech Republic, 3 days

Neumannová, M.: Karlove Vary, Czech Republic, 3 days  
Zuzulová, A.: Prague, Czech Republic, 1 day  
Bartošová, L.: Prague, Czech Republic, 1 day  
Bačová, K.: Bořetice, Czech Republic, 2 days  
Nemček, M.: Bořetice, Czech Republic, 2 days  
Bezák, B.: Brno, Czech Republic, 1 day  
Bezák, B.: Bucurest, Romania, 2 days  
Ondrovič, M.: Maribor, Slovenia, 8 days  
Nittmanová, L.: Maribor, Slovenia, 8 days  
Onderčinová, M.: Maribor, Slovenia, 8 days  
Gažiová, J.: Maribor, Slovenia, 8 days  
Hamadřáková, Z.: Maribor, Slovsko, 8 days

#### **Membership in international professional organizations**

Bezák, B.: Member of the PIARC - C 2.3 Technical Committee on Urban Areas and Integrated Transport, Paris, France

Bezák, B.: Member of the Southeast European Transport Research Forum, SETREF, Thessaloniki, Greece

Bezák, B.: Member of the Editorial Board -Transport Review, London, UK

Bezák, B.: Member of the Editorial Board – Acta Technica Jaurinensis, Győr, Hungary

Bezák, B.: CEI Vienna - Central European Initiative – Subgroup for Transport and the Environment, Austrian Federal Ministry of Agriculture, Forestry, the Environment and Water Management, Vienna

Gschwendt, I.: Member of the PIARC – C7/8 – World Road Association (Road Pavements)

Gschwendt, I.: Member of the Editorial Board – Silniční obzor, Prague

Gschwendt, I.: The American Bibliographical Institute: Research Board of Advisors

Gschwendt, I.: Czech Association for Mechanics, ČSM Prague, Czech Republic

Rakšányi, P.: CEI Vienna - Central European Initiative – Subgroup for Transport and the Environment, Austrian Federal Ministry of Agriculture, Forestry, the Environment and Water Management, Vienna

Rakšányi, P.: DASL (German Academy of Spatial and Landscape Planning, Committee for Transport and the Environment), Landesgruppe Niedersachsen-Bremen, Hannover, Member-Correspondent

Rakšányi, P.: IFHP International Federation for Housing and Planning, The Hague, The Netherlands, Member-delegate

Ondrovič, M.: Member of the PIARC - A.1 Technical Committee on Preserving the Environment, Paris, France

## **4. Publications**

### **Books**

BARTOŠOVÁ, L. - BAČOVÁ, K. - KAPUSTA, V.: Road Engineering Construction. – 1st ed. - Bratislava : STU v Bratislave, 2010. - 231 pp.- ISBN 978-80-227-3359-5 (in Slovak).

### **Journals**

BARTOŠOVÁ, L.: Cement-Concrete Pavements : Transport Infrastructure. In: Roads and Railways pp.- ISSN 1801-822X. - Year 5, No. 4 (2010), pp. 16-18 (in Slovak).

BARTOŠOVÁ, L.: Temperature Changes and Concrete Pavement. In: Concrete. Technology - Construction - Maintenance. - ISSN 1213-3116. – Year 10, No. 4 (2010), pp. 78-81 (in Slovak).

HUBA, M. - RAKŠÁNYI, P.: Studies in the Sustainable Development of the Tatra Region After Five Years. In: Terra Spectra STU. Planning Studies. ISSN 1338-0370. - Vol. 2, No. 2 (2010), pp.15-20 (in Slovak).

RAKŠÁNYI, P.: Analysis of a Municipality and Its Transport Infrastructure Development. In: Urbanita. - ISSN 0139-5912. - Year 22, No. 2 (2010), pp. 40-43 (in Slovak).

BAČOVÁ, K. - BEZÁK, B. - GSCHWENDT, I.: The Use of Paving Blocks on the Road Pavements. In: Buildings Material pp.- ISSN 1336-7617. - Year 6, No.5-6 (2010), pp. 50-52 (in Slovak).

KOMRSKA, J. - JAKUŠOVÁ, M. - ŠLACHTA, Š. - SMOLEC, M. - RAKŠÁNYI, P. - BADA, D.: Discussion on Public Spaces. In: Urbanita. - ISSN 0139-5912. - Year 22, No. 1 (2010), pp. 18-23 (in Slovak).

ONDROVIČ, M. – RAKŠÁNYI, P.: EU Territorial Projects in Slovakia. In: Urbanita. - ISSN 0139-5912. – Year. 22, No. 2 (2010), pp. 22-25 (in Slovak).

RAKŠÁNYI, P.: The Quality of Public Space and Energy Savings in Cities SR- 2nd part. In: Transfer. - ISSN 1337-9747. – Year. 2, No.2 (2010), pp.20-21 (in Slovak).

RAKŠÁNYI, P.: Improving the Quality of Public Space and Energy Savings in Cities of the SR - section 1, In: Transfer. - ISSN 1337-9747. - Year. 2, No. 1 (2010), p. 24 (in Slovak).

ŠTEFUNKOVÁ, S.: Warm-Mix Asphalt. In: Stavba. - ISSN 1335-5406. - Year. 13, No. 1 (2010), pp. 58-64 (in Slovak).

### **Conferences**

ŠTEFUNKOVÁ, S.: Determination of Qualitative Parameters of Construction Layers of Roads from Repeatedly Used Materials. In: Juniorstav 2010, Brno, ČR, 24.2.2010. – Brno: VUT, 2010. – ISBN 978-80-214-4042-5. – pp. 1-8 (in Slovak).

ŠTEFUNKOVÁ, S.: Influence of Low - Sasobit Temperature Additive on Asphalt Binder Parameters. In: Road 2010: Proceedings of Conference with foreign participation. Prague, ČR, 17.6.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04582-4. - unpagged. (in Slovak).

RAKŠÁNYI, P. - ONDROVIČ, M.: Urban Transport Safety, Energy and Space Savings. In: Urban Investment, Bratislava: STATIS, 2010. - ISBN 978-80-85659-57-3. - pp. 109-118

ŠTEFUNKOVÁ, S.: Warm-Mix Asphalt with RAP. In: TOP 2010. Technika ochrany prostredia, Častá-Papiernička, 15.-17. 6. 2010, ISBN 978-80-970438-0-3. - pp. 393-398 (in Slovak).

GSCHWENDT, I. - DREVEŇÁK, M. - ZUZULOVÁ, A.: Innovations in Assessing the Suitability of Roads for the PPP Project. In: Road 2010: Proceedings of Conference with foreign participation. Prague, ČR, 17.6.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-0458 2-4. – nonpagged, (in Slovak).

BARTOŠOVÁ, L.: Transport and the Environment in an Historic City Center. In: Transport Infrastructure in Cities: 7th International Conference, Žilina, SR, 20.-21.10.2010. - Žilina: University of Žilina, 2010. - ISBN 978-80-554-0260-4. - pp.185-190 (in Slovak).

RAKŠÁNYI, P.: Differences Between Sectoral and Comprehensive Transport Plans. In: Physical-Planning Support Documents: Seminar 29.4.2010, Banská Bystrica. - Bratislava: Association of Slovak Architects, 2010. - ISBN 978-80-88757-59-7. – unpagged (in Slovak).

- BAČOVÁ, K.- BEZÁK, B.- KAPUSTA, V.- NEUMANNOVÁ, M. - RAKŠÁNYI, P.: The Environmental Aspects of Transportation Engineering Projects of the Department. In: Environmental Aspects of Transport Construction: Meeting Chairs of Transportation Engineering 2010. Bořetice, ČR, 8.-9. 2010. - Brno: VUT Brno – Faculty of Civil Engineering, 2010. - ISBN 978-80-7204-696-6. - pp. 13-21 (in Slovak).
- BEZÁK, B.- SKÝVA, M.: Transport Serviceability of Large Territorial Units and the Integration of Public Transport. In: Transport Infrastructure in Cities: 7th International Conference, Žilina, SR, 20.-21.10.2010. - Žilina: University of Žilina, 2010. - ISBN 978-80-554-0260-4. - pp. 7-10 (in Slovak).
- BEZÁK, B. - NEUMANNOVÁ, M.: Modeling Background for Cross - Border Displacement Relations. In: Transport infrastructure in Cities: 7th International Conference, Žilina, SR, 20.-21.10.2010. - Žilina: University of Žilina, 2010. - ISBN 978-80-554-0260-4. - pp. 127-133 (in Slovak).
- NEMČEK, M.: Effect of the Basic Characteristics of Parking on Parking Policy. In: Transport Infrastructure in Cities: 7th International Conference, Žilina, SR, 20.-21.10.2010. - Žilina : University of Žilina, 2010. - ISBN 978-80-554-0260-4. - pp. 31-35 (in Slovak).
- BEZÁK, B. - NEUMANNOVÁ, M. - ONDROVIČ, M.: Urban - Traffic Aspects of Urban and Land Use Patterns. In: Civil Engineering Karlovy Vary 2010: It was Here the Town, the Country: 15th international conference Karlovy Vary, ČR, 11.6.2010. - Ostrava : VŠB - TU Ostrava, 2010. - ISBN 978-80-248-2229-7. - pp. 41-51 (in Slovak).
- BEZÁK, B. - SKÝVA, M.: Coordinated Optimization Procedures IDPP. In: Public Passenger Transport 2010: Proceedings of the International Conference. Bratislava, SR, 7.-8.9.2010. - pp. 32-36 (in Slovak).
- BEZÁK, B.: Need for Integrated Mobility Patterns. In: Medunarodno savetovanje indikatori u saobračajnom inženjerstvu : 9. savetovanje o tehnikama regulisanja saobraćaja. Beograd - Subotica, Srbija, 2010. - ISBN 978-86-7395-263-5. - pp. 257-263 (in Slovak).
- BEZÁK, B. - SKÝVA, M.: Transport Service Solutions for Large Territorial Units in Slovakia. In: 11th Traffic - Engineering Days: Implementation of Highway Construction and Repair for Maintenance of Communications in an Urban Agglomeration. Mikulov, ČR, 2.-3.6.2010. - pp. 59-63 (in Slovak).
- KAPUSTA, V. - DOHNAL, I.: Highway Traffic Safety in Slovakia. In: 11th Traffic - Engineering Days: Implementation of Highway Construction and Repair for Maintenance of Communications in an Urban Agglomeration. Mikulov, ČR, 2.-3. 6.2010. - pp. 59 - Mikulov (in Slovak).
- NEUMANNOVÁ, M.: Material and Immaterial Transport - Its Influence on Settlements and Settlement Structure. In: Civil Engineering Karlovy Vary 2010: It was Here the Town, the Country: 15th international conference. Karlovy Vary, ČR, 11.6.2010. - Ostrava: VŠB - TU Ostrava, 2010. - ISBN 978-80-248-2229-7. - pp. 111-118 (in Slovak).
- BEZÁK, B. - NEUMANNOVÁ, M. - KAPUSTA, V.: Concept of the RSI Methodology for Roads in the SR, In: Transport Safety on Roads: Proceedings of the international conference. Vyhne, Slovakia, 22.-24.9.2010. - ISBN 978-80-232-0303-0. - pp. 144-148 (in Slovak).
- KAPUSTA, V. - FAJTA, V.: Results of RSI in the Model Territory of Záhorie. In: Transport Safety on Roads: Proceedings of the international conference. Vyhne, SR, 22.-24.9.2010. ISBN 978-80-232-0303-0. - pp.149-152 (in Slovak).
- NEMČEK, M. - ONDROVIČ, M.: Design of Traffic - Safety Measures for Model Municipalities in the SR. In: Transport Safety on Roads: Proceedings of the international conference. Vyhne, SR, 22.-24.9.2010. ISBN 978-80-232-0303-0. - pp. 86-90 (in Slovak).
- RAKŠÁNYI, P. - ĽOS, P.: Sensitive Characteristics of Traffic Safety. In: Transport Safety on Roads: Proceedings of the international conference. Vyhne, SR, 22.-24.9.2010. ISBN 978-80-232-0303-0. - pp. 31-35 (in Slovak).

#### Research report

RAKŠÁNYI, P. - ONDROVIČ, M. - ĽOS, P. - VAŠKOVIČ, P. - JANÍK, O. - KYSEL', T.: Comprehensive Transport Masterplan of the Town of Piešťany : Part: II.e) Design of Development. - Bratislava: STU v Bratislave, 2010. - 77 pp.

# DEPARTMENT OF THEORETICAL GEODESY

Department Head  
Prof. Ing. Ján Hefty, PhD.

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## 1. Education

### 1.1 Graduate study

Information Technologies  
Processing and Analysis of Measurements 1  
Processing and Analysis of Measurements 2  
Global Geodesy 1  
Geodesy and Cartography (Faculty of Architecture)  
Geodesy and Cartography (Institute of Management)  
Programming  
Local Geodetic Networks  
Physical Geodesy 1  
Spherical Astronomy and Space Geodesy  
Geoinformatics  
Global Navigation Systems  
Field Education in Geodetic Controls  
Global Geodesy 2  
Space Geodesy  
Processing and Analysis of Measurements 3  
Physical Geodesy 2  
Management of Spatial Data  
Satellite Geodesy  
Spatial Modelling in GIS  
Metrology in Geodesy  
Mathematical Models in Geodesy  
Geographical Information Systems  
Specialized Field Education

### Optional Subjects

Gravimetry  
Geodynamics  
GIS Design and Implementation  
Database Systems in GIS  
Analysis of Geodata Quality  
Geometry and Relativity in Geodesy  
Object-Oriented Programming in C#  
Programming Web Pages Using PHP and JavaScript

### 1.2 Postgraduate courses

Processing and Analysis of Measurements – Hefty, J., 26 hours  
Numerical Methods in Geodesy – Janák, J., 26 hours  
Geodynamics – Mojzeš, M., 26 hours

## 2. Theses

### 2.1 Research projects

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### 2.2 Graduate theses

CZAFÍK, J.: Quality Testing of SKPOS  
Supervisor: Gerháťová, Ľ.

DUŠKA, M.: Proposed User Interface of the Information System for Property Management of the Slovak University of Technology  
Supervisor: Bučko, E.

GARAI, P.: Contribution of GLONASS and Its Application to Geodetic Networks  
Supervisor: Gerháťová, Ľ.

HAŠTOVÁ, M.: Design of an Information System for Room Management in the Building of the Faculty of Civil Engineering  
Supervisor: Ďuračiová, R.

JAVORČEKOVÁ, L.: Increasing the Accuracy of Regional Precipitable Water Vapour Model  
Supervisor: Igondová, M.

KASINOVÁ, J.: Analysis of the Functionality of the Leica GPS1200 Measurement System  
Supervisor: Igondová, M.

KOŘÍNEK, T.: Contribution of the Slovak Observation Spatial Service in the Establishment of Geodetic Networks  
Supervisor: Gerháťová, Ľ.

KOVÁČ, B.: Selected Tasks in Geodesy Programming  
Supervisor: Černý, P.

KŠENŽIGH, M.: Conversion of Selected Data Formats Used in Geodesy and Geoinformatics  
Supervisor: Janák, J.

PITOŇÁK, M.: Analysis of GNSS Observations  
Supervisor: Igondová, M.

SALVA, M.: Permanent GNSS Stations in Slovakia  
Supervisor: Igondová, M.

SASKO, T.: Interactive Orientation Map of the Faculty of Civil Engineering Building  
Supervisor: Bučko, E.

STOPKOVÁ, E.: Spatial Analyses in a Web Environment  
Supervisor: Faixová Chalachanová, J.

TOMANÍKOVÁ, Z.: Proposed Information System for Central Europe Geokinematical Parameters  
Supervisor: Hefty, J.

URBAN, M.: Predictive Modeling of Water Flow Springs in a GIS Environment Using a Digital Terrain Model  
Supervisor: Ďuračiová, R.

VRÁBEL, M.: Determining the Geopotential of a Geoid from the Altimetric Measurements of the Jason-1 Satellite  
Supervisor: Mojzeš, M.

### 2.3 Doctoral thesis

BEZRUČKA, J.: Near Real Time Analysis of Permanent GPS Networks and Its Applications  
Supervisor: Hefty, J.

DROŠČÁK, B.: Homogenization of Results of Long-term Position Monitoring Using GNSS and Their Geo-dynamical Interpretation  
Supervisor: Hefty, J.

PAPČO, J.: Monitoring the Earth's Crust Deformations in Alpine Area  
Supervisor: Mojzeš, M.

STROMČEK, V.: Modelling of Geo-Objects and Geo-Systems Using Object-Oriented Approach  
Supervisor: Bučko, E.

### 3. Research

#### 3.1 Research projects

Prediction of Archeological Sites (Faixová Chalachanová, APVV-0249-07)

Refinement of Gravity Field Models of the Earth Using Gradiometric Measurements (Janák, VEGA 1/0775/08)

Using Satellite Observations and Gravimetric Measurements for Determining Geoid, Quasigeoid and Physical Heights (Mojzeš, VEGA 1/0882/08)

Analysis and Interpretation of High-Frequency Positioning Using Global Navigation Satellite Systems (Hefty, VEGA 1/0569/10)

National Centre for Diagnosing the Earth' Surface Deformations in Slovakia (Mojzeš, ITMS 26220220108)

#### 3.2 International cooperation

##### Visit of staff members to foreign institutions

JANÁK, J., FAŠKOVÁ, Z., WILD-PFEIFFER, F., XU, P. L.: Challenges of GOCE Satellite Mission in Terms of User Applications. The Meeting of Americas, 8 – 13 August 2010, Foz do Iguassu, Brazil. (Solicited presentation)

KLIMENT, T. - Joint Research Centre, Institute for Environment and Sustainability, Spatial Data Infrastructure Unit, Ispira, Italy (9 months)

LIESKOVSKÝ, T. - Tell Fecheriye Research Project, organized by Freie Universität Berlin, Sirian Arab Republic (2 months)

PAPČO, J. (Lecturer), STOPKOVÁ, E., MIKOLAJ, M. - International Course on ArchaeoGeophysics (European Union Intensive Programme), Albersdorf, Germany, 16 July – 2 August 2010

PAPČO, J. - Geophysic, Institut für Geowissenschaften, Mathematisch-Naturwissenschaftliche Fakultät, Universität zu Kiel, Germany

##### Membership in international professional organizations

International Astronomical Union (IAU) – Hefty, J.

International Association of Geodesy (IAG) – Hefty, J., Mojzeš, M.

European Geosciences Union (EGU) – Hefty, J., Mojzeš, M., Igondová, M.

American Geophysical Union (AGU) – Hefty, J., Mojzeš, M.

CEGRN Consortium – Mojzeš, M.

### 4. Publications

#### Books and Textbooks

JANÁK J.: Gravimetry. STU, Bratislava, 2010, 133 pp., ISBN 978-80-227-3254-3 (in Slovak).

FERANEC, J., et al.: Slovakia Through the Eyes of Satellites (3 chapters: HEFTY, J.: Principle of Position Determining and Space Navigation Using Global Navigation Satellite Systems. GNSS Satellites and Receivers. Application of GNSS in Geodesy, Geographic Information Systems, Navigation and Geodynamical Research in Slovakia.), VEDA, Bratislava, 2010, 263 pp., ISBN 978-80-224-1105-9 (in Slovak).

#### Journals

BLAŽOVÁ, E., FAIXOVÁ CHALACHANOVÁ, J., BARTÍK, M.: Proposed Conceptual Data Structure for the Creation of an Archaeological Prediction Model. In: Study News of the Archaeological Institute of the Slovak Academy of Sciences (Študijné zvesti Archeologického ústavu SAV). 48, 2010, pp. 5-19. ISSN 0560-2793 (in Slovak).

ĎURAČIOVÁ, R.: Model of the Assessment of Data Quality for a Real Estate Cadastre and Its Correspondence with the INSPIRE Directive. In: Horizons of Geodesy and Cartography (Geodetický a kartografický obzor), 56 (98), 6, 2010, pp. 113-121, ISSN 0016-7096 (in Slovak).

HEFTY, J., HIPMANOVÁ, L., GERHÁTOVÁ, L., IGONDOVÁ, M., DROŠČÁK, B.: Recent Geo-kinematics of Slovakia Based on Homogenized Solutions of Permanent and Epoch GPS Networks. In: Acta Geodynamica et Geomaterialia, 7, 3 (159), 2010, pp. 303-315, ISSN 1214-9705.

HEFTY, J., IGONDOVÁ, M.: Diurnal and Semi-Diurnal Coordinate Variations Observed in the EUREF Permanent GPS Network – Case Study for the Period from 2004.0 to 2006.9. In: Contributions to Geophysics and Geodesy, 40, 3, 2010, pp. 225-247, ISSN 1335-2806.

IGONDOVÁ, M., CIBULKA, D.: Precipitable Water Vapour and Zenith Total Delay Time Series and Models over Slovakia and Its Vicinity. In: Contributions to Geophysics and Geodesy. 40, 4, 2010, pp. 299 – 312, ISSN 1335-2806.

JANÁK, J., SLOVÍK, S., FAŠKOVÁ, Z., MIKULA, K.: Disturbing Potential and Its Geometrical Properties. In: Slovak Journal of Civil Engineering, 18, 3, 2010, pp. 27-32, ISSN 1210-3896.

KLIMENT, T.: Metainformation Infrastructure for Geospatial Information. In: Slovak Journal of Civil Engineering, 18, 2, 2010, pp. 13-18, ISSN 1210-3896.

KOLLÁR, P., MOJZEŠ, M., VALKO, M.: Deformation of the Earth's Surface Caused by the Loading of a Tall Building. In: Slovak Journal of Civil Engineering, 18, 2, 2010, pp. 34-40, ISSN 1210-3896.

STOPKOVÁ, E.: Safety of Data Published Online. In: Cartographic Letters (Kartografické listy), 18, Cartographic Society of Slovak Republic, Bratislava, 2010, pp. 117-120, ISSN 1336-5274 (in Slovak).

VAJSÁBLOVÁ, M., ĎURAČIOVÁ, R., LIESKOVSKÝ, T., DURDOVANSKÝ, T.: Transformation between the Coordinate Systems Used in Slovakia in a GIS Environment. In: Letters (Kartografické listy), 18, Cartographic Society of the Slovak Republic, Bratislava, 2010, pp. 105-116, ISSN 1336-5274 (in Slovak).

ZAHOREC, P., PAŠTEKA, R., PAPČO, J.: The Estimation of Errors in Calculated Terrain Corrections in the Tatra Mountains. In: Contributions to Geophysics and Geodesy, 40, 4, 2010, pp. 323-350, ISSN 1335-2806.

## Conferences

BURGAN, J.: Comparison of the Results from Precise Point Positioning Software. In: 16th International Slovak-Polish-Czech Geodetic Days. Tatranská Lomnica, Slovak Geodetic and Cartographic Society, Bratislava, 2010, ISBN 978-80-969692-5-8 (in Slovak).

BURGAN, J.: Automation of Precise Point Positioning Services. In: Juniorstav 2010. 12th Professional Conference of Postgraduate Students. VUT Brno, 2010, ISBN 978-80-214-4042-5 (in Slovak).

CIBULKA, D.: Time Web Map Service – Client and Server. In: Juniorstav 2010. 12th Professional Conference of Postgraduate Students. VUT Brno, 2010, ISBN 978-80-214-4042-5 (in Slovak).

CIBULKA, D.: Web Services and Geographic Information Systems. In: Juniorstav 2010. 12th Professional Conference of Postgraduate Students. VUT Brno, 2010, ISBN 978-80-214-4042-5 (in Slovak).

CIBULKA, D.: Open Source Software for the INSPIRE Network Services. In: ENVIRO I FÓRUM 2010. TU Zvolen, 2010, pp. 50-53 (in Slovak).

DAŇOVÁ, K.: Digital Terrain Models in the Slovak Republic. In: Pedagogical Letters 16, Geodetic and Cartographic Support of Flood Protection, Bratislava, SvF STU, 2010, pp. 26-31 (in Slovak).

GÁLOVÁ, L.: Protection against Floods – Legislative Status in the Slovak Republic and Spatial Data. In: Juniorstav 2010. 12th Professional Conference of Postgraduate Students. VUT Brno, 2010, ISBN 978-80-214-4042-5 (in Slovak).

GÁLOVÁ, L., KLIMENT, T.: Data Harmonization – Basic Component of Interoperability in GIS Crisis Management. In: 16th International Slovak-Polish-Czech Geodetic Days. Tatranská Lomnica, Slovak Geodetic and Cartographic Society, Bratislava, 2010, ISBN 978-80-969692-5-8 (in Slovak).

GÁLOVÁ, L., KLIMENT, T.: Heterogeneous Data in Flood Crisis Management. In: Pedagogical Letters 16, Geodetic and Cartographic Support of Flood Protection, Bratislava, SvF STU, 2010, pp. 40-50 (in Slovak).

HÁBEL, B.: Analysis and Interpretation of the Micro-Gravimetric Measurements in the Area of the Čachtice Cave. In: Juniorstav 2010. 12th Professional Conference of Postgraduate Students. VUT Brno, 2010, ISBN 978-80-214-4042-5 (in Slovak).

HEFTY, J., GERHÁTOVÁ, L., HÁBEL, B., BURGAN, J.: Precise Absolute Point Positioning Using a Combination of GPS and GLONASS. In: Satellite Methods in Geodesy and Cadastre. ECON Brno, 2010, pp. 44-51, ISBN 978-80-86433-46-2 (in Slovak).

HEFTY, J., GERHÁTOVÁ, L., BURGAN, J.: Precise Absolute Point Positioning – An Independent GPS and GLONASS Solution. In: Global Navigation Satellite Systems as an Effective Tool for Spatial Positioning. Tatranská Lomnica, Slovak Geodetic and Cartographic Society, Bratislava, 2010, pp. 31-41, ISBN 978-80-969692-4-1 (in Slovak).

HIPMANOVÁ, L.: Geo-Kinematics of Central and Southeastern Europe Inferred from Homogenized Long-Term GPS Measurements. In: Proceedings of the Junior Scientist Conference 2010, Vienna University of Technology, Austria, 2010, pp. 53-54, ISBN 978-3-200-01797-9.

HIPMANOVÁ, L.: Geo-Kinematics of Slovakia as Results of the Combination of the Permanent and Epoch-Wise GNSS Networks. In: Juniorstav 2010. 12th Professional Conference of Postgraduate Students. VUT Brno, 2010, ISBN 978-80-214-4042-5.

IGONDOVÁ, M., HEFTY, J.: Contribution of GNSS to Meteorology. In: Global Navigation Satellite Systems as an Effective Tool for Spatial Positioning. Tatranská Lomnica, Slovak Geodetic and Cartographic Society, Bratislava, 2010, pp. 49-56, ISBN 978-80-969692-4-1 (in Slovak).

JANÁK, J., WILD-PFEIFFER, F.: Comparison of Various Topographic-Isostatic Effects in Terms of Smoothing Gradiometric Observations. In: Proceedings of IAG International Symposium Gravity, Geoid and Earth Observation. IAG Symposia, Vol. 135, Mertikas, S. (Ed.), Springer, Berlin, 2010, pp. 377-382.

KLIMENT, T.: Proposal and Pilot Realization of a Testing Process for a Search Service According to the INSPIRE Requirements. In: ENVIRO I FORUM 2010. TU Zvolen, 2010, pp. 38-42 (in Slovak).

KLIMENT, T., GÁLOVÁ, L.: Searching, Evaluation and Using Flood Data in a Spatial Data Infrastructure. In: Pedagogical Letters 16, Geodetic and Cartographic Support of Flood Protection, Bratislava, SvF STU, 2010, pp. 64-73 (in Slovak).

LIESKOVSKÝ, T.: Application of GIS in the Protection of a Cultural Heritage. In: 16th International Slovak-Polish-Czech Geodetic Days. Tatranská Lomnica, Slovak Geodetic and Cartographic Society, Bratislava, 2010, ISBN 978-80-969692-5-8 (in Slovak).

MIKOLAJ, M.: Analysis of Free Core Nutation and VLBI Results. In: Juniorstav 2010. 12th Professional Conference of Postgraduate Students. VUT Brno, 2010, ISBN 978-80-214-4042-5 (in Slovak).

MOJZEŠ, M., VALKO, M.: Determining Physical Heights Using a Modified Second Boundary Value Problem. In: Proceedings of IAG International Symposium on Gravity, Geoid and Earth Observation. IAG Symposia, Vol. 135, Mertikas, S. (Ed.), Springer, Berlin, 2010, pp. 333-338.

MOJZEŠ, M.: Global Geodetic Observing System. In: Global Navigation Satellite Systems as an Effective Tool for Spatial Positioning. Tatranská Lomnica, Slovak Geodetic and Cartographic Society, Bratislava, 2010, pp. 69-75, ISBN 978-80-969692-4-1 (in Slovak).

PÁNISOVÁ, J., PAŠTEKA, R., RABEL, W., BIELIK, M., WUNDERLICH, T. A., PAPČO, J.: Geophysical Survey for Crypt Detection in the Church of Virgin St. Mary's Birth in Horné Krškany. In: Proceedings of the 16th European Meeting of Environmental and Engineering Geophysics – Near Surface 2010. EAGE Zurich, Switzerland, 2010, ISBN 978-90-73781-88-7.

PAPČO, J., HIPMANOVÁ, L., DROŠČÁK, B.: Geokinematics of the High Tatras - 10 Years of GNSS Observations. In: Global Navigation Satellite Systems as an Effective Tool for Spatial Positioning. Tatranská Lomnica, Slovak Geodetic and Cartographic Society, Bratislava, 2010, pp. 83-93, ISBN 978-80-969692-4-1 (in Slovak).

STOPKOVÁ, E., LIESKOVSKÝ, T.: Possibilities of Publishing Archaeological Data in a Web Environment. In: GIS in Archaeology 2010. Archaeological Institute of the Slovak Academy of Sciences in Nitra. ISBN 978-80-89315-25-3 (in Slovak).

# DEPARTMENT OF SURVEYING

Department Head  
Prof. Ing. Štefan Sokol, PhD.

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Surveying I  
Surveying II  
Surveying III  
Surveying in Civil Engineering  
Surveying (branch of study: Building Constructions and Architecture)  
Surveying (branch of study: Building Technology and Management)  
Surveying (branch of study: Hydraulic Engineering and Water Resources Management)  
Surveying in Building Construction (branch of study: Engineering Constructions and Transportation Structures)  
Engineering Surveying I  
Engineering Surveying II  
Geodesy, Cartography and Cadastre  
Geodetic Work Legislation  
History of Civil Engineering and Surveying  
Industrial Surveying  
Photogrammetry I  
Photogrammetry II  
Surveying Camp  
Engineering Surveying Camp  
Professional Practice  
B. Sc. Project  
Special Seminar  
Diploma Work  
Optional Subjects  
Surveying in Underground Areas  
Measuring Systems in Engineering Surveying

#### Optional Subjects

Surveying in Underground Areas  
Measuring Systems in Engineering Surveying

### 1.2 Postgraduate courses

Engineering Surveying  
Photogrammetry

## 2. Thesis

### 2.1 Research projects

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### 2.2 Graduate thesis

BRUNČÁK, P.: Prolonged Monitoring of Movements of Bridge Structures  
Supervisor: Ježko, J.

GÁBOVÁ, G.: Verification of Stability Points of a Level Field by the Geometric Levelling Method  
Supervisor: Bajtala, M.

GREGUŠKA, M.: Measurement of the Displacement and Modification of Large Bridge Structures during an Operation  
Supervisor: Kopáček, A.

HODOVÁ, K.: Processing of a 3D Model Area and the

Spatial Alignment of Communications in a Field  
Supervisor: Ježko, J.

HRČKA, M.: Documentation of Cultural Heritage Buildings with Laser Scanning  
Supervisor: Fraštia, M.

JURKULÁKOVÁ, V.: Geodetic Tasks in the Creation of Project Documentation  
Supervisor: Ježko, J.

KALIS, M.: Creation of a 3D Model of the Church of the Holy Family in Petržalka  
Supervisor: Bajtala, M.

KLĽOC, V.: Digitalization of Artworks  
Supervisor: Fraštia, M.

KOZÁR, T.: Analysis of Methods for Measuring Premises with a Spatial Composition  
Supervisor: Bajtala, M.

KÖSZAGA, J.: Computing Quantity with Geodetic Surveying Methods  
Supervisor: Ježko, J.

KUBÍK, M.: Quality of Models Determined by Data from Laser Scanners and Coordinate Measuring Systems  
Supervisor: Kopáček, A.

LIPTÁK, M.: Measurement of Displacements and Deformations of the Apollo Bridge over the Danube in Bratislava  
Supervisor: Kopáček, A.

MATUŠKOVÁ, A.: Testing the Stability of Digital Levels  
Supervisor: Sokol, Š.

MIZERA, M.: The Current Estimates of the Unknown Parameters and Parameters of a Precise Measuring System in a Geodetic Network  
Supervisor: Bajtala, M.

MORAVČÍK, M.: Testing and Calibration of the Horizontal Circles of Geodetic Instruments  
Supervisor: Ježko, J.

NEMČÍK, M.: Testing "the Photomodeler Scanner" Photogrammetric Scanner  
Supervisor: Fraštia, M.

PAVLOV, P.: Geodetic Monitoring of Bridge Structures  
Supervisor: Staněk, V.

SKAČÁNI, J.: Utilization of GNSS Technology for the Measurement and Creation of a Special Purpose Map.  
Supervisor: Sokol, Š.

SMATANA, M.: Analysis of the Stated Documentation Layers of the Registry of Renewed Land Inventory by Processing Historical Photographs  
Supervisor: Fraštia, M.

SMOLKOVÁ, D.: Verifying the Stability of Universal Measuring Stations  
Supervisor: Sokol, Š.

SZOBONYA, T.: Application of the Series of STN ISO 17123 Standards under the Conditions of Geodetic Practice in Slovakia  
Supervisor: Konáček, A.



ŠEFČÍK, M.: Testing the Stability and Accuracy of the Determination of a Levelling Rod Section by the Trimble DiNi 12 Digital Level.  
Supervisor: Kopáček, A.

ŠINGLIAR, P.: Measurement of Relative Displacements Using Digital Cameras  
Supervisor: Fraštia, M.

ŠUFLIARSKA, M.: Creating a 3D Digital Landscape Model Combining GNSS and Terrestrial Methods  
Supervisor: Ježko, J.

TURČÁNY, P.: Testing Geodetic Instruments According to ISO 17123  
Supervisor: Ježko, J.

## 2.3 Doctoral thesis

HAŠKOVÁ, V.: Stability of the Results of Geodetic Measurements of Electronic Total Stations  
Supervisor: Sokol, Š.

KYRINOVIČ, P.: Automated Measurement of the Geometric Parameters of Crane Rails  
Supervisor: Kopáček, A.

LIPTÁK, M.: Elimination of the Impact of Vertical Refraction on the Trigonometric Measurement of Elevations  
Supervisor: Sokol, Š.

## 3. Research

### 3.1 Research projects

The Development of a Measuring System for Continual Monitoring of the Bridges in Bratislava (Research Grant Registration No. 1/0706/09, Kopáček, A.)

The Qualitative Aspects of Creating Spatial Models by Surveying and Photogrammetric Methods (Research Grant Registration No. 1/0142/10, Sokol, Š.)

Detailed Virtual Model of the Calvary in Banská Štiavnica as a Base for the Preservation of a World-Wide Cultural Monument (Research Grant Registration No. 1/0680/10, Fraštia, M.)

Proposed Realisation of the Modified Time-Baseline Method for the Purpose of the Staged Monitoring of Rock Cuts (Chlepková, M.)

Proposed Testing of the Methodology of Photogrammetric Documentation of the Ruins of Monuments (Marčíš, M.)

### 3.2 International cooperation

#### Visit of staff members to foreign institution

Sokol, Š. – TU Ostrava, Czech Republic (January 2010)  
Erdelyi, J., Haličková, J., Lipták, M., Marčíš, M. – VUT Brno, Czech Republic (February 2010)

Erdelyi, J., Kyrinovič, P. – Brno, Czech Republic (April 2010)  
Kopáček, A. – FIG International Congress, Sydney, Australia (April 2010)

Ježko, J. – Prague, Czech Republic (December 2010)  
Sokol, Š. – VUT Brno, Czech Republic (December 2010)

#### Membership in international professional organizations

Deutsche Geodätische Kommission bei der Bayerischen Akademie der Wissenschaften – Correspondent – Kopáček

FIG – International Federation of Surveyors:

National delegate to FIG Commission 1: “Professional Standards & Practice” – Lukáč

National delegate to FIG Commission 2: “Professional Education” – Kopáček

Chair of Commission 6: “Engineering Surveying” – Kopáček

Member of WG 6.1: “Deformation Measurements” – Lukáč

FIG Advisory Committee of Commission Officers (ACCO) – member – Kopáček

ISPRS – International Society for Photogrammetry and Remote Sensing – Ordinary Members – Bartoš, Fraštia

EEGCS – European Education in Geodesic Engineering, Cartography and Surveying – WG1 “Undergraduate Education” – Kopáček

## 4. Publications

### Journals

JEŽKO, J.: New Standards for Testing Geodetic Instruments in Practice. In: Slovak Surveyor and Cartographer. ISSN 1335-4019, 2010, vol. 15, no. 1, pp. 20-22 (in Slovak).

JEŽKO, J.: Verification of Surveying Instruments and Devices on Calibration Equipment in the Slovak Republic. In: Slovak Surveyor and Cartographer. ISSN 1335-4019, 2010, vol. 15, no. 2, pp. 8-12 (in Slovak).

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SOKOL, Š. – BAJTALA, M. – LIPTÁK, M.: Creation of a Surveying Base for an Ice Rink Reconstruction Project. In: Geodesy, Cartography and Geographic Information Systems 2010. [CD-ROM]. Košice : UGKaGIS, F BERG TU Košice, 2010. ISBN 978-80-553-0468-7 (in Slovak).

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# DEPARTMENT OF GEOTECHNICS

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Geology  
Geology and Geomorphology  
Soil Mechanics  
Soil Mechanics and Foundations  
Building Foundations  
Building Foundations and Underground Structures  
Engineering Geology and Rock Mechanics  
Properties of Rocks and Soils  
Water Reservoirs and Dams  
Underground Constructions  
Plane and Deep Foundations  
Soil Construction

#### Optional subjects

Geology  
Geology and Geomorphology  
Soil Mechanics  
Soil Mechanics and Foundations  
Building Foundations  
Building Foundations and Underground Structures  
Engineering Geology and Rock Mechanics  
Properties of Rocks and Soils  
Water Reservoirs and Dams  
Underground Constructions  
Plane and Deep Foundations  
Soil Construction

#### Recommended subjects

Dam Design  
Foundation of Water Structures  
Selected Topics in Soil Mechanics  
Complex Dam Projects  
Diploma Seminar  
Special Engineering Geology and Hydrogeology  
Soil Properties  
Geomechanics

### 1.2 Postgraduate courses

Foundation of Water Structures  
Selected Topics in Soil Mechanics  
Complex Dam Projects

## 2. Thesis

### 2.1 Bachelor's theses

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### 2.2 Graduate theses

ANTOLOVÁ, D.: Landslides on the Liptovská Mara Water Reservoir  
Supervisor: Kopecký, M.

HOZZA, L.: Design and Assessment of the Foundation of the Bridge Piers of a Steel Arc Bridge on Highway D1 Jablonov – Studenec in Complex Engineering-Geological Conditions. Supervisor: Hruštinec,

L. KOŽEJOVÁ, L.: Adaptation of a Reservoir to Changed Requirements for Withdrawal  
Supervisor: Minárik, M.

MARTINKA, L.: Geotechnical Aspects of the Recultivation of Heating – Plant Desludging Site  
Supervisor: Masarovičová, M.

ŠLOSÁR, L.: Assessment of the Stability of the Southwest Dam at HS Vihorlat  
Supervisor: Minárik, M.

VASS, P.: Design of a Dry Polder  
Supervisor: Minárik, M.

## 3. Research

### 3.1 Research projects

An Analysis of the Effect of Human Activity on the Stability of Slopes in Slovakia (Baliak) (Project No: 1/0599/08)

Implementation of Progressive Methods for Reviewing the Safety and Reliability of Water Structures (Bednárová) (Project No: 1/0704/09)

Soil-Structure Interaction in Layered Subsoil (Kuzma) (Project No: 1/0578/08)

Geotechnical Risks and Innovations in Environmental Structures and Burdens (Masarovičová) (Project No: 1/0892/09)

Risks Taken into Account in the Design of Geotechnical Constructions (Turček) (Project No: 1/0619/09)

Integration of New Trends in the Brownfields of an Urban Environment in Underground Civil Engineering (Turček) (Project No: 344-0075STU-4/2010)

### 3.2 International cooperation

#### Visits of staff members to foreign institutions

Baliak – Czech Republic, Poland  
Bednárová – Czech Republic  
Frankovská – Czech Republic, Italy  
Grambličková – Czech Republic  
Hruštinec – Czech Republic  
Hulla – Czech Republic  
Chabroňová – Czech Republic, Austria, Poland  
Kopecký – Czech Republic, Austria, Poland  
Ledényiová – Czech Republic  
Masarovičová – Czech Republic  
Minárik – Czech Republic  
Ondrášik – Czech Republic  
Ravinger – Czech Republic  
Slávik – Czech Republic  
Stríček – Czech Republic, Italy, Austria  
Súľovská – Czech Republic, Italy  
Turček – Czech Republic, Italy, Hungary, Austria

#### Membership in international professional organizations

FRANKOVSKÁ, J.: President of the Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

FRANKOVSKÁ, J.: Member of CEN – TC 250/SC7 Geotechnics

FRANKOVSKÁ, J.: Member of ETC 10 Evaluation of Eurocode 7 of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

HRUŠTINEC, Ľ.: Member of the Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

HULLA, J.: Member of the Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

KOPECKÝ, M.: Member of the Slovak Committee of the International Association of Engineering Geology (IAEG)

KUZMA, J.: Member of the Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

MASAROVIČOVÁ, M.: Member of the Regional Committee of the International Association for Computer Methods and Advances in Geomechanics (IACMAG)

MASAROVIČOVÁ, M.: Vice – Chair, Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

MINÁRIK, M.: Member of the International Committee of ICOLD (International Commission on Large Dams) – Groundwater Dams.

ONDRÁŠIK M.: International Association for Engineering Geology and the Environment (IAEG) – Secretary of National Group.

RAVINGER, R.: Member of the Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

SLÁVIK, I.: Member of the Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

TURČEK, P.: Member of the Czech and Slovak Committee of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

TURČEK, P.: Member of CEN – TC 250/SC7 Geotechnics

TURČEK, P.: Member of ETC 10 Evaluation of Eurocode 7 of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

## 4. Publications

### Books

BEDNÁROVÁ, E. - LUKÁČ, M. - LUKÁČ, M. – MINÁRIK, M. - BAKALJAROVÁ, M. - LIPTÁK, B. - MIŠČÍK, M. - PANENKA, P. – STOLIČNÝ, J.: Dam Construction in Slovakia: Originalities, Milestones, Attractions. Bratislava, KUSKUS, 2010, 206 pp. (in Slovak)

KOPECKÝ, M.: Slope Movements and Their Impact on the Design and Operation of Water Works. Bratislava, STU SvF, 2010, 126 pp. (in Slovak)

TURČEK, P. - FRANKOVSKÁ, J. - SÚĽOVSKÁ, M.: Design of Geotechnical Constructions Using the Eurocodes. 1<sup>st</sup> edition, Bratislava, Engineering Consulting Center of Slovak Chamber of Civil Engineers, 2009, 160 pp. (in Slovak)

### Journals

BALIAK, F. – STRÍČEK, I.: Special Purpose Engineering-Geological Maps of Slope Failures in Slovakia. In:

Górnictwo i geoinżynieria. Vol. 34, No. 2/2010, pp. 61-68

BEDNÁROVÁ, E. - GRAMBLIČKOVÁ, D. - MINÁRIK, M. - MIŠČÍK, M.: Lessons Learned from Special Measurements of the Filtration Flow of the Vičia Dolina Dam. In: Vodní hospodárství. Vol. 60, No. 4/2010, pp. 106-108 (in Slovak)

FRANKOVSKÁ, J. – ANDREKOVIČOVÁ, S. - JANOTKA, I.: Effect of NaCl on Hydraulic Properties of Bentonite and Bentonite - Palygorskite Mixture. In: Geosynthetics International. Vol. 17, No. 4/2010, pp. 250-259

GRAMBLIČKOVÁ, D. - BEDNÁROVÁ, E.: Review of the Stability of the Left Bank Flood Dyke of the Váh River between the Village of Komoča and the Town of Kolárovo. In: Geotechnika. Vol. 13, No. 3/2010, pp. 10-13 (in Slovak)

GRAMBLIČKOVÁ, D. - BEDNÁROVÁ, E. - MINÁRIK, M.: Lessons Learned and Experience Gained from the Application of the FEM to Solve Transient Flow Filtration Tasks. In: Slovak Journal of Civil Engineering. Vol. 18, No. 3/2010, pp. 7-13

HAKÁČ, J. - BEDNÁROVÁ, E.: Applications of Mathematical Methods in the Supervision of the Technical Safety of Water Constructions. In: Slovak Journal of Civil Engineering. Vol. 18, No. 1/2010, pp. 22-28

HONTY, M. - DE CRAEN, M. - WANG, L. - MADEJOVÁ, J. – CZÍMEROVÁ, A. - PENTRÁK, M. - STRÍČEK, I. - VAN GEET, M.: The Effect of High pH Alkaline Solutions on the Mineral Stability of the Boom Clay - Batch Experiments at 60°C. In: Applied Geochemistry. Vol. 25, No. 6/2010, pp. 825-840

HULLA, J. - SÚĽOVSKÁ, M.: Identification of the Permeable Positions in the Sealing Elements of Foundation Excavations. In: Realizace staveb. Vol. 5, No. 3/2010, pp. 44-48 (in Czech)

HULLA, J.: Dewatering of Sealed Construction Pits. In: Inžinierske stavby. Vol. 58, No. 1/2010, pp. 63-65 (in Slovak)

KOPECKÝ, M. - HRUŠTINEC, Ľ. - ONDRÁŠIK, M. - FRANKOVSKÁ, J.: Unstable Slopes at the Nová Bystrica Reservoir Dam. In: Górnictwo i geoinżynieria. Vol. 34, No. 2/2010, pp. 389-394

LEDÉNYIOVÁ, T. - CHABROŇOVÁ, J.: Bratislava Tram Tunnel. In: Stavebnictví. Vol. 4, No. 5/2010, pp. 45-49 (in Slovak)

TURČEK, P.: Modern Foundations in Gaps. In: Stavebné materiály. Vol. 6, No.3/2010, pp. 38-40 (in Slovak)

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BALIAK, F. - FRAŠTIA, M. - CHLEPEKOVÁ, M.: Photogrammetric Methods in Geotechnical Engineering. In: Proceedings of 14<sup>th</sup> Danube European Conference on Geotechnical Engineering, Bratislava, Slovakia, 2010

BALIAK, F. – STRÍČEK, I.: Review of Slope Remediation Methods Used in the Revitalization of a Country. In: Proceedings of 9<sup>th</sup> Conference on Urban, Architectonical and Technical Aspects of the Restoration of Countrysides, Bratislava, Slovakia, 2010, pp. 162-166 (in Slovak)

BALIAK, F.: The Impact of the Construction of Reservoirs on the Upper Torysa on the Geological Environment. In: Proceedings of 32<sup>nd</sup> Dam Days Conference. Banská

- Bystrica, Slovakia, 2010, pp. 221-225 (in Slovak)
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- BEDNÁROVÁ, E. - MINÁRIK, M. - GRAMBLIČKOVÁ, D. - SABO, J.: Flood Protection of Bratislava and Its Specifics from the Viewpoint of Geological Composition of Surrounding Environment. In: Proceedings of 14<sup>th</sup> Danube European Conference on Geotechnical Engineering, Bratislava, Slovakia, 2010
- BEDNÁROVÁ, E.: Importance of Special Measurement Methods in Reviewing the Safety of Dams. In: Proceedings of International Conference on the Safety of Water Structures, Bratislava, Slovakia, 2010, pp. 53-58 (in Slovak)
- FRANKOVSKÁ, J.: Actual European and Slovak Standards in Geotechnics. In: Proceedings of 15<sup>th</sup> Conference on the Statics of Constructions, Piešťany, Slovakia, 2010, pp. 77-90 (in Slovak)
- FRANKOVSKÁ, J. - LIŠČÁK, P. - DANANAJ, I.: Case Study of Collapsible Loess in Slovakia. In: Proceedings of 14<sup>th</sup> Danube European Conference on Geotechnical Engineering, Bratislava, Slovakia, 2010
- FRANKOVSKÁ, J.: Geotechnical Investigation for Geotechnical Categories. In: Proceedings of 12<sup>th</sup> Conference on the Foundations of Structures, Stará Lesná, Slovakia, 2010, pp. 29-36 (in Slovak)
- GALLIKOVÁ, Z. - SLÁVIK, I.: Predicted Settlement of a High-Rise Building - Experimentally Determined Deformation Parameters of Soils. In: Proceedings of 12<sup>th</sup> Conference on the Foundations of Structures, Stará Lesná, Slovakia, 2010, pp. 55-60 (in Slovak)
- GRAMBLIČKOVÁ, D. - BEDNÁROVÁ, E. - MINÁRIK, M.: Optimization of Flood Protection Measures on Selected Sections of Danube Using Numerical Methods - Design and Construction. In: Proceedings of 14<sup>th</sup> Danube European Conference on Geotechnical Engineering, Bratislava, Slovakia, 2010
- HRUŠTINEC, Ľ. - SUMEC, J. - KUZMA, J.: Analysis of the Effect of Stiffness and Coupling on Contact Area on Displacement of Circle Foundation Slab. In: Proceedings of 10<sup>th</sup> VSU International Scientific Conference, Sofia, Bulgaria, 2010, pp. 74-79
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- HULLA, J. - RAKOVSKÝ, P. - VRÁBEL, B. - ŽUFFA, R.: Influence of Technology on Soil Properties in Their Surroundings. In: Proceedings of 30<sup>th</sup> Conference on Geotechnical Field Methods, Ústí nad Labem, Czech Republic, 2010, pp. 114-119 (in Slovak)
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- KOPECKÝ, M.: The Impact of Extreme Weather Conditions on the Instability of Slopes in Slovakia. In: Proceedings of 12<sup>th</sup> Conference on the Foundations of Structures, Stará Lesná, Slovakia, 2010, pp. 77-86 (in Slovak)
- MARIKOVIČOVÁ, A.: Effect of the Operation of the Veľká Domaša Reservoir on Runoff Conditions under the Dam. In: Proceedings of International Conference on the Safety of Water Structures, Bratislava, Slovakia, 2010, pp. 107-111 (in Slovak)
- MASAROVIČOVÁ, M. - DVOŘÁKOVÁ, S.: Interdisciplinary Problem of Environmental Burdens. In: Proceedings of International Conference on the Safety of Water Structures, Bratislava, Slovakia, 2010, pp. 184-189 (in Slovak)
- MASAROVIČOVÁ, M. - SLÁVIK, I. - KOLEDOVÁ, J.: Effect of Maintenance of the Stability of a Desludging Site (Lime Sediment). In: Proceedings of International Conference on the Safety of Water Structures, Bratislava, Slovakia, 2010, pp. 178-183 (in Slovak)
- MASAROVIČOVÁ, M. - SLÁVIK, I.: Predicted Existence of an Environmental Burden – the Slovinky - Kellgrund Desludging Site. In: Proceedings of International Conference on the Safety of Water Structures, Bratislava, Slovakia, 2010, pp. 158-164 (in Slovak)
- MÉSZÁROS, T.: The Rozgrund Dam - Calibration of the Parameters Affecting Filtration Flow. In: Proceedings of 32<sup>nd</sup> Dam Days Conference. Banská Bystrica, Slovakia, 2010

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MÉSZÁROS, T. - MINÁRIK, M.: Modeling Filtration Flow Through the Body of the Rozgrund Dam. In: Proceedings of International Conference on the Safety of Water Structures, Bratislava, Slovakia, 2010, pp. 66-71 (in Slovak)

RAVINGER, R.: Comments to EN STN 73 1001 and 73 0091 on Foundations Bearing Capacity. In: Proceedings of 12<sup>th</sup> Conference on Foundations of Structures, Stará Lesná, Slovakia, 2010, pp. 51-54 (in Slovak)

RAVINGER, R. - TURČEK, P. - SÚĽOVSKÁ, M.: Geotechnical Risks of the Project and Building for the Tatranská Lomnica Basin. In: Proceedings of Conference on Risks in Water Management, Brno, Czech Republic, 2010, pp. 243-250 (in Slovak)

SLÁVIK, I. - GALLIKOVÁ, Z.: Deformation Parameters of Soils - Experimental Method of Expression. In: Proceedings of 12<sup>th</sup> Conference on Foundations of Structures, Stará Lesná, Slovakia, 2010, pp. 37-42 (in Slovak)

SÚĽOVSKÁ, M. - Hulla, Jozef: Identification of Permeable Positions in Sealing Elements of Foundations Pits. In: Proceedings of 14<sup>th</sup> Danube European Conference on Geotechnical Engineering, Bratislava, Slovakia, 2010

SUMEC, J. - HRUŠTINEC, Ľ. - KUZMA, J.: Analysis of Stiffness and Bonding Effects in the Foundation Bottom on the Contact Stresses Distribution of the Circular Foundation. In: Proceedings of 10<sup>th</sup> VSU International Scientific Conference, Sofia, Bulgaria, 2010, pp. 68-73 (in English)

SUMEC, J. - KUZMA, J. - HRUŠTINEC, Ľ.: Experimental Tests of the Deformation and Consolidation Properties of the Cohesive Soils and Their Use in the Geotechnical Calculations. In: Proceedings of 48<sup>th</sup> Scientific International Conference on Experimental Stress Analysis, Velké Losiny, Czech Republic, 2010, pp. 415-420 (in English)

TURČEK, P.: Development of Geotechnics in Slovakia. In: Proceedings of 14<sup>th</sup> Danube European Conference on Geotechnical Engineering, Bratislava, Slovakia, 2010, pp. 57-76

TURČEK, P. - RAVINGER, R. - SÚĽOVSKÁ, M.: Influence of Groundwater on Slope Stability. In: Proceedings of 12<sup>th</sup> Conference on the Foundations of Structures, Stará Lesná, Slovakia, 2010, pp. 87-98 (in Slovak)

TURČEK, P. - RAVINGER, R. - SÚĽOVSKÁ, M.: Measurement of Seepages on the Les Království Water Reservoir. In: Proceedings of 30<sup>th</sup> Conference on Geotechnical Field Methods, Ústí nad Labem, Czech Republic, 2010, pp. 92-97 (in Slovak)

TURČEK, P.: Foundation Engineering Problems in Difficult Conditions. In: Proceedings of 12<sup>th</sup> Conference on the Foundations of Structures, Stará Lesná, Slovakia, 2010, pp. 17-28 (in Slovak)

TURČEK, P.: The Influence of Eurocode 7 on Geotechnical Design. In: Proceedings of 15<sup>th</sup> Conference on the Statics of Constructions, Piešťany, Slovakia, 2010, pp. 91-98 (in Slovak)

# DEPARTMENT OF LAND AND WATER RESOURCES MANAGEMENT

Department Head  
Prof. Ing. Ján Szolgay, PhD.

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Hydrology  
Landscape Ecology  
Landscape Ecology and Bioecology  
Meteorology and Hydrology  
Landscape Engineering  
Engineering Structures in a Landscape  
River Training  
Pedology  
River Restoration  
Integrated River Basin Management  
Water Management  
Hydrological Field Measurements  
CAD Systems in Landscape Engineering  
Water Regime of a Landscape  
Irrigation and Drainage  
GIS in Water Management

#### Optional Subjects

Project 1 – Sustainable Landscape Development  
Basics of the Design of Landscape Structures  
CAD Systems in Water Management  
Project Work  
Computer Modelling in Water Management  
Design of Small Water Reservoirs  
Revitalization of Wetlands  
CAD Systems in Environmental Engineering

### 1.2 Postgraduate courses

Hydrology, J. Szolgay  
Hydrology of Surface Waters, J. Szolgay  
Hydrology of Sub-Surface Waters, J. Skalová  
Hydrodynamics of Porous Media, J. Skalová  
Methods of Field and Laboratory Experiments in Hydrology, J. Skalová  
Mathematical Modelling of Hydrological and Hydraulic Processes, J. Szolgay  
Simulation Methods, Algorithms and Programming, J. Szolgay  
Geoinformatics, K. Hlavčová  
Landscape Planning, V. Macura  
Revitalization of Rivers, V. Macura  
Soil Water Regime, V. Macura  
Hydrochemistry and Hydrobiology, V. Macura

## 2. Theses

### 2.1 Graduate theses

BAJČAN, J.: Proposals for Erosion Control in the Village of Dedinka  
Supervisor: Hlavčová, K.

BOHÁČ, D.: Analysis of the Time Series of the Monthly Discharges in Selected Gauge Stations in the Vah River Basin  
Supervisor: Kohnová, S.

CÍFERSKÝ, P.: Design of Drip Irrigation for Orchards  
Supervisor: Čistý, M.

DANIŠ, T.: River Training of the Kysuca River in Vysoká nad Kysucou  
Supervisor: Macura, V.

HAVLÍKOVÁ, S.: Analysis of Annual Maxima Discharges in Selected Stations in the Danube River Basin  
Supervisor: Kohnová, S.

CHEBEŇOVÁ, T.: Estimation of Changes in Seasonal Runoff Distribution in Future Decades  
Supervisor: Hlavčová, K.

KARABOVÁ, B.: Analysis of Changes in the Flow Regime on the Danube River.  
Supervisor: Szolgay, J.

KASIČ V: Design of a Flood Protection Reservoir  
Supervisor: Szolgay, J.

KUNDRÁTOVÁ, S.: River Training of the Torysa River in the Region between Prešov and Veľký Šariš  
Supervisor: Macura, V.

KŐSZIKLOVÁ, K.: Assessment of the Impact of Changes in the Meteorological Characteristics in the Simulation of Soil Water Regime  
Supervisor: Skalová, J.

LUCKÝ, O.: Modelling of Extreme Runoff for Flood Protection  
Supervisor: Kohnová, S.

MACKOVÁ, J.: Impact of Climate Change on the Runoff Regime in the Hron River Basin  
Supervisor: Hlavčová, K.

MASÁROVÁ, H.: Analysis of Changes in a Soil Water Regime Due to Different Crops  
Supervisor: Skalová, J.

PELIKANT, M.: Design of an Artificial Snowmaking System for the Remata Ski Resort  
Supervisor: Szolgay, J.

PAULÍK, M.: Swath of Agricultural Soils for Construction Activities Outside of Villages  
Supervisor: Skalová, J.

SLÁVIK, M.: Application of Neural Networks in Water Resources Management)

SUSEDKA, M.: Design of an Irrigation System and Reservoir

ŠČASNÝ, T.: Groundwater Level Regime in the Abrod Nature Reserve  
Supervisor: Skalová, J.

ŠPAZIER, J.: Proposals for Landscape-Engineering Measures in a Selected Basin  
Supervisor: Hlavčová, K.



VALENT, P.: Analysis of the Time-Series of Monthly Averages of Nitrate Concentrations from the Hron and Váh Rivers  
Supervisor: Szolgay, J.

VIGH, R.: Design of an Irrigation System  
Supervisor: Čistý, M.

## 2.2 Doctoral theses

BALÁŽ, M.: Methods for Estimating Wave Speed in Rivers for Hydrological Modelling  
Supervisor: Szolgay, J.

BARA, M.: Scaling of Short-Term Rainfall Intensities in Slovakia  
Supervisor: Kohnová, S.

BLAŠKOVIČOVÁ, L.: Methods for the Evaluation of Flash Floods in Slovakia  
Supervisor: Kohnová, S.

MICHALIKOVÁ, M.: Human Influences on Floodplain Lake Sedimentation  
Supervisor: Macura, V.

JURČÁK, S.: Modelling and Forecasting of a Hydrological Time Series with Hybrid Models  
Supervisor: Szolgay, J.

JURÁKOVÁ, M.: Impact of Climate Change on the Water Regime of Wetlands  
Supervisor: Skalová, J.

REMIÁŠOVÁ, R.: Mapping Design Daily Precipitation in Slovakia  
Supervisor: Hlavčová, K.ŠKRINÁR A.: Effect of Abiotic Factors on the Biohydrology of Streams  
Supervisor: Macura, V.

## 3. Research

### 3.1 Research projects

Conservation, Restoration and Wise Use of the Rich Fens in the Slovak Republic (Skalová) (United Nations Development Programme SLO/03/G35/A/1G/72)

Hydrological Drought and Its Impact on Exploitable Groundwater Resources (Macura) (Research Project of APVV-0335-06)

Regionalization of the Quality of the Aquatic Parts of Rivers by Bioindicative Methods (Macura) (Research project of AV 4/0110/06)

Hydrometeorological Data Resources and Technologies for Effective Flash Flood Forecasting (HYDRATE) (Szolgay) (Research Project of the Commission of the European Communities, 6th FP, No. 037024)

Hydrological Regionalisation – Towards a Coherent Framework (Szolgay) (Subcontract of a research project of the Austrian Foundation for Research FWF P 18993)

Study of the Relationships and Spatial Properties of Joint Hydrometeorological and Hydrological Extremes in Mountainous Regions in Slovakia (Kohnová) (Research Grant of the Slovak Grant Agency VEGA 1/4024/07)

Hybrid Flood Modelling and Forecasting Framework for the Real Time Control of Water Resource Systems and Flood Risk Estimation (Szolgay) (Research Grant of the Slovak Grant Agency VEGA 1/4209/07)

Geographically-Oriented Distributed Runoff Model (Kočícký, Szolgay) (Research Project of APVV-0378-07)

Improvement of the Representation of Processes in Hydrological Modelling (Hlavčová) (Research Project of LPP-0254-07)

Hybrid Flow Forecasting Model (Szolgay) (Research Project of APVV-0443-07)

Comparative Analysis of the Natural and Anthropogenic Variability of a Hydrometeorological Series (Miklánek, Hlavčová) (Research Grant of the Slovak Grant Agency VEGA 2/0096/08)

Combined Deterministic – Statistical Modelling Approach to Hydrological Forecasts (Szolgay) (Research Grant of the Slovak Grant Agency VEGA 1/0496/08)

Soil Water Storage Diagnosis and Prediction with Regard to Aspects of the Optimal Water Supply of Vegetation (Skalová) (Research Project of APVV-0271-07)

Evaluation of Water Bodies and Optimisation of Water Management Measures in a Landscape (Research Grant of the Slovak Grant Agency VEGA 1/0585/08)

### 3.2 International cooperation

#### Visits of staff members to foreign institutions

Szolgay, J., Hlavčová, K., Kohnová, S., Horvát, O., Gaál, L. Institute for Hydraulic and Water Resources Engineering, Vienna University of Technology, Vienna, Austria

Szolgay, J., Hlavčová, Macura, V. Technical University in Brno, Faculty of Civil Engineering, Brno, Czech Republic  
Technical University in Prague, Faculty of Civil Engineering, Prague, Czech Republic

Gaál, L.: Institute of Atmospheric Physics of the Czech Academy of Sciences

Jalčovičová, M.: Faculty of Civil Engineering, Catholic University of Leuven, Belgium  
Štefková, A.: Technical University of Catalonia, Barcelona, Spain

#### Membership in international professional organizations

Hlavčová, K.: Member of International Association of Hydrological Sciences

Hlavčová, K.: Member of European Geosciences Union

Kohnová, S.: Member of European Geosciences Union

Kohnová, S.: Member of International Association of Hydrological Sciences

Szolgay, J.: Member of Editorial Board of Journal of River Basin Management

Szolgay, J.: Member of Editorial Board of Water Resources Management

Szolgay, J.: Member of Editorial Board of Journal of Hydrology

Szolgay, J.: Member of Editorial Board of Journal of Hydrological Sciences

Szolgay, J.: National Correspondent of IAHS for Water Management Systems

Szolgay, J.: National Representative of International Association for Hydrological Sciences

Szolgay, J.: Chairman of Subdivision of Hydrological Division of EGU for Hydrological Forecasting

Szolgay, J.: Member of Association of Hydrological Sciences

## 4. Publications

### Books

BAJTEK, Z.: Deterministic and Heuristic Methods and Their Application in Optimizing Pressured Water Distributions for Irrigation. SUT, Bratislava 2010, 103 pp., ISBN 978-80-227-3275-8 (in Slovak)

BARA, M. - KOHNOVÁ, S. - GAÁL, L. - SZOLGAY, J. - HLAVČOVÁ, K.: Scaling of Short-Term Rainfall Intensities in Slovakia. KEY Publishing, Ostrava 2010, 74 pp, ISBN 978-80-7418-083-5 (in Slovak)

BLAHA, J.: Drainage of Agricultural Land with Drainage Pipes. SUT, Bratislava 2009, 137 pp., ISBN 978-80-227-3168-3 (in Slovak)

SVETLÍKOVÁ, D. - KOHNOVÁ, S. - SZOLGAY, J. - KOMORNÍKOVÁ, M. - HLAVČOVÁ, K.: Application of Hybrid Methods in Hydrological Forecasting. KEY Publishing, Ostrava 2010, 106 pp., ISBN 978-80-7418-084-2 (in Slovak)

### Parts of Books

ČISTÝ, M.: Application of the Harmony Search Optimization in Irrigation. In: Recent Advances in Harmony Search Algorithms. Springer Verlag London, Berlin 2010, ISBN 978-3-642-04316-1, pp. 123-134

MACURA, V.: Ecological Drought in the Basin of the Upper Torysa River. In: Hydrogeological Draughts. Comenius University, Bratislava 2010, ISBN 978-80-969342-7-0, pp. 143-156 (in Slovak)

### Journals

BAJTEK, Z. - ČISTÝ, M.: Comparison and Application of the Various Approaches for the Optimal Design of Irrigation Projects. Agricultural Engineering, 2010, No. 1, pp. 134-140

BALÁŽ, M. - SZOLGAY, J. - DANÁČOVÁ, M.: On the Use of the Muskingum Method for the Simulation of Flood Wave Movement by Harmony Search Optimisation. Acta Hydrologica Slovaca, Vol. 11, 2010, No. 1, pp. 28-35 (in Slovak)

BALÁŽ, M. - DANÁČOVÁ, M. - SZOLGAY, J.: On the Use of the Muskingum Method for the Simulation of Flood Wave Movements. Slovak Journal of Civil Engineering, Vol. 18, 2010, No. 3, pp. 14-20

BARA, M. - KOHNOVÁ, S. - SZOLGAY, J. - GAÁL, L. - HLAVČOVÁ, K.: Assessing of IDF Curves for a Hydrological Design by Simple Scaling of 1-Day Precipitation Totals. Slovak Journal of Civil Engineering, Vol. 18, 2010, No. 3, pp. 1-6

BARA, M. - GAÁL, L. - KOHNOVÁ, S. - SZOLGAY, J. - HLAVČOVÁ, K.: On the Use of the Simple Scaling of Heavy Rainfall in the Regional Estimation of IDF Curves in Slovakia. Journal of Hydrology and Hydromechanics, Vol. 58, 2010, No. 1, pp. 49-63

ČISTÝ, M. - SUCHÁR, M. - ŠTEKAUEROVÁ, V.: Interpolation Model for Soil Moisture Based on a Support Vector for the Locality of Báč. Acta Hydrologica Slovaca, Vol. 11, 2010, No. 1, pp. 126-134 (in Slovak)

ČISTÝ, M. - BAJTEK, Z.: Application of Heuristic Methods in the Building of an Irrigation Simulation Model. Agricultural Engineering, 2010, No. 2, pp. 137-144

ČISTÝ, M.: Application of Artificial Neural Networks with SOM Architecture in the Water Management of a Landscape. Acta Hydrologica Slovaca, Vol. 10, 2009, No. 2, pp. 254-265 (in Slovak)

DANÁČOVÁ, Z. - DANÁČOVÁ, M.: Experimental Measurements for Determining Discharges in Open Channels by the Indicator Method. Water Management Journal, Vol. 53, 2010, No. 3-4, pp. 13-16 (in Slovak)

DANÁČOVÁ, Z. - DANÁČOVÁ, M.: Processes of Mixing an Indicator Substance in Natural Stream Channels within a Discharge Measurement Using the Indicator Method. Acta Hydrologica Slovaca, Vol. 11, 2010, No. 1, pp. 70-77 (in Slovak)

DANKO, M. - HLAVČOVÁ, K. - KOHNOVÁ, S. - SZOLGAY, J.: Estimation of the Extreme Runoff from Snowmelt on the Račiansky Stream Basin. Acta Hydrologica Slovaca, Vol. 11, 2010, No. 1, pp. 46-57 (in Slovak)

GAÁL, L. - KYSELÝ, J.: Comparison of the Region-of-Influence Methods for Estimating the High Quantiles of Precipitation in a Dense Dataset in the Czech Republic. Hydrology and Earth System Sciences, Vol. 13, 2009, No. 11, pp. 2203-2219

GAÁL, L. - SZOLGAY, J. - LAPIN, M. - FAŠKO, P.: Hybrid Approach to the Delineation of Homogeneous Regions for Regional Precipitation Frequency Analysis. Journal of Hydrology and Hydromechanics, Vol. 57, 2009, No. 4, pp. 226-249

GAUME, E. - GAÁL, L. - VIGLIONE, A. - SZOLGAY, J. - KOHNOVÁ, S. - BLÖSCHL, G.: Bayesian MCMC Approach to Regional Flood Frequency Analyses Involving Extraordinary Flood Events at Ungauged Sites. Journal of Hydrology, Vol. 394, 2010, No. 1-2, pp. 101-107

HORVÁT, O. - HLAVČOVÁ, K. - KOHNOVÁ, S. - DANKO, M.: Application of the FRIER Distributed Model for Estimating the Impact of Land Use Changes on the Water Balance in Selected Basins in Slovakia. Journal of Hydrology and Hydromechanics, Vol. 57, 2009, No. 4, pp. 213-225

JÁNOŠÍK, J. - PÁSZTOROVÁ, M. - VITKOVÁ, J.: Sensitivity of the Estimation of Soil Grain Size by the Aerometric Method. Acta Hydrologica Slovaca, Vol. 11, 2010, No. 1, pp. 119-125 (in Slovak)

KRIŠ, J. - BALÁŽ, M.: Outdoor Family Pool. Do It Yourself, Vol. 13, 2010, No. 5, pp. 42-54 (in Slovak)

KYSELÝ, J. - GAÁL, L. - PICEK, J.: Comparison of Regional and At-Site Approaches for Modelling Probabilities of Heavy Precipitation. International Journal of Climatology, 2010, doi: 10.1002/joc.2182 (2010)

LE COZ, J. - MICHALKOVÁ, M. - HAUET, A. - ČOMAJ, M. - DRAMAIS, G. - HOLUBOVÁ, K. - PIÉGAY, H. - PAQUIER, A.: Morphodynamics of the Exit of a Cutoff Meander: Experimental Findings from Field and Laboratory Studies. Earth Surface Processes and Landforms, Vol. 35, 2010, No. 3, pp. 249-261

- MACUROVÁ, Z. - HLAVČOVÁ, K. - SZOLGAY, J. - KOHNOVÁ, S.: Impact of Climate Change on the Daily Discharges in the Upper Hron River Basin. *Meteorological Journal*, Vol. 13, 2010, No. 2, pp. 45-53
- MICHALKOVÁ, M.: Analysis of the Lateral Channel Activity of the Sacramento River from Aerial Photos. *Geographical Journal*, Vol. 61, 2009, No. 3, pp. 199-213
- MICHALKOVÁ, M.: Diachronic Analysis of the Floodplain Lakes of the Sacramento River. *Geographical Journal*, Vol. 61, 2009, No. 4, pp. 257-268
- PARAJKA, J. - KOHNOVÁ, S. - BÁLINT, G. - BARBUC, M. - BORGA, M. - CLAPS, P. - CHEVAL, S. - DUMITRESCU, A. - GAUME, E. - HLAVČOVÁ, K. - MERZ, R. - PFAUNDLER, M. - STANCALIE, G. - SZOLGAY, J. - BLÖSCHL, G.: Seasonal Characteristics of Flood Regimes Across the Alpine-Carpathian Range. *Journal of Hydrology*, Vol. 394, 2010, Nos. 1-2, pp. 78-89
- PÁSZTOROVÁ, M. - SKALOVÁ, J. - VITKOVÁ, J. - JÁNOŠÍK, J.: Analysis of the Climatologic and Hydrological Conditions of the Ramsar Locality of Poiplie. *Acta Hydrologica Slovaca*, Vol. 11, 2010, No. 1, pp. 108-118 (in Slovak)
- REMIÁŠOVÁ, R. - GAÁL, L. - HLAVČOVÁ, K. - KOHNOVÁ, S. - FAŠKO, P.: Spatial Regionalization of Design Rainfall in Slovakia. *Acta Hydrologica Slovaca*, Vol. 10, 2009, No. 2, pp. 284-291 (in Slovak)
- SKALOVÁ, J. - JAROŠ, B. - NOVÁK, V.: The Effect of Different Canopies on the Groundwater Level Changes at the Natural Reserve of Kláštorské Lúky. *Journal of Hydrology and Hydromechanics*, Vol. 57, 2009, No. 4, pp. 276-285 (in Slovak)
- SUCHÁR, M. - ČISTÝ, M.: Predicting Soil-Water Content Using Learning Algorithms. *Acta Hydrologica Slovaca*, Vol. 10, 2009, No. 2, pp. 266-274 (in Slovak)
- ŠTEKAUEROVÁ, V. - SKALOVÁ, J. - NOVÁKOVÁ, K.: Assignment of Hydrolimits for Estimating the Ability Soil to Supply Plants with Water. *Növénytermelés*, Vol. 59, 2010, Suppl. 1, pp. 195-198
- ŠTEVKOVÁ, A. - KOHNOVÁ, S. - HLAVČOVÁ, K. - BOHDALOVÁ, M.: Pooling of the Seasonality Occurrence of Minimum Annual Discharges in Slovakia. *Acta Hydrologica Slovaca*, Vol. 11, 2010, No. 1, pp. 36-45 (in Slovak)
- ŠÚREK, P. - SZOLGAY, J. - ČISTÝ, M.: Parameterisation of Multilinear Model Cascade Linear Reservoirs by the Artificial Neural Network. *Acta Hydrologica Slovaca*, Vol. 10, 2009, No. 2, pp. 275-283 (in Slovak)
- TEGELHOFFOVÁ, M. - KARABOVÁ, B. - DANÁČOVÁ, M. - SZOLGAY, J.: Analysis of the Trend in Mean Monthly Discharges at the Moravský Svätý Ján Water Station. *Acta Hydrologica Slovaca*, Vol. 11, 2010, No. 1, pp. 58-69 (in Slovak)
- VALENT, P. - SZOLGAY, J. - KOMORNÍKOVÁ, M. - HOWDEN, N. J. K.: Time Series Analysis of Nitrate Concentrations in the Ouse River. *Acta Hydrologica Slovaca*, Vol. 11, 2010, No. 1, pp. 88-96 (in Slovak)
- VÝLETA, R. - SZOLGAY, J. - HLAVČOVÁ, K.: Calibration of a Rainfall-Runoff Model with a Monthly Time Step in the Upper Hron River Basin. *Acta Hydrologica Slovaca*, Vol. 10, 2009, No. 2, pp. 183-190 (in Slovak)
- Conferences**
- BAJTEK, Z.: Comparison of the Performance of Heuristic Methods with Regard to the Global Optima. In: 8<sup>th</sup> Conference of Young Water Managers. Conference Proceedings. SHMI, Bratislava 2009, ISBN 978-80-88907-70-1 (in Slovak)
- BAJTEK, Z. - ČISTÝ, M.: Comparison of the Heuristic Parts of a Hybrid Model Applied to the Optimization of Pressurized Water Distribution Systems. In: People, Buildings and the Environment 2009. International Scientific Conference. Brno, CR, 26.-27.11.2009. CERM, Brno 2009, ISBN 978-80-7204-660-7, pp. 23-31
- BAJTEK, Z.: Comparison of the Various Optimization Approaches Applied to the Optimal Design of Water Distribution Systems. In: 1st IWA Austrian National Young Water Professionals Conference, 9.-11. 6. 2010, Austria. IWA, 2010
- BAJTEK, Z. - ČISTÝ, M.: Testing Hybrid Design Methods for Water Distribution. In: Transport of Water, Chemicals and Energy in the Soil-Crop Canopy-Atmosphere System. 17th International Poster Day, 12. 11. 2009, Bratislava. IH SAS, Bratislava 2009, ISBN 978-80-89139-19-4, pp. 22-30 (in Slovak)
- BARA, M. - LÁTEČKOVÁ, J. - KOHNOVÁ, S. - GAÁL, L. - SZOLGAY, J. - HLAVČOVÁ, K.: Regional Analysis of the Short-Term Design Rainfalls in Slovakia. In: Extreme Hydrological Processes in Catchments. Workshop of Adolf Patera 2010, Brno, ČR, 27.5.2010. VUT, Brno 2010, ISBN 978-80-02-02260-2
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- ŠIMOR, V.: Flow Forecasting Using Artificial Neural Networks. In: 8<sup>th</sup> Conference of Young Water Managers. Conference Proceedings. SHMI, Bratislava 2009, ISBN 978-80-88907-70-1 (in Slovak)
- ŠKRINÁR, A.: Generalization of the Bioindication Parameters of the Quality of a Habitat of Mountain and Submountain Streams in Slovakia. In: 8<sup>th</sup> Conference of Young Water Managers. Conference Proceedings. SHMI, Bratislava 2009, ISBN 978-80-88907-70-1 (in Slovak)
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- ŠÚREK, P.: Forecasting the Time Lag of Flood Peaks Using ANN. In: 8<sup>th</sup> Conference of Young Water Managers. Conference Proceedings. SHMI, Bratislava 2009, ISBN 978-80-88907-70-1 (in Slovak)
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- VALENT, P.: Analysis of the Time Series of Nutrients in the Vah and Hron Rivers. In: 11<sup>th</sup> Conference of Scientific Student Works of the Faculties of Civil Engineering, Prague, 20. 5. 2010. pp. 11 (in Slovak)
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- VÝLETA, R. - SZOLGAY, J. - HLAVČOVÁ, K.: Proposed Model for the Mean Monthly Discharges in the Hron River Basin. In: Transport of Water, Chemicals and Energy in the Soil-Crop Canopy-Atmosphere System. 17th International Poster Day, 12. 11. 2009, Bratislava. IH SAS, Bratislava 2009, ISBN 978-80-89139-19-4 (in Slovak)
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- VÝLETA, R. - MACUROVÁ, Z. - HLAVČOVÁ, K. - ŠÚREK, P. - KOHNOVÁ, S.: Simulation of a Hydrological Response to the Future Climate in the Mountainous Basins in Slovakia. In: Geophysical Research Abstracts, Vol. 12/2010. EGU General Assembly, Vienna 2010 (in English)
- ZSIDEKOVÁ, B.: Quantification of Erosion Processes Using GIS. In: Transport of Water, Chemicals and Energy in the Soil-Crop Canopy-Atmosphere System. 17th International Poster Day, 12. 11. 2009, Bratislava. IH SAS, Bratislava 2009, ISBN 978-80-89139-19-4, pp. 50 (in Slovak)
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# DEPARTMENT OF HYDRAULIC ENGINEERING

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Hydraulics I.  
Hydraulics II.  
Water Management Structures  
Weirs  
Groundwater Hydraulics  
Inland Waterways  
Computer Exploitation in Engineering  
Special Issues of Weirs  
Special Issues of Waterways  
Operation and Reconstruction of Hydraulic Structures  
Small Water Power Plants  
Stability and Static Solutions for Hydraulic Structures  
Water Power Utilization  
Field Measurements  
Hydroenergetics  
Construction of Metallic Hydraulic Structures  
Hydraulic Research  
Engineering Networks and Water Structures  
Automation of Engineering Problems  
Special Issues of Hydraulic Engineering  
Numerical Modelling of Hydraulic Processes  
Water and Road Constructions

## 2. Theses

### 2.1 Research projects

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### 2.2 Graduate theses

ANDRÁSSY, T.: The Effect of the Resistance of a River Bottom on a Groundwater Regime  
Supervisor: Baroková, D.

HOFMANNOVÁ, S.: Predicted Groundwater Developments after the Construction of the Šalková SHPP  
Supervisor: Baroková, D.

HRÁNKOVÁ, R.: Structures for Sports and Recreational Navigation on the Hron River at the Banská Bystrica – Majer Locality  
Supervisor: Cabadaj, R.

HROTKOVÁ, S.: Proposal for and Comparison of Different Types of Stilling Basins of a Water Structure  
Supervisor: Hulík, F.

MARKOVIČ, P.: Design of the Pečenský Les Hydropower Plant  
Supervisor: Dušička, P.

PETRÁŠ, J.: Design of a Small Hydropower Plant on the Hron River  
Supervisor: Rumann, J.

POLÁK, V.: Design of a Technical Fish-pass for Enabling Migration through the Barrage System of the Gabčíkovo Water Structure  
Supervisor: Rumann, J.

REHÁK, D.: Hydraulic Analysis of a Thermal Pump of a WATER – WATER Type in the Hydrogeological Conditions of Slovakia

Supervisor: Šoltész, A.

SLOVÁK, T.: Navigational Structures of the Pečenský Les Water Structure

Supervisor: Možiešik, I.

ŠEBESTOVÁ, Z.: Design of the Hliník nad Hronom Small Hydropower Plant

Supervisor: Rumann, J.

TOKOŠ, P.: Hydroenergetic Utilization of the Rajčianka River in the Locality of Lietavská Lúčka

Supervisor: Rumann, J.

VALACHOVIČ, I.: Multidimensional Modeling of the Water Flow in the Vicinity of Hydraulic Structures

Supervisor: Květon, R.

VANČIKOVÁ, H.: Assessment of the Effect of the Construction and Operation of the Drahovce WS on Surface Water and Groundwater Level Regimes

Supervisor: Šoltész, A.

VODOVÁ, M.: Simulation of the Effect of the “Bratislava – Pečniansky les” WS on the Groundwater

Supervisor: Baroková, D.

ZÁVODSKÝ, S.: Design of the Small Hydropower Plant on the Hron River in the Banská Bystrica - Majer Locality

Supervisor: Šulek, P.

## 3. Research

### 3.1 Research projects

Flood Protection of the Urban Areas of Slovakia (Šoltész)  
(Research Grant No. VEGA 1/0894/10)

UNDP – Integration of the Principles and Procedures of Ecological Management in the East-Slovakian Lowland (Laborec – Uh Region) (Šoltész)

Physical Research on the Intake Structures of Small Hydropower Plants (Dušička) (Research Grant No. VEGA 1/0281/10)

### 3.2 International cooperation

#### Visit of staff members to foreign institutions

Czech Technical University, Prague, Faculty of Civil Engineering, Department of Hydraulic Engineering, Czech Republic (Dušička, Šoltész, Možiešik)

Technical University of Brno, Faculty of Civil Engineering, Institute of Water Structures, Czech Republic (Dušička, Šoltész, Možiešik)

#### Membership in international professional organizations

International Commission on Irrigation and Drainage (ICID) – Vice President of ICID Slovak Committee, Member of European Workgroup (ERWG) (Šoltész, A.)

International Association of Hydrological Sciences (IAHS) – National Correspondent of Ground Water Workgroup (Šoltész, A.)

## 4. Publications

### Journals

ČUBANOVÁ, L. - ŠULEK, P.: Fish Passes. In: Inžinierske stavby. ISSN 1335-0846. Vol. 58, No. 1, pp. 68-69, 2010.

DUŠIČKA, P. - RUMANN, J.: Possibilities for the Additional Utilization of the Hydropower Potential at the Čunovo Water Structure. In: Vodohospodársky spravodajca. ISSN 0322-886X. Vol. 53, Nos. 5-6, pp. 23-23, 2010.

DUŠIČKA, P. - VECHTER, J.: Small Hydro Power Plants – Positives and Negatives. In: Transfer. ISSN 1337-9747. Vol. 2, No. 3, pp. 24-25, 2010.

MOŽIEŠIK, L. - ŠULEK, P.: The Bodrog, Latorica and Laborec Rivers – the Zemplin Water Way. In: Inžinierske stavby. ISSN 1335-0846. Vol. 58, No. 3, pp. 44-46, 2010.

RUMANN, J. - DUŠIČKA, P. - OZÁBAL, M.: Model Research on a Small Hydro Power Plant. In: Energie 21. ISSN 1803-0394. Vol. 3, No. 4, pp. 36-39, 2010.

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ŠOLTÉSZ, A. - GOMBOŠ, M.: Can We Revive the Water Flow in the Medzibodrožie Region? In: EKOEFEKT. Vol. 19, p. 1, 2010.

ŠOLTÉSZ, A. - BAROKOVÁ, D.: Expected Impact Assessment of an Underground Railway Line on a Groundwater Regime. In: Podzemná voda. ISSN 1335-1052. Vol. 16, No. 1, pp. 103-112, 2010.

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BAROKOVÁ, D.: Simulation of the Impact of a Planned Water Structure on Groundwater. In: Proceedings of Symposium of Hydraulic Engineers 2010, Seč, ČR, 13.-14.9.2010. ČVUT Prague. ISBN 978-80-01-04651-7, pp. 119-125, 2010.

CABADAJ, R.: Structures for Sports and Recreational Navigation. In: Proceedings of 32nd Dam Days 2010. International Conference. Banská Bystrica, SR, 8.-10.6.2010. SVP,š.p., ISBN 978-80-968014-6-6, pp. 423-427, 2010.

CIPOVOVÁ, K.: Flood Protection of Levice. Implementation of the Directive 2007/60/EC of the European Parliament and the Council on the Assessment and Management of Flood Risks. In: First IAHR European Division Congress, Edinburgh, UK, 4.-6.5.2010, Heriot-Watt University, 2010.

CIPOVOVÁ, K.: Flood Risk Assessment in Slovakia. In: Young Scientist 2010. 2nd PhD. Student Conference of Civil Engineering and Architecture. Tatranská Štrba, SR, 13.-15.4.2010. Technical University of Košice, ISBN 978-80-553-0391-8, 2010.

DUŠIČKA, P. - ŠULEK, P. - RUMANN, J.: Possibilities of the Additional Utilization of the Hydropower Potential of the Danube River at the Čunovo Water Structure. In: Power Engineering 2010. International Scientific Event. Tatranské Matliare, SR, 18.-20.5, 2010. Slovak University of Technology in Bratislava, pp. 74-75, 2010.

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GRAMBLIČKA, M.: Activation of the Tice River and Its Revitalisation. In: Proceedings of Symposium of Hydraulic Engineers 2010, Seč, ČR, 13.-14.9.2010. ČVUT Prague. ISBN 978-80-01-04651-7, pp. 135-137, 2010.

GRAMBLIČKA, M.: Line-Up of a Water Structure on a River. In: Proceedings of Symposium of Hydraulic Engineers 2010, Seč, ČR, 13.-14.9.2010. ČVUT Prague. ISBN 978-80-01-04651-7, pp. 131-134, 2010.

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MOŽIEŠIK, L.: Hydraulic Course of the Filling of the Right Navigation Chamber of the Gabčíkovo Water Structure - Model, Reality, Calculations. In: Proceedings of Symposium of Hydraulic Engineers 2010, Seč, ČR, 13.-14.9.2010. ČVUT Prague. ISBN 978-80-01-04651-7, pp. 144-152, 2010.

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PÁLINKÁŠOVÁ, Z.: Purpose of the Water Management Improvements in the Eastern Slovak Lowland. In: Juniorstav 2010. The 12th PhD Scientific Conference. VUT Brno, 24.2.2010, Technical University of Brno, ISBN 978-80-214-4042-5, 2010.

PÁLINKÁŠOVÁ, Z.: Purpose of the Water Management Improvements in the Eastern Slovak Lowland. In: Young Scientist 2010. 2nd PhD. Student Conference of Civil Engineering and Architecture. Tatranská Štrba, SR, 13.-15.4.2010. Technical University of Košice, ISBN 978-80-553-0391-8, 2010.

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- RUMANN, J. - DUŠIČKA, P. - OZÁBAL, M.: Hydraulic Research on the Dobrohošť SHPP. In: Proceedings of 32nd Dam Days 2010. International Conference. Banská Bystrica, SR, 8.-10.6.2010. SVP,š.p., ISBN 978-80-968014-6-6, pp. 323-327, 2010.
- RUMANN, J. - DUŠIČKA, P. - OZÁBAL, M.: Model Research on the Planned Small Hydropower Plant at Dobrohošť. In: Power Engineering 2010. International Scientific Event. Tatranské Matliare, SR, 18.-20.5, 2010. Slovak University of Technology in Bratislava, pp. 76-77, 2010.
- RUMANN, J. - DUŠIČKA, P. - OZÁBAL, M.: The Physical Model of the Conduit of the Dobrohošť Small Hydropower Plant. In: Proceedings of International Conference on Water Structure Safety, 2nd part, Bratislava, SR, 12.10.-14.10.2010. Vodohospodárska výstavba, pp. 349-355, 2010.
- ŠOLTÉSZ, A. - BAROKOVÁ, D. - ČUBANOVÁ, L.: Hydraulic Aspects of Creating a Wetland in the Senianska Depression. In: Proceedings of Hydrology Days 2010. Water in a Changing Environment. The 7th National Conference of Czech and Slovak Hydrologists and Water Engineers, Hradec Králové, ČR, 25.-27.10. 2010. Český hydrometeorologický ústav, Prague, ISBN 978-80-86690-84-1, pp. 613-618, 2010.
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- ŠULEK, P.: Possibilities of New Optimal Management Theory Methods in the Process of Preparing Operational Management in a Hydropower Plant. In: HYDROTURBO 2010. 20th International Conference on "Water Power Utilization". Proceedings of the Conference. Patince, 21.-23.9. 2010. Slovak University of Technology in Bratislava, ISBN 978-80-227-3363-2, pp. 91-100, 2010.
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- ŠULEK, P. - DUŠIČKA, P.: Regulating Hydropower Plants - Models of Operational Control. In: Proceedings of Symposium of Hydraulic Engineers 2010, Seč, ČR, 13.-14.9.2010. ČVUT Prague. ISBN 978-80-01-04651-7, pp. 195-204, 2010.
- ŠULEK, P. - ORFÁNUS, M.: Short-Term Operation Scheduling of Water Management Systems Utilizing Energy. In: Proceedings of 32nd Dam Days 2010. International Conference. Banská Bystrica, SR, 8.-10.6.2010. SVP,š.p., ISBN 978-80-968014-6-6, pp. 329-333, 2010.
- ŠULEK, P.: The Short-Term Scheduling of the Generation of the Hydropower Plants in the Slovak Electric Power System. In: Power Engineering 2010. International Scientific Event. Tatranské Matliare, SR, 18.-20.5, 2010. Slovak University of Technology in Bratislava, pp. 78-79, 2010.
- TEGELHOFFOVÁ, M. - HLAVČOVÁ, K. - KOHNOVÁ, S. – ŠOLTÉSZ, A.: Impact of Climate and Water Management Changes on the Hydrological Balance of the Laborec Wetland System (abstract). In: Geophysical Research Abstracts. Vol. 12/2010, EGU General Assembly, 2010.
- RUMANN, J. - DUŠIČKA, P.: The Dobrohošť SHPP – Physical Research on the Intake Structure and Conduit. In: Stavebnícka ročenka 2010. Jaga, Bratislava, ISBN 978-80-8076-076-2, pp. 101-103, 2010
- DUŠIČKA, P. - ŠULEK, P. - RUMANN, J.: Water Power Utilization. Seminar Guides part 1. Water Mangement – Hydropower Energy Plans. – 2nd ed., Slovak University of Technology in Bratislava, ISBN 978-80-227-3332-8, 2010

# DEPARTMENT OF BUILDING STRUCTURES

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Technical Drawing  
Building Construction 1  
Building Construction 2  
Building Construction 3  
Building Construction 4  
Building Construction 5  
KPS Project  
Physics of Indoor Environments  
Thermal Engineering of Buildings  
Building Acoustics and Illumination  
Fire Safety of Buildings  
Design Studio 1  
Design Studio 2  
Design Studio 3  
Design Studio 4  
Special Practice  
Final Project  
Building Construction  
Architectural-Constructional Design Studio 1  
Architectural-Constructional Design Studio 2 Architectural-  
Constructional Design Studio 3 Architectural-Constructional  
Design Studio 4  
Building and Energy  
Fire Engineering of Buildings  
Pathology of Buildings  
Simulations of Energy and Indoor Environments  
of Buildings  
Special Building Construction  
Thesis Seminar  
Thesis  
Methodology of Scientific Experiments  
Excursion  
Acoustics in Architecture  
Solar Technology and Illumination of Buildings  
Special Building Materials and Constructions  
Building-Physical Experiment  
Project 3  
Design Studio  
Defects and Reconstructions of Building Constructions  
Selected Articles from Building Construction  
Low-Energy and Ecological Architecture  
Pathology of Constructions  
Ecological Architecture  
Constructions in Architecture 1 (in English)  
Constructions in Architecture 2 (in English)  
Constructions in Architecture 3 (in English)  
Constructions in Architecture 4 (in English)  
Constructions in Architecture 5 (in English)  
Building Physics (in English)

#### Optional Subjects

Project 1: Low-Energy Buildings  
Building Acoustics and Illumination  
Building Construction 4  
Building Construction 2  
Aerodynamics and Hydrodynamics of Buildings  
Thermal Protection of Buildings

Construction-Physical Design  
Computer Graphics and Visualizations  
Facade Technology of Intelligent Buildings  
Information Technologies  
Lifespan of Building Constructions  
Architecture-Constructional Design  
Physics of Buildings in a European Context  
Building Construction  
Fire Safety of Buildings  
Urban and Building Acoustics  
Simulations of Energy and Indoor Environments  
of Buildings  
Acoustics in Architecture  
Solar Technology and Illumination of Buildings  
Building Construction 5  
Thermal Engineering, Acoustics and Illumination  
Renewal and Modernization of Buildings

## 2. Theses

### 2.1 Bachelor Theses

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### 2.2 Graduate Theses

BARTALOŠ, R.: Mountain Hotel  
Supervisor: Puškár, A.  
CICHROVÁ, K.: Public Event House - Reconstruction  
Supervisor: Turček, I.  
HUDZÍK, M.: Detached Low-Energy House  
Supervisor: Minarovičová, K.  
MIKLOVIČ, B.: Roman Catholic Church with a Manse  
Supervisor: Žilinský, J.  
MESÍK, M.: Sports Hall  
Supervisor: Bielek, B.  
ZUBČEK, R.: Health Center  
Supervisor: Jamnický, M.  
LUKAČOVIČ, P.: Agrotourist Center  
Supervisor: Gieciová, M.  
ŠTEPÁNOVÁ, Z.: Passive Residential Building  
Supervisor: Palko, M.  
MEDVEĎ, J.: Administrative Building, Žilina  
Supervisor: Dlhý, D.  
VLHA, M.: Main Integrated Fire and Rescue Station in  
Piešťany  
Supervisor: Olbřímek, J.  
RÁBAROVÁ, M.: Family Farm – Riding Premises  
Supervisor: Mikolaj, I.  
ROMAŇÁK, P.: Hotel  
Supervisor: Držka, M.  
CHEMEZOVÁ, M.: Private Grammar School  
Supervisor: Jakeš, E.  
KÁN, M.: Multi-Storey Car Park  
Supervisor: Oláh, J.

SLEZÁKOVÁ, J.: Business Center  
Supervisor: Hraška, J.

## 2.3 Doctoral Theses

BENDŽALOVÁ, J.: Prediction of Energy Use and Energy Consumption Depending on the Properties of Building Constructions and Buildings  
Supervisor: Sternová, Z.

TKÁČ, J.: Model Examples of Natural Ventilation for a Protected Escape Route Type A<sub>p</sub> in a Fire of a Block of Flats  
Supervisor: Mikolaj, I.

KAJAN, I.: Contribution to the Design of Waterproofed Safety Membranes of Pitched Roofs  
Supervisor: Oláh, J.

ŽÚDEL, R.: Theory and Practice of the Constructional Design of the Details of Fitting Windows  
Supervisor: Puškár, A.

TAKÁCSOVÁ, Z.: Hygroscopic Properties of the Inner Surface of the Walls of Residential Buildings  
Supervisor: Žilinský, J.

MIKUŠOVÁ, M.: Parametric Study of the Building-Climate-Energy System in a Dynamic Model of the External Climate in the Locality of Bratislava  
Supervisor: Bielek, B.

MISAR, I.: Construction-Physical Behaviour of Roofs with a Reverse Order of Layers (Flat Roof)  
Supervisor: Oláh, J.

NOVOTNÝ, M.: Strength of the Joints of Roofing Layers Made from Asphalt Strips (Flat Roof)  
Supervisor: Oláh, J.

## 3. Research

### 3.1 Research Projects

Window Constructions in Low-Energy and Passive Houses (Puškár, A., Palko, M.) (VEGA 1/0748/08)

Building Simulations in the Climatic Conditions of the Slovak Republic (Hraška, J.) (VEGA 1/0647/09)

Natural Physical Cavities of Double-Skin Facades with a Geometrically Undefined Cross-Section of the Air Flow and Its Motion Line (Bielek, M.) (VEGA 1/0316/09)

Influence of Background Noise Levels and the Sound Insulation of Partition Walls on Speech Intelligibility and Changes in the Intensity of the Vocal Output of a Teacher in Classrooms: Measuring Methods, Suggested Parameters for Evaluations, Analyses and Criteria (Tomašovič, P.) (VEGA 1/0208/09)

Modern Architecture as a Monument: Energy-Saving Renewal (Puškár, A.) (APVV-0204-07)

Integrating and Harmonizing Sound Insulation Aspects in Sustainable Urban Housing Constructions - IHSIASUHC COST TU0901 (MC Member: Vargová, A.)

### 3.2 International cooperation

TU Vienna, Austria  
Wolfen WIRN, Austria  
ČVUT Prague, Czech Republic  
VUT Brno, Czech Republic  
KEB Berlin, Germany  
IFT Rosenheim, Germany  
Planungsinstitut für ländliche Siedlung, Stuttgart, Germany  
TU Budapest, Hungary

TU Győr, Hungary  
CE Haifa, Israel  
TU Eindhoven, The Netherlands  
TU Delft, The Netherlands  
KU Leuven, Belgium  
MISI Moscow, Russia  
TU Kharkov, Ukraine  
University of Strathclyde, United Kingdom

## 4. Publications

### Books and Textbooks

BELLOVÁ, M., OLBRÍMEK, J., OSVALD, A., PROCHÁZKA, J., ŠTEFAN, R., ŠTUJBEROVÁ, M.: Fire-Resistant Design of Constructions According to the Eurocodes. Examples: Introduction of the Eurocodes into Practice. Bratislava: Engineering Consultation Center of the Slovak Chamber of Civil Engineers. 2010, 148 pp., ISBN 978-80-89113-70-5 (in Slovak)

BELLOVÁ, M., OLBRÍMEK, J., OSVALD, A., PROCHÁZKA, J., ŠTEFAN, R., ŠTUJBEROVÁ, M.: Fire-Resistant Design of Constructions According to the Eurocodes. Theory: Introduction of the Eurocodes into Practice. Bratislava: Engineering Consultation Center of the Slovak Chamber of Civil Engineers, 2010, 218 pp., ISBN 978-80-89113-69-9 (in Slovak)

OLÁH, J., PALKO, M.: Roofs and Energy: 13<sup>th</sup> CSS Study Seminar in Mošovce. Bratislava: STU in Bratislava SvF, 2010, 88 pp. ISBN 978-80-227-3341-0 (in Slovak)

OLBRÍMEK, J., BELLOVÁ, M., ŠTUJBEROVÁ, M., OSVALD, A.: The Fire Resistance of Constructions According to the Eurocodes in Tables. Bratislava: SÚTN, 2010. 107 pp., ISBN 978-80-88971-91-7 (in Slovak)

TOMAŠOVIČ, P., RYCHTÁRIKOVÁ, M., DLHÝ, D., GAŠPAROVIČOVÁ, V.: Acoustics of Buildings - Room Acoustics. 1<sup>st</sup> edition, Bratislava: STU in Bratislava, 2010, 287 pp., ISBN 978-80-227-3235-2 (in Slovak)

PETRÁŠ, D., KRAJČÍK, M., MURAN, J., CHMÚRNÝ, I., FÜR, B., KONKOL, R., TAKÁCS, J., KURČOVÁ, M., PERÁČKOVÁ, J., SMOLA, A., ŠABÍKOVÁ, J., JANUŠKA, J.: Energy Audit of the Elementary School at Budatínska Street No.61. Bratislava: STU in Bratislava, 2010. 105 pp., ISBN 978-80-227-3285-7 (in Slovak)

RABENSEIFER, R., SALLAI, E.: Simulation of the Energy Performance and Indoor Environment of Buildings: A Handbook for Architects. Bratislava: STU in Bratislava, 2010, 88 pp., ISBN 978-80-227-3336-6

### Journals

ADAMSKÁ, G., GAŠPAROVIČOVÁ, V.: Changes in a Building's Volume and Their Influence on the Origin of Defects. In: Stavba. Vol.13, No.3 (2010), pp. 73-77, ISSN 1335-5406 (in Slovak)

BEŤKO, B., VAVROVIČ, B.: Analysis of the Defects of a Double-Skin Sloping Roof. In: Střechy, fasády, izolace. Vol. 16, No. 3 (2010), pp. 28-31, ISSN 1212-0111 (in Slovak)

BIELEK, B., BIELEK, M., SZABÓ, D.: Lessons Learned about the Regime of the Natural Physical Cavity of a Double-Skin Transparent Facade under Wind-Climate Conditions - Long Term In-situ Experimental Research. In: Czasopismo techniczne. Vol. 107, No. 4 (2010), pp. 11-23, ISSN 0011-4561

BIELEK, M., BIELEK, B., HÍREŠ, J.: Low Energy Buildings Versus Green Buildings and Their Design Strategies. In: Czasopismo techniczne. Vol. 107, No. 4 (2010), pp. 25-32, ISSN 0011-4561

CHMÚRNY, I.: Glass in Civil Engineering and Architecture. In: Stavebné materiály. Vol.6, Nos.5-6 (2010), pp. 30-32, ISSN 1336-7617 (in Slovak)

CHMÚRNY, I.: Low Emissivity Double and Triple Glazings. In: Eurostav. Vol.16, No.5 (2010), pp. 18-21, ISSN 1335-1249 (in Slovak)

DLHÝ, D.: Analysis of the Acoustical Quality of Wooden Doors. In: Akustika. Vol. 14, September 2010, pp. 15-22. ISSN 1801-9064

DLHÝ, D.: Classification of Building Constructions in Terms of Acoustics. In: Practical Handbook of Functional and Technical Requirements for Construction. May 2010, pp. 8-11, ISSN 1335-8634 (in Slovak)

DRŽKA, M.: Defects and Renewal of the Ferroconcrete Parts of Balconies. In: Stavebné materiály. Vol.6, No.4 (2010), pp. 20-22, ISSN 1336-7617 (in Slovak)

INGELI, R.: The Geometry of Lofts and the Energy Performance of Buildings. In: Stavba. Vol.13, No.3 (2010), pp. 68-72, ISSN 1335-5406 (in Slovak)

JAKEŠ, E.: A Chimney is on a Roof, Too. In: Střechy, fasády, izolace. Vol. 16, No. 4 (2010), pp. 56-58, ISSN 1212-0111 (in Slovak)

KAŠUBA, M.: Fire Safety Plans of Buildings - 3rd Part. In: Stavba. Vol.13, No.2 (2010), pp. 80-83, ISSN 1335-5406 (in Slovak)

MENĎAN, R., PAVČEKOVÁ, M.: Contribution to Problems of the Theoretical Determination of the Sound Reduction Index of Aerated Concrete Walls. In: Akustika. Vol. 14, September 2010, pp. 45-52, ISSN 1801-9064

OLÁH, J.: Albania and Roofs. In: Střechy, fasády, izolace. Vol. 17, No. 10 (2010), pp. 4-9, ISSN 1212-0111 (in Slovak)

OLÁH, J.: Renovation of a Balcony and Loggia. In: Správa budov. Vol. 4, No. 1 (2010), pp. 26-28, ISSN 1337-6233 (in Slovak)

OLBŘÍMEK, J. TÖLGYESSYOVÁ, H.: Implementation of the Eurocodes in the SR and Fire-Resistant Building Construction. In: Spravodajca. (2010), pp. 34-37, ISSN 1335-9975 (in Slovak)

PALKO, M.: Thermal and Moisture Optimal Pitched Roof. In: Stavebné materiály. Vol.6, Nos.7-8 (2010), pp. 32-34, ISSN 1336-7617 (in Slovak)

PERNIŠOVÁ, A.: Glass in an Interior. In: Stavba. Vol.13, No.3 (2010), pp. 56-59, ISSN 1335-5406 (in Slovak)

PUŠKÁR, A.: Demands of Fixing Windows. In: Fasády. Vol.8, No.2 (2010), pp. 20-23, ISSN 1214-4592 (in Slovak)

TOMAŠOVIČ, P.: Principles of Designing Lifts in a Building's Space Arrangement in Terms of Noise and Noise Reduction. In: Practical Handbook of Functional and Technical Requirements for Construction. February 2010, pp. 46-51, ISSN 1335-8634 (in Slovak)

VARGOVÁ, A. HORÁKOVÁ, I.: Assessment of the Structural Defects of an Office Building and a Proposed Renovation. In: Almanach znalca. Vol. 9, No. 2 (2010), pp. 23-25, ISSN 1336-3174 (in Slovak)

VAVROVIČ, B. PUŠKÁR, A.: Correct Implementation of the Details of a Window Installation. In: Stavebné materiály. Vol.6, Nos.5-6 (2010), pp. 18-21, ISSN 1336-7617 (in Slovak)

ZAJAC, J. VARGOVÁ, A.: The Causes of Leaking and Moistening in Masonry. In: Znalectvo. Vol. 15, No. 1 (2010), pp. 25-30, ISSN 1335-809X (in Slovak)

## Conferences

BEŤKO, B., GAŠPAROVIČOVÁ, V.: Analysis of the Causes of Constuction Defects in Floors. In: Design, Preparation and Realization of Buildings: Proceedings of CONECO 2010 international scientific conference. Bratislava, 25. March 2010, Bratislava: STU in Bratislava SvF, 2010. ISBN 978-80-7399-931-5. pp. 9-13 (in Slovak)

BIELEK, B., BIELEK, M., GROFČÍK, E.: Modernization of the Izohronal Light Facade System in Variant Solutions of a Double-Skin Transparent Facade. In: Defects and Renewal of Facades and Roofs: Proceedings of conference with international attendance. Podbanské, SR, 7.-9.4.2010. Košice: Technical University of Košice, 2010. ISBN 978-80-232-0307-3. pp. 11-16 (in Slovak)

BIELEK, B., BIELEK, M., HÍREŠ, J.: Aerodynamic Quantification of Buildings Because of Their Physical Problems. In: Design, Preparation and Realization of Buildings: Proceedings of CONECO 2010 international scientific conference. Bratislava, 25.3.2010. Bratislava: STU in Bratislava SvF, 2010. ISBN 978-80-7399-931-5. pp. 20-25 (in Slovak)

CHMÚRNY, I.: Energy Certification - Present State and Relation to Real Estate. In: Building Construction 2010. Buildings for Housing - Envelope Constructions: Proceedings of scientific conference. Nitra, 22.4.2010. Bratislava: STU in Bratislava SvF, 2010. ISBN 978-80-227-3278-9. pp. 11-14 (in Slovak)

ČEKON, M., HRAŠKA, J.: Thermodynamic Properties of "Low Emissivity" Building Surfaces. In: Proceedings of Junior Scientist Conference 2010, Vienna, Austria, 7.-9.4.2010. Vienna: University of Technology, 2010. ISBN 978-3-200-01797-9. pp. 437-438

DLHÝ, D.: Determining the Sound Insulation of a Wood-Based Door. In: 35<sup>th</sup> Épületszerkezzetani konferencia. Baja. Budapest: BME, 2010, unpagged

DRŽKA, M.: New Trends in Damp Proofing Building Techniques. In: 35<sup>th</sup> Épületszerkezzetani konferencia. Baja. Budapest: BME, 2010, unpagged

HANULIAK, P., HRAŠKA, J.: Advanced Light Measurement Methods and Future Trends in Long-Term Ocupancy Spaces. In: Buildings and the Environment 2010: Proceedings of the 5<sup>th</sup> international conference. Brno, ČR, 20.-21.10.2010. Brno: University of Technology, 2010. ISBN 978-80-214-4155-2. pp. 266-267

HRAŠKA, J.: Quantification of the Environmental Performance of Buildings. In: Buildings and the Environment 2010: Proceedings of the 5<sup>th</sup> international conference. Brno, ČR, 20.-21.10.2010. Brno: University of Technology, 2010. ISBN 978-80-214-4155-2. pp. 104-107

INGELI, R.: Considering the Influence of a Staircase on the Heat Use for the Space Heating of a Residential House of Building System BA. In: Buildings and the Environment 2010: Proceedings of the 5<sup>th</sup> international conference. Brno, ČR, 20.-21.10.2010. Brno: University of Technology, 2010. ISBN 978-80-214-4155-2. pp. 126-131 (in Slovak)

JAMNICKÝ, M.: BIM and Sustainable Building Design in an Early Design Stage. In: Buildings and the Environment 2010: Proceedings of the 5<sup>th</sup> international conference. Brno, ČR, 20.-21.10.2010. Brno: University of Technology, 2010. ISBN 978-80-214-4155-2. pp. 114-117

- JEDOVNICKÝ, M., TOMAŠOVIČ, P.: Acoustic Multifunctions of Sports Halls in Terms of Architectural Acoustic Parameters. In: Noise and Vibration in Practice: Proceedings of the 15<sup>th</sup> International Acoustic Conference. Bratislava: STU in Bratislava, 2010. ISBN 978-80-227-3305-2. pp. 65-68 (in Czech)
- KAŠUBA, M.: Possibility of the Elimination of the Potential Consequences of Fires Using the Documentation of the Fire Safety Plans of Buildings. In: Environmental and Safety Aspects of Fires and Accidents 2010: Proceedings of conference with international attendance. Trnava, 29. April 2010. Trnava: AlumniPress, 2010. ISBN 978-80-8096-119-0. pp. 123-133 (in Slovak)
- MIKOLAI, I.: Simulated Model of the Course of a Fire. In: Fire Engineering: Proceedings of the 3rd International Scientific Conference. 5th-6th October 2010, Zvolen, SR. Zvolen: Technical University in Zvolen, 2010. ISBN 978-80-89241-38-5. pp. 243-250
- MORAVČÍKOVÁ, K., JANÁK, M.: Experimental and Theoretical Thermal Analysis of a Transparent Naturally-Ventilated Double Skin Facade. In: Proceedings of Junior Scientist Conference 2010, Vienna, Austria, 7.-9.4.2010. Vienna: University of Technology, 2010. ISBN 978-3-200-01797-9. pp. 373-374
- OLÁH, J., ŠIDA, M., ŠUTLIAK, S.: Specificities in the Design of the Roof Decks of Buildings. In: Design, Preparation and Realization of Buildings: Proceedings of CONECO 2010 international scientific conference. Bratislava, 25.3.2010. Bratislava: STU in Bratislava SvF, 2010. ISBN 978-80-7399-931-5. pp. 200-205 (in Slovak)
- PALKO, M.: Fluid Flow Near a Wall. In: 35<sup>th</sup>. Épületszerkezzetani konferencia. Baja. Budapest: BME, 2010. unpagged
- PALKOVÁ, A., PALKO, M.: Condensation of Water Vapor in a Window Structure. In: ANSYS 2010: Proceedings of the 2010 conference for the Czech Republic and Slovakia: Frymburk, Czech Republic, 6.-9.10.2010. Brno: SVS FEM, 2010. ISBN 978-80-254-8388-6. unpagged
- PERNIŠOVÁ, A.: Sound Insulation Properties of Building Envelope Structures. In: Urbanistic, Architectural and Technical Aspects of Rural Renewal IX.: Renewal of the Building Fund as a Contribution to the Sustainable Development of the Country. Proceedings of international conference. Bratislava, SR, 22.4.2010. Bratislava: STU in Bratislava SvF, 2010. ISBN 978-80-89113-65-1. pp. 184-186 (in Slovak)
- PUŠKÁR, A., VAVROVIČ, B.: Current Trends in the Development and Production of Windows. In: Building Constructions 2010. Buildings for Housing - Envelope Constructions: Proceedings of scientific conference. Nitra, 22.4.2010. Bratislava: STU in Bratislava SvF, 2010. ISBN 978-80-227-3278-9. pp. 15-22 (in Slovak)
- RABENSEIFER, R.: A Generic Model for an Energy Assessment of a Detached Family House. In: BauSIM 2010: Building Performance Simulation in a Changing Environment. Vienna: Vienna University of Technology, 2010. ISBN 978-3-85437-314-8. p. 6
- RYCHTÁRIKOVÁ, M., VERMEIR, G.: Acoustical Assessment of Urban Public Places. In: Noise in a Built Environment: Ghent, 29.-30.4.2010. Hertfordshire: Institute of Acoustics, 2010. ISBN 978-1-906913-02-1. pp. 53-56
- TKÁČ, J., MIKOLAI, I.: Model Example of Natural Ventilation for a Protected Escape Route Type Ap in a Fire of a Block of Flats. In: Environmental and Safety Aspects of Fires and Accidents 2010: Proceedings of conference with international attendance. Trnava, 29. April 2010. Trnava: AlumniPress, 2010. ISBN 978-80-8096-119-0. pp. 357-364 (in Slovak)
- TOMAŠOVIČ, P.: Computer Simulations of Specific Classrooms in Terms of Room Acoustics. In: Material - Acoustics - Place 2010: Proceedings of the 5th international symposium. Zvolen, SR, 8.-10.9.2010. Zvolen: Technical University in Zvolen, 2010. ISBN 978-80-228-2121-6. pp. 145-150 (in Slovak)
- VARGOVÁ, A., RYCHTÁRIKOVÁ, M., TIRPÁKOVÁ, V.: Working Conditions of Physical Education Teachers from an Acoustical Point of View. In: Buildings and the Environment 2010: Proceedings of the 5<sup>th</sup> International conference. Brno, ČR, 20.-21.10.2010. Brno: University of Technology, 2010. ISBN 978-80-214-4155-2. pp. 149-152 (in Slovak)
- ZAJAC, J., VARGOVÁ, A.: Building Physics in Structural Detail Nowadays. In: Noise and Vibration in Practice: Proceedings of the 15th international acoustic conference. Bratislava. Kočovce, SR, 31.5.-1.6.2010. Bratislava: STU in Bratislava, 2010. ISBN 978-80-227-3305-2. pp. 147-150 (in Slovak)
- ŽILINSKÝ, J.: Construction of an Aerodynamic Tunnel at the Faculty of Civil Engineering of STU Bratislava. In: Buildings and the Environment 2010: Proceedings of the 5<sup>th</sup> International conference. Brno, ČR, 20.-21.10.2010. Brno: University of Technology, 2010. ISBN 978-80-214-4155-2. pp. 227-228 (in Slovak)

# DEPARTMENT OF STEEL AND TIMBER STRUCTURES

Department Head  
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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Steel Structures  
Preparation of the First Degree Thesis  
Steel and Timber Structures  
Construction Project  
High-Rise and Long-Span Steel Structures  
Timber Structures  
Special Seminar  
Steel and Timber Members  
Metal and Timber Structures  
Steel Bridges I  
Metal and Timber for Buildings  
Steel, Timber and Glass in Architecture  
Steel Structures and Bridges  
Stability and Plasticity of Metal Structures  
High-Rise and Long-Span Steel Structures  
Stability and Plasticity of Steel and Timber Structures  
Special Timber Structures

#### Optional Subjects

Execution of Steel and Timber Structures  
Steel Bridges II  
High-Rise and Long-Span Steel Structures  
Diagnosis and Reconstruction of Steel and Timber Structures  
Thin-Walled Steel Structures  
Composite Structures

#### Recommended subjects

Composite Steel-Concrete Structures  
Special Timber Structures  
Structures of Ecological Buildings  
Technological Steel Structures  
Diagnosis and Reconstruction of Steel and Timber Structures  
Advanced Steel and Timber Structures

## 2. Thesis

### 2.1 Bachelor theses

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### 2.2 Graduate theses

BAHEEJ A, A.: Design of a Metal Factory Building  
Supervisor: Baláž, I.

DIAN, D.: Tennis Hall in Malinovo  
Supervisor: Brodniansky, J.

DZUREK, J.: Load-Bearing Structure of the Aquapark in Zvolen  
Supervisor: Sandanus, J.

FAŠANG, M.: Comparison of the Bending Resistance of Beams Made from Different Structural Materials  
Supervisor: Baláž, I.

FORGÁCS, J.: Resistance of Crane Girder Beams

According to the Eurocode  
Supervisor: Baláž, I.

KACHLÁR, A.: Reconstruction of the Old Bridge Across the Danube in Bratislava  
Supervisor: Ároch, R.

KHATIBI, A.: Design of a Steel Factory Building  
Supervisor: Baláž, I.

NOVYSEDLÁK, P.: National Football Stadium in Bratislava  
Supervisor: Brodniansky, J.

SMREČANSKÝ, M.: Comparison of the Compression Resistances of Beams Made from Different Structural Materials  
Supervisor: Baláž, I.

### 2.3 Doctoral theses

KOVÁČ, M.: Buckling Resistance of Metal Columns and Frame Structures. Use of New Eurocode Methods  
Supervisor: Baláž, I.

KLAS, T.: Stability of Metal Isotropic and Orthotropic Plates  
Supervisor: Baláž, I.

SLIVANSKÝ, M.: Experimental and Theoretical Verification of the Resistance of Glass Beams  
Supervisor: Brodniansky, J.

ZELENAJ, A.: Development of Diagnostic Methods for Pipelines Affected by Environmental Protection  
Supervisor: Brodniansky, J.

## 3. Research

### 3.1 Research projects

Strength, Stability and Ductility of Thin-Walled Beam and Plate Elements in Metal Bridges and Other Applications (Baláž) (VEGA 1/0652/09)

Interactive Loss of the Stability of Thin-Walled Structural Members (Baláž) (VEGA 2/0101/09)

Innovative and Traditional Structural Systems – Design and Diagnostics Regarding Current Ecological, Architectural, Engineering and Economic Requirements with an Emphasis on Analysis of the Influence of Accidental Effects (Brodniansky) (VEGA 1/0256/10)

### 3.2 International cooperation

#### Visits of staff members to foreign institutions

Baláž, ENC Meeting, Brussels, Belgium, Jan. 24 – 25, 2010  
Kováč, Kowalski, Pásztorová, Csölleová, Juniorstav Conference, Brno, Czech Republic, Feb. 24 – 25, 2010

Blesák, Proksa, Sandanus, International Seminar, Volyně, Excursion, Gaishorn am See, Austria, March 3 – April 1, 2010

Baláž, CEN TC 250 Meeting, Stuttgart, Germany, April 15 – 17, 2010

Forgács, International Competition, Prague, Czech Republic, May 19 – 20, 2010



Baláž, PhD. Thesis Defence, Prague, Czech Republic, May 21, 2010  
 Brodniansky, Final Exams, Brno University, Czech Republic, June 23, 2010  
 Ároch, Final Exams, Brno University, Czech Republic, June 23, 2010  
 Baláž, ENC Meeting, Brussels, Belgium, Sept. 16 – 17, 2010  
 Ároch, Baláž, Živner, Bridge Eurocodes Seminar, Vienna, Austria, Oct. 4 – 5, 2010  
 Baláž, CEN TC 250 Meeting, Brussels, Belgium, Oct. 21 – 23, 2010  
 Baláž, Conference, Pécs, Hungary, Oct. 24 – 26, 2010  
 Brodniansky, IASS Conference, Shanghai, China, Nov. 6. – 14, 2010  
 Baláž, CEN TC 250 Meeting, Berlin, Germany, Nov. 8 – 9, 2010  
 Brodniansky, Conference, Hustopeče, Czech Republic, Dec. 2, 2010

#### Membership in international professional organizations

ÁROCH R.: ECCS (European Convention for Constructional Steelwork), TC 7 Thin-Walled Structures

BALÁŽ I.: IABSE (International Association for Bridge and Structural Engineering)

BALÁŽ I.: ECCS (European Convention for Constructional Steelwork), TC 7 Thin-Walled Structures

BALÁŽ I.: Eurocode National Correspondents working group

BALÁŽ I.: CEN TC 250 SC3 Design of Steel Structures

BALÁŽ I.: CEN TC 250 SC9 Design of Aluminium Structures

BALÁŽ I.: WG of SC3 for Creating List of Errors in EN 1993

BRODNIANSKY J.: IASS (International Association for Shell and Spatial Structures)

## 4. Publications

### Books

BALÁŽ, I., ÁROCH, R., CHLADNÝ, E., KMEŤ, S., VIČAN, J.: Design of Steel Structures According to Eurocode 3 STN EN 199, Part -1-1:2006 and Part -1-8:2007, According to the National Annexes NA: 2007 and NA: 2008 and Corrigendas AC: 2009 and AC: 2009. 2<sup>nd</sup> edition. Bratislava. Engineering Consultative Center of the Slovak Chamber of Civil Engineers, 2010. 400 pp. ISBN 978-80-89113-68-2 (in Slovak)

BELLOVÁ, M., OLBŘÍMEK, J., OSVALD, A., PROCHÁZKA, J., ŠTEFAN, R., ŠTUJBEROVÁ, M.: Design of Structures for Fire Resistance According to the Eurocodes. Examples. Introduction of the Eurocodes into Practice. Bratislava. Engineering Consultative Center of the Slovak Chamber of Civil Engineers, 2010. 148 pp. ISBN 978-80-8911370-5 (in Slovak)

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- BRODNIANSKY, J., MAGURA, M.: Theoretical, Experimental and Repair Works by Safety Measures in the Operation of High Pressure Gas Pipelines. In: Engineering Structures, Proceedings of the 12<sup>th</sup> International Scientific Conference, Brno, April 20 – 22, 2009, Brno, CERM, 2009. ISBN 978-80-7204-629-4, pp. 15-18 (in Slovak)
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- BALÁŽ, I., KOLEKOVÁ, Y.: Flexural Buckling Resistance of Frames with Unique Global and Local Initial Imperfections. In: Modelling in Mechanics 2010, Proceedings of the International conference. Ostrava, Czech Republic, May 18-19, 2010. TU Ostrava, 2010. ISBN 978-80-248-2234-1. pp. 35-36

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- NÉMETH, C., BRODNIANSKY, J.: Theoretical Analysis and Design of Shell Structures. In: Metal, Composite and Timber Structures and Bridges, Proceedings of the 35<sup>th</sup> Meeting of Experts on Steel Structures, Tatranská Štrba, Nov. 4-6, 2009. Košice. TU Košice, 2009. ISBN 978-80-553-0283-6. pp. 115-120 (in Slovak)
- PÁSZTOROVÁ, M.: Beam String Structure Systems Made of Steel and Wood - Solution for Joints. In: Juniorstav 2010, Proceedings of the 12<sup>th</sup> Professional Conference of PhD. Studies, Feb. 24, 2010, TU Brno, ISBN 978-80-214-4042-5 (in Slovak)
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- SANDANUS, J., SÓGEL, K.: Reconstruction of Sacral Buildings. In: Drevostavby 2010, Proceedings of the Scientific Conference. Habovka, Slovakia, June 3-4, 2010. Žilina, 2010. ISBN 978-80-970171-2-5. pp. 109-116 (in Slovak)
- SANDANUS, J., PROKSA, D.: Use of Composite Timber-Concrete Structures. In: Drevostavby 2010, Proceedings of the Scientific Conference. Habovka, Slovakia, June 3-4, 2010. Žilina, 2010. ISBN 978-80-970171-2-5. pp. 93-100. (in Slovak)
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- ŽIVNER, T., KLAS, T.: Diagnosis of the Steel Structure of the Old Railway Bridge. In: Metal, Composite and Timber Structures and Bridges, Proceedings of the 35<sup>th</sup> Meeting of Experts on Steel Structures, Tatranská Štrba, Nov. 4-6, 2009. Košice. TU Košice, 2009. ISBN 978-80-553-0283-6. pp. 155-160 (in Slovak)

# DEPARTMENT OF MAPPING AND LAND CONSOLIDATION

Department Head  
Assoc. Prof. Ing. Jozef Čižmár, PhD.

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Cartographic Techniques and Norms  
Topography  
Cadastral Mapping  
Cartographic Creation and Reproduction  
Land Surveying, Cartography and Cadastre of Real Estate  
Cadastre of Real Estate  
Land Consolidation 1  
Field Practice in the Cadastre of Real Estate and Cadastral Mapping  
Land Consolidation 2  
Mathematical Cartography  
Specialised Field Practice

#### Optional Subjects

Environmental Modelling and Evaluations of Landscapes  
Cartometry and Data Analysis of the Cadastre of Real Estate  
Spatial Modelling in GIS

## 2. Theses

### 2.1 Bachelor Theses

5 projects

### 2.2 Graduate Theses

BLOUDEK, D.: Visualization of Land Consolidation Project  
Supervisor: Geisse, R.

DAŇOVÁ, K.: Analysis of Spatial Data Used in Crisis Situations  
Supervisor: Fencík, R.

DUFALOVÁ, S.: Dealing with Corrections of Errors in the Cadastre of Real Estate  
Supervisor: Hudecová, L.

FIALOVÁ, L.: Technological Procedures for Processing Survey Sketch  
Supervisor: Hudecová, L.

FORGÁČ, M.: Cadastral Office Tools for Updating the Geodetic Data File of the Cadastre of Real Estate  
Supervisor: Hudecová, L.

GASPARIK, Z.: Creation of a Thematic Map of Slovakia  
Supervisor: Čižmár, J.

HUDEK, R.: Roadside Field Project for a Purpose-Built Agricultural Farm  
Supervisor: Geisse, R.

CHLUPÍK, T.: Generalization Procedures in the Creation of Automated Maps  
Supervisor: Čižmár, J.

JAKUBCOVÁ, A.: Evaluation of the Non-Numerical Accuracy of Vector Cadastral Maps  
Supervisor: Hudecová, L.

KAROVIČOVÁ, L.: Using a Digital Elevation Model in a Land Consolidation Project  
Supervisor: Fencík, R.

KRIŽAN, J.: Modelling Anti-Erosion Arrangements in a Land Consolidation Project  
Supervisor: Geisse, R.

LIPTÁK, J.: Creation and Use of Solar Radiation Models  
Supervisor: Vajsáblová, M.

LORINC, P.: The DEM Quality Analysis, Depending on a Mountainous Terrain  
Supervisor: Fencík, R.

MORAVČÍK, P.: Land Consolidation Project in a Garden Colony  
Supervisor: Geisse, R.

NEMCOVÁ, P.: Cartographic Visualization of Flood Crisis Situations  
Supervisor: Fencík, R.

PAVLOV, M.: Use of Land Consolidation for Capture of Flood Protection Data  
Supervisor: Geisse, R.

SCHMIDTOVÁ, M.: Analysis of Interpolation Methods and Digital Elevation Models  
Supervisor: Fencík, R.

VICÁŇOVÁ, V.: Methods of Visualization of Geo-Objects from ZB GIS  
Supervisor: Čižmár, J.

## 3. Research

### 3.1 Research projects

Flood protection of the urban areas of Slovakia (Šoltész, Fencík) (project No.: VEGA 1/0894/10)

### 3.2 International cooperation

#### Visit of staff members to foreign institutions

Institute of Geoinformation and Cartography, Vienna University of Technology, Vienna, Austria (Danek, 4 months)

## 4. Publications

### Journals

GEISSE, R.: ATLAS DMT in Education. In: Zeměměřič, Vol.17, Nos. 7,8, Prague, 2010, 1 pp., ISSN 1211-488X (in Slovak).

HRNČÁROVÁ, P.: ATLAS DMT Programme Suitable for Designing Roadside Fields. In: Stavebnictví a interiér, Vol.18, No. 4, 2010, pp. 86-87, ISSN 1211-6017 (in Slovak).

## Conferences

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ČIŽMÁR, J.: Accuracy Analysis of a Digital Elevation Model. In: Proceedings of Pedagogické listy 16: Geodetic and Cartographic Support of Flood Protection, Department of Mapping and Land Consolidation of the Faculty of Civil Engineering, Bratislava, 2010, pp. 7-13.

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JEŽKO, J. - ČIŽMÁR, J.: Cartographic and Map Creation during the Mikovini Period in Slovakia. In: Transactions of the National Technical Museum (Eds.), Z dějin geodézie a kartografie 14, National Technical Museum in Prague, Prague (Czech Republic), 2010, pp. 123-128 (in Slovak).

DANEK, L.: Assessment of Spatial Data Publishing by Open Source Software [CD-ROM]. In: Proceedings of 12th Specialized Doctoral Study Conference, Technical University of Brno, Brno (Czech Republic), 2010, 8 pp. (in Slovak).

DANEK, L.: Benefit of Ontology in Spatial Data Representation and Publishing in the GIS Domain. In: Proceedings of Pedagogické listy 16: Geodetic and Cartographic Support of Flood Protection, Department of Mapping and Land Consolidation of the Faculty of Civil Engineering, Bratislava, 2010, pp. 14-25.

FENCÍK, R.: Visualisation of Flood Maps. In: Proceedings of Pedagogické listy 16: Geodetic and Cartographic Support of Flood Protection, Department of Mapping and Land Consolidation of the Faculty of Civil Engineering, Bratislava, 2010, pp. 32-39.

FENCÍK, R. - KLIMENT, T. - TUCHYŇA, M.: Current State of Building the Spatial Data Infrastructure in the Slovak Republic. In: Proceedings of GI2010-Symposium, 10. Sächsisches GIS-Forum, Dresden (Germany), IGN e.V., 2010, pp. 31-33.

GEISSE, R. - HRNČÁROVÁ, P.: The Common Systems and Technical Measures in a Land Consolidation Project for Flood Protection. In: Proceedings of Pedagogické listy 16: Geodetic and Cartographic Support of Flood Protection, Department of Mapping and Land Consolidation of the Faculty of Civil Engineering, Bratislava, 2010, pp. 51-56.

HRNČÁROVÁ, P.: Soil Loss Analysis in a Land Consolidation Project [CD-ROM]. In: Proceedings of 12th Specialized Doctoral Study Conference, Technical University of Brno, Brno (Czech Republic), 2010, 8 pp. (in Slovak).

HUDECOVÁ, Ľ.: Benefits of Land Consolidation for a Cadastre of Real Estate. In: Proceedings of 10th international conference on Cadastre of Real Estate, Karlovy Vary (Czech Republic), 2010, pp. 24-25 (in Slovak).

HUDECOVÁ, Ľ.: Land Consolidation from the View Point of the National Spatial Data Infrastructure. In: Proceedings of Pedagogické listy 16: Geodetic and Cartographic Support of Flood Protection, Department of Mapping and Land Consolidation of the Faculty of Civil Engineering, Bratislava, 2010, pp. 57-63.

HUDECOVÁ, Ľ.: Upcoming Changes in Methodical Instruction for Carrying Out the Geodetic Activities for a Land Consolidation Project. In: Proceedings of Global Navigation Satellite Systems as an Effective Tool for Determining Spatial Position, Tatranská Lomnica, Slovak Association of Land Surveyors and Cartographers, 2010, pp.43-48.

RUŽIČKOVÁ, M.: The Cadastral Systems in Europe and 3D Cadastre [CD-ROM]. In: Proceedings of 12th Specialized Doctoral Study Conference, Technical University of Brno, Brno (Czech Republic), 2010, 4 pp. (in Slovak).

RUŽIČKOVÁ, M.: 3D Cadastre Issues [CD-ROM]. In: Proceedings of the 18th Slovak Geodetic Days Conference, Bratislava, Chamber of Surveyors and Cartographers, 2010, 9 pp.

RUŽIČKOVÁ, M.: Recording Rivers in a 3D Cadastre of Real Estate. In: Proceedings of Pedagogické listy 16: Geodetic and Cartographic Support of Flood Protection, Department of Mapping and Land Consolidation of the Faculty of Civil Engineering, Bratislava, 2010, pp. 74-85.

# DEPARTMENT OF MATHEMATICS AND DESCRIPTIVE GEOMETRY

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Mathematics I  
Mathematics II  
Descriptive Geometry  
Descriptive Geometry  
Mathematics I  
Mathematics II  
Mathematics II  
Descriptive Geometry  
Mathematics I  
Mathematics II  
Mathematics III  
Descriptive Geometry  
Descriptive Geometry  
Mathematics III  
Mathematics IV  
Informatics  
Informatics  
Mathematics  
Mathematical Statistics  
Mathematical Statistics  
Mathematical Cartography  
Mathematical Analysis I  
Engineering Geometry and AutoCAD I  
Engineering Geometry and AutoCAD II  
Geometry  
Algebraic Structures and Mathematical Logic  
Programming in C Language  
Software  
Software  
Probability Theory  
Numerical Mathematics  
Modelling and Data Analysis  
Finite Element Methods  
Functional Analysis and Variational Methods  
Stochastic and Differential Equations  
Fluid Flow  
Time Series Analysis  
Financial Mathematics  
Software (ANSYS)

#### Optional Subjects

Mathematical Statistics  
Architecture Mathematics  
Numerical and Stochastic Methods  
Informatics and Statistics

#### Recommended subjects

Computer Graphics  
Fuzzy Management

### 1.2 Postgraduate courses

Linear Models of Time Series, M. Komorníková, 26 h.  
Nonlinear Models of Time Series, M. Komorníková, 26h.  
Mathematical Methods in Fluid Flow, Diffusion and Heat Transfer, K. Mikula, 26 h.

Numerical Methods in Fluid Flow, Diffusion and Heat Transfer, K. Mikula, 26 h.

Mathematical Basis of a Finite Element Method I, K. Mikula, 26 h.

Mathematical Basis of a Finite Element Method II, K. Mikula, 26 h.

Stochastic Processes I, M. Kalina, 26 h.

Probability and Statistical Estimation, O. Nánásiová, 26 h.

Multidimensional Statistics, O. Nánásiová, 26 h.

Statistical Methods in Geodesy, O. Nánásiová, 26 h.

Mathematics, R. Mesiar, 26 h.

Decision Theory, R. Mesiar, 26 h.

Aggregation Operators, R. Mesiar, 26 h.

Proposed Experiment in Optimisation, M. Komorníková, 26h.

Time Series Analysis in Civil Engineering, M. Komorníková, 26 h.

Dynamic and Stochastic Optimisation, J. Širáň, 26 h.

Discrete Mathematics, J. Širáň, 26 h.

Graph Theory, J. Širáň, 26 h.

## 2. Thesis

### 2.1 Bachelor theses

7 theses

### 2.2 Doctoral theses

ZACHAROVSKÁ, P.: Numerical Modeling of Groundwater Flow in Porous Media, supervisor: FROLKOVIČ, P.

### 2.3 Doctoral theses

HAVRANOVÁ, Z.: Lukasziewicz Filters and S-additive Measures, supervisor: KALINA, M.

MESZÁROSOVA, K.: Fractals in the Structure of a Landscape, supervisor: FINKA, M.

ŽDÍMALOVÁ, M.: Large Vertex-Transitive and Cayley Graphs and Digraphs of a Given Degree and Diameter, supervisor: ŠIRÁŇ, J.

## 3. Research

### 3.1 Research projects

VEGA 1/0733/10 Effective Numerical Methods for the Solution of Geometric Partial Differential Equations (2010-2012, Frolkovič, P.)

VEGA 1/0080/10, Aggregation Information: Models and Their Applications (2010-2012, Mesiar, R.)

VEGA 1/0269/09 The Development of Efficient and Reliable Numerical Methods for Engineering Applications (2009-2011, Mikula K.)

VEGA 1/0198/09 Completion of Partial Information Under Uncertainty (2009-2011, Beganová, J., Stupňanová A.)

VEGA 1/0280/10 Extremal Graphs of a Given Degree and Diameter, or Girth, with a High Level of Symmetry (2010-2012, Šiagiová, J.)

VEGA 1/0489/08 Topological Methods of the Study of Discrete Structures and Their Symmetry Groups (2008-2010, Širáň J.)

APVV 0012-07 Development of Methods for Decision - Making Aids (2008-2010, Mesiar R.)

APVV 0104-07 Maps with a High Level of Symmetry (2008-2010, Širáň J.)

LPP-0111-09 Stochastic Processes (2009-2012, Komorníková, M.)

LPP 0004-07 Copula-Based Modeling of Non-Exchangeable Random Vector Distributions and Its Applications (2008-2010, Mesiar R.)

### 3.2 International cooperation

U University of Linz, Austria  
University of Novi Sad, Serbia  
University of Haifa, Israel  
Communication University of China, Beijing, China  
Beijing Institute of Technology, China  
CTU Prague, Czech Republic  
University of Ostrava, Czech Republic  
University of Liberec, Czech Republic  
WB University, Plzeň, Czech Republic  
Czech Academy of Sciences, Czech Republic  
University of Ghent, Belgium  
TU Budapest, Hungary  
University of Waterloo, Canada  
University of Freiburg, Germany  
University of Bremen, Germany  
University of Heidelberg, Germany  
University of Newcastle, Australia  
University of Bologna, Italy  
University of Ljubljana, Slovenia  
University of Pamplona, Spain  
CINECA – Supercomputing Centre, Bologna, Italy  
CNRS, Paris, France  
ICS, Paris, France  
University of Groningen, The Netherlands  
University of the Balearic Islands, Palma de Mallorca, Spain  
La Sapienza University, Rome, Italy  
Open UNI London, Great Britain  
University of Dortmund, Germany  
Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany  
Western Australia University, Perth, Australia  
University of Auckland, New Zealand  
TU Cracow, Poland  
Pohang University of Science and Technology, South Korea  
Western Washington University, Bellingham, WA, USA

#### Visit of staff members to foreign institutions

BACIGÁL, T. – JKU Linz, Austria

FROLKOVIČ, P. – UNI IWR Heidelberg, Germany; CNRS Strasbourg, France; CNRS Paris, France; ICS Paris, France; ČVUT Prague, Czech Republic

JÁGR, V. – JKU Linz, Austria

KALINA, M. – VUT Brno, Czech Republic; University of Novi Sad, Serbia

KNOR, M. – AGH Cracow, Poland; Open UNI Milton Keynes, United Kingdom; UNI Ljubljana, Slovenia

KOMORNÍKOVÁ, M. – UMŠ, PřF MU Brno, Czech Republic;

MESJAR, R. – UNI Salzburg, Austria; JKU Linz, Austria; UNI Ostrava, Czech UTIA AV ČR Prague, Czech Republic; Trinity College, Dublin, Ireland; UIB Palma de Mallorca, Spain; Communication University of China, Beijing, China; Beijing Institute of Technology, China; University of Novi Sad, Serbia

MIKULA, K. – UNI Innsbruck, Austria; CNRS Paris, France; UNI Munster, Germany; UNI Ghent, Belgium; ICS Paris, France; ČVUT Prague, Czech Republic; UNI Yantai, China

NÁNÁSIOVÁ, O. – ČVUT Prague, Czech Republic; University of Lecce, Italy; Jiaotong University, Shanghai, China; Business School, Shanghai, China

PEKÁROVÁ, M. – JKU Linz, Austria

REMEŠÍKOVÁ, M. – CNRS Strasbourg, France; CNRS Paris, France; ICS Paris, France, UNI Yantai China

SARKOCI, P. – JKU Linz, Austria

STAŠOVÁ, O. – CNRS Paris, France; ICS Paris, France

STRUK, P. – Communication University of China, Beijing, China; Beijing Institute of Technology, China

ŠIRÁŇ, J. – UNI Auckland, New Zealand; Open UNI Milton Keynes, United Kingdom; Open UNI London, United Kingdom; Loyola College, Chennai, India; Kalasalingam University, India; Institute of Physics and Mathematics, Teheran, Iran; Polytechnic University, Barcelona, Spain

#### Membership in international professional organizations

KOMORNÍKOVÁ, M.: SEFI Mathematics Working Group

MESJAR, K.: ERC (European Research Council), 2009-2013

MIKULA, K.: ERC (European Research Council), 2009-2013

MINÁROVÁ, M.: European Committee FP7 Marie Curie Fellowship

TEREŇOVÁ, Z.: EUCYS, (European Union Contest for Young Scientists)

MESJAR, R.: EUSFLAT (European Society for Fuzzy Logic and Technology)

MIKULA, K. - Embryomics Steering Committee; BioEmergencies Steering Committee

## 4. Publications

### Books

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TEREŇOVÁ, Z.: Lines and Singular Points on Algebraic Surfaces of the 4th Degree, STU Publishing Centre, Bratislava, Slovakia, 2010, 101 pp. (in Slovak)B., MIKULA, K.: Analytical

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FAŠKOVÁ, Z., ČUNDERLÍK, R., MIKULA, K.: On Finite Element and Finite Volume Methods and Their Application in Regional Gravity Field Modeling, Gravity, Geoid and Earth Observation, IAG Commission 2, Gravity Field, Chania, Crete, Greece, Berlin: Springer Verlag, 2010, pp. 421-426

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#### Journals

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- TEREŇOVÁ, Z.: Lines on Algebraic Surfaces, Geometry and Its Applications, Proceedings of Abstracts, Bratislava, Slovakia, 2010 (in Slovak)
- VÁCLAVÍKOVÁ, Š., NÁNÁSIOVÁ, O., PASTUCHOVÁ, E.: Classification of Association Coefficients and Its Application, ISCAMI 2010, Book of Abstracts, Bratislava, Slovakia, 2010, p. 42
- VALENT, P., SZOLGAY, J., KOMORNÍKOVÁ, M.: Analysis of Nitrate Time Series Using Nonlinear Models, Hydrology Days 2010, 7th National Conference of Czech and Slovak Hydrologists and Water Managers, Hradec Králové, Czech Republic, 2010 pp. 199-204 (in Slovak)
- VALENT, P., SZOLGAY, J., KOMORNÍKOVÁ, M., HOWDEN, NICHOLAS J., K.: Predicting Long-Term Catchment Nutrient Export, the Use of Nonlinear Time Series Models, Geophysical Research Abstracts, Vol. 12/2010, EGU General Assembly 2010
- VAVRÍKOVÁ, L.: Assessment of University Departments Based on Multicriteria Decision Making and Aggregation Operators, ISCAMI 2010, Book of Abstracts, Bratislava, Slovakia, 2010, pp. 43-44
- ZHANG, Q., MESIAR, R., LI, J., STRUK, P.: Generalized Integral, FSTA 2010, Proceedings of 10th International Conference on Fuzzy Set Theory and Applications, Liptovský Ján, Slovakia, 2010, p. 15
- ŽDÍMALOVÁ, M.: Graph Coverings in Constructions of Large Graphs and Digraphs with Given Diameter and Degree, ISCAMI 2010, Book of Abstracts, Bratislava, Slovakia, p. 46

# DEPARTMENT OF PHYSICS

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Physics I  
Physics II  
Physics III  
Physics (English)  
Optional Subjects  
Engineering Thermodynamics

#### Optional Subjects

Engineering Thermodynamics

### 1.2 Postgraduate courses

Physical Principles of Measurements  
Special Aspects of Physics  
Modelling Transport Phenomena  
Physical Fields, Waves  
Heat and Moisture Transport in Building Materials

## 2. Research

### 2.1 Research projects

Study of the Material Properties of Historical and Modern Building Materials in Light of Their Compatibility (J. Veselský, Project No.: VEGA 1/0591/10)

### 2.2 International cooperation

Faculty of Civil Engineering, Czech Technical University, Prague, Czech Republic  
Silesian University of Technology, Gliwice, Poland  
Faculty of Civil Engineering, Technical University, Brno, Czech Republic  
Cracow University of Technology, Poland  
Military University of Technology Warsaw, Poland  
Katholieke Universiteit Leuven, Belgium  
University of Liberec, Czech Republic  
Institute of Theoretical and Applied Mechanics of the ASCR, Prague, Czech Republic

#### Membership in international professional organizations

European Physical Society. (I. Baník, J. Veselský, J. Lukovičová)

European Society for the Study of Science and Theology. (J. Lukovičová)

International Council for Research and Innovation in Building and Construction–W 40. (J. Veselský, J. Lukovičová)

## 3. Publications

### Journals

BANÍK, I.: Photoconductivity in Chalcogenide Glasses on the Basis of a Barrier-Cluster Model. *J. of Optoelectr. and Adv. Mater.*, Vol. 11, No. 12, pp. 1931-1945 (2009).

BANÍK I.: Barrier-Cluster Model – The Basis for Understanding Optical Phenomena in Non-Crystalline Semiconductors, *J. of Optoelectron. Adv. Mater.*, Vol. 11, No. 12, pp. 1915-1930 (2009).

BANÍK, I.: Optical Properties of the Hydrogenated Amorphous Silicon from the Point of View of the Barrier-Cluster Model, *J. of Non-Oxide Glasses*, Vol. 2, No. 2, 2010, pp. 107-120 (2010).

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HOLÚBEK, M., MATIAŠOVSKÝ, P.: Determination of Relative Permittivity-Moisture Content Curves for Lightweight Carbonate Plasters by the TDR Method from the Aspect of the Probe Placement. In: *Research on Building Physics: Proceedings of the 1st Central European Symposium on Building Physics*, 13.-15.9.2010, Cracow-Lodz, Poland. Technical University of Lodz, 2010, pp. 33-37.

HOLÚBEK., MIHÁLKA, P., MATIAŠOVSKÝ, P.: Relationship Between Relative Permittivity and the Thermal Conductivity Moisture Dependence of Calcium Silicate Boards. In: *Thermophysics 2009: Proceedings*, 29.-30.10.2009, Valtice, Czech Republic. Brno University of Technology, 2009, pp. 43-48, ISBN 978-80-214-3986-3.

BANÍK,I.: Band Model of Diffusion: The Meyer-Neldel Rule and Relaxation Processes in Disordered Materials. *Proceedings of the 37th Conference of the Slovak Society of Chemical Engineering*, SSCHE 2010, May 24-28, 2010, Tatranské Matliare.

BANÍK,I., ČULÍK, F., LUKOVIČOVÁ, J.: Some Specific Problems of Thermophysics Semiconducting Materials. In: *Thermophysics 2010: Proceedings*, 29.-30.10.2010, Valtice, Czech Republic. Brno University of Technology, 2010, ISBN 978-80-214-4166-8, pp. 18-24.

BANÍK,I., LUKOVIČOVÁ, J., PAVLENDOVÁ, G., VESELSKÝ,J.: Measurement of Thermal Properties of Soils in Temperature Interval from Room Temperature to the Temperature of Nitrogen Boiling Point. In: *Thermophysics 2010: Proceedings*, 29.-30.10.2010, Valtice, Czech Republic. Brno University of Technology, 2010, ISBN 978-80-214-4166-8, pp. 25-31.

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BANÍK, I.: Meyer-Neldel Rule in Disordered Semiconductors. Proceedings of International Conference. APCOM 2010, 16-18. Jun 2010, Malá Lučivná, pp. 288-291.

LUKOVIČOVÁ, J., PAVLENDOVÁ, G., TISOVIČOVÁ, A.: Teaching Physics at Technical Universities. In: L'Éducation Chrétienne et l'Enseignement Dans des Pays Européens Après le Concile de Vatican. Fribourg, Association Internationale Sciences, 2009, pp. 29-37. ISBN 978-2-9700690-5-8.

# DEPARTMENT OF STRUCTURAL MECHANICS

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## 1. Education

### Graduate study

#### Obligatory subjects

Building Analysis  
Interaction of Structures and Foundations  
Non-Linear Mechanics  
Plane and Spatial Structures  
Special Problems in Dynamics and Statics  
Statics  
Statics (English)  
Structural Analysis  
Structural Dynamics  
Structural Mechanics  
Structural Mechanics (English)  
Structural Mechanics I  
Theory of Elasticity  
Theory of Elasticity (English)  
Theory of Elasticity I  
Theory of Elasticity II

#### Optional Subjects

Aeroelastics  
Life Span and Reliability of Structures  
Modelling Subgrades  
Seismic Engineering

#### Recommended subjects

Automation in Non-Linear Structural Analysis  
Automation in Structural Dynamics  
Automation in the Statics of Structures  
CAD in the Design of Structures  
Plasticity Analysis of Structures  
Stability of Structures  
Statics of Reconstructions  
Structural Modelling Using FEM  
Use of Computers in Civil Engineering  
Viscoelasticity of Structural Systems

## 2. Theses

### 2.1 Bachelor Theses

7

ČEREŠNÍK, J.: Analysis of a Circular Tank. Supervisor: Jendželovský, N.

GAJDOŠ, V.: Static and Dynamic Analysis of an Administrative Center. Supervisor: Ivánková, O.

MACÁK, M.: Analysis of a Latticed Shell Having a Circular Plan. Supervisor: Jendželovský, N.

### 2.3 Doctoral Theses

KENÍŽOVÁ, P.: Biomechanical Response of the Human Spine to Stationary Force Effects. Supervisor: Sumec, J.

PREKOP, Ľ.: Nonlinear Analysis of an Underground Wall in Interaction with a Subgrade. Supervisor: Jendželovský, N.

## 3. Research

### 3.1 Research projects

Analysis of Load-Bearing Structures Subjected to Accidental Dynamic Actions (2008 - 2010, M. Sokol, VEGA 1/0573/08)

New Products and Technologies for the Manufacturing of Glued Laminated Timber for Civil Engineering (J. Dický, APVV VMSP-P-99-0050-09)

Numerical Analysis of Foundation Structures under Various Foundation Conditions (2008 - 2010, N. Jendželovský, VEGA 1/0567/08)

Optimal Design of Structures Having Unilateral Bonds with Respect to the Non-Linear Behaviour of Materials and Their Reliability and Serviceability Aspects (2009-2011, J. Dický, VEGA 1/0692/09)

Reliability of Reinforced Concrete Structures Considering the Soil-Structure Interaction: Effect of Extreme Loads and Degradation of Material Properties. Safety and Reliability of Nuclear Power Plants (2008 - 2010, J. Králik, VEGA 1/0849/08)

Stability and Dynamics of Imperfect Heterogeneous Structures (2008-2010, J. Ravinger, VEGA 1/0666/08).

### 3.2 International cooperation

Civil Engineering Institute of the Polish Academy of Science, Warsaw, Poland

Technical University of Opole, Poland

Silesian University of Technology, Gliwice, Poland

Cracow University of Technology, Poland

Fakultät der Bauingenieurwesen Ruhr-Universität, Bochum, Germany

Bundesforschung und Prufzentrum, Arsenal, Vienna, Austria

Czech Academy of Sciences, Prague, Czech Republic

Technical University of Ostrava, Czech Republic

Brno University of Technology, Czech Republic

Czech Technical University in Prague, Czech Republic

Budapest University of Technology and Economics, Budapest, Hungary

### Membership in International Professional Organizations

KOLEKOVÁ, Y.: Member of ÖGE Bridges and Building Structures, TU Vienna

RAVINGER, J. Member of International "Coupled Instabilities in Metal Structures" Committee

RAVINGER, J.: Member of Polish – Slovak Commission for Civil Engineering, Polish Academy of Sciences

SOKOL, M.: Member of ÖGE Bridges and Building Structures, TU Vienna

SOKOL, M.: Member of European Association for Earthquake Engineering

SOKOL, M.: Member of CEN/TC 250/ SC 8

SUMEC, J.: Member of IASS Workgroup 13

SUMEC, J.: Member of Polish – Slovak Commission for Civil Engineering, Polish Academy of Sciences

SUMEC, J.: Member of the Committee of the European Society for Biomechanics

SUMEC, J.: Vice-Chairman of the Czech-Slovak Committee for Biomechanics

## 4. Publications

### Books and textbooks

DICKÝ, J. - MISTRÍKOVÁ, Z. – SUMEC, J.: Elasticity and Plasticity in Civil Engineering 1 (2<sup>nd</sup> edition). STU Publishing House 2010. 298 pp. ISBN 978-80-227-3385-4 (in Slovak)

### Parts of Books and Textbooks

DICKÝ, J.: Some Experiences of the Implementation of the Two-Tier Study Programs at STU Bratislava. In: Inquiries into European Higher Education in Civil Engineering: Ninth EUCEET Volume. Edited by I. Manoliu. Bucharest, CONSPRESS 2010. 326 pp. ISBN 978-973-100-123-4; ISBN 978-973-100-126-5. pp. 59-69

DICKÝ, J.: The New First Cycle Degree Programmes in Civil Engineering at the Slovak University of Technology in Bratislava. In: Inquiries into European Higher Education in Civil Engineering: Seventh EUCEET Volume. Edited by I. Manoliu. Bucharest, CONSPRESS 2010. 276 pp. ISBN 978-973-100-123-4; ISBN 978-973-100-124-1. pp. 117-122

### Journals

KOLEKOVÁ, Y. - PETRONIJEVIC, M. - SCHMID, G.: Special Dynamic Soil-Structure Analysis Procedures Demonstrated for Two Tower-Like Structures. In: Slovak Journal of Civil Engineering. ISSN 1210-3896. Vol. 18, No. 2 (2010), pp. 26-33

KRÁLIK, J. - ROZSÁR, P.: Safety and Reliability Analysis of High-Rise Buildings Considering Exterior Explosion Effects. In: Journal of KONBIN. ISSN 1895-8281. Nos. 2, 3 (14, 15) (2010), pp. 49-60

KRÁLIK, J.: Deterministic and Probabilistic Analysis of Damping Device Resistance under Impact Loads from a Nuclear Fuel Container Drop. In: Slovak Journal of Civil Engineering. ISSN 1210-3896. Vol. 18, No. 1 (2010), pp. 1-16

KRÁLIK, J.: Modeling and Assessment of the Seismic Resistance of Reinforced Concrete Frames with Panel Walls. In: Konstrukce. ISSN 1213-8762. Vol. 9, No. 2 (2010), pp. 19-27 (in Slovak)

KRÁLIK, J.: Probabilistic Safety Analysis of the Nuclear Power Plants in Slovakia. In: Journal of KONBIN. ISSN 1895-8281. Nos. 2, 3 (14, 15) (2010), pp. 35-48

PSOTNÝ, M. - RAVINGER, J.: Shallow Shell as a Ceiling Panel. In: Konstrukce. ISSN 1213-8762. Vol. 9, No. 2 (2010), pp. 8-13 (in Slovak)

SOKOL, M. - KONEČNÁ, L.: The Impact of Climate Change on the Design of Structures. In: Normalizácia. ISSN 1335-5511. Vol. 16, No. 2 (2010), pp. 2-7 (in Slovak)

SUMEC, J. - JENDŽELOVSKÝ, N. - KORMANÍKOVÁ, E. - KOTRASOVÁ, K.: Architectural Bionics in Civil Engineering. In: Machines, Technologies, Materials. ISSN 1313-0226. Issue 6 (2010), pp. 33-36

SUMEC, J. - JENDŽELOVSKÝ, N. - KORMANÍKOVÁ, E. - KOTRASOVÁ, K.: Architectural Bionics in Civil Engineering - Applications. In: Media4u Magazine. ISSN 1214-9187. Vol. 7, No. 2 (2010), pp. 122-131

### Conferences

BALÁŽ, I. - KOLEKOVÁ, Y.: Flexural Buckling Resistance of Frames with Unique Global and Local Initial Imperfections. In: Modeling in Mechanics 2010. Ostrava, Czech Republic, May 18-19, 2010. ISBN 978-80-248-2234-1. pp. 35-36

BALÁŽ, I. – KOLEKOVÁ, Y.: Flexural Buckling Resistance of Metal Frames with Imperfections in the Form of the Elastic Buckling Mode. In: Steel, Wooden and Composite Structures and Bridges. Terchová – Vrátna, October 28-29, 2010. pp. 25-32. ISBN 978-80-970171-5-6

BALÁŽ, I. – KOLEKOVÁ, Y.: Metal Frames with Non-Uniform Members and/or Non-Uniform Normal Forces with Imperfections in the Form of the Elastic Buckling Mode. In: Conference on Engineering Research and Sixth International PhD, DLA Symposium. Pécs, Hungary, October 25-26, 2010. pp. B:3 – B:15. ISBN 978-7298-40-0

BOCK, I. - LOVIŠEK, J.: On an Optimal Control Problem for Reissner-Mindlin Plates with Contact Conditions. In: New Trends in the Statics and Dynamics of Buildings. Bratislava, Slovak Republic, October 21-22, 2010. ISBN 978-80-227-3373-1. pp. 21-24

DICKÝ, J. - JURÍČEK, T.: Reliability Analysis of Glulam Timber Composite Beams Reinforced by Carbon Fibers. In: 10<sup>th</sup> International Scientific Conference VSU 2010. Vol. 2. Sofia, Bulgaria, June 3-4, 2010. pp. 48-53

HRUŠTINEC, Ľ. - SUMEC, J. - KUZMA, J.: Analysis of Stiffness and Bonding Effects in the Contact Surface on the Displacements of a Circular Foundation. In: 10<sup>th</sup> International Scientific Conference VSU 2010. Vol.1. Sofia, Bulgaria, June 3-4, 2010. pp. 74-79

HRUŠTINEC, Ľ. - SUMEC, J. - KUZMA, J.: Experimental Tests of the Shear Strength of Cohesive Soils and Their Use in Geotechnical Calculations. In: Experimental Stress Analysis 2010. Velké Losiny, Czech Republic, May 31 – June 3, 2010. ISBN 978-80-244-2533-7. pp. 101-106

HUBOVÁ, O.: Actual Problems of Wind Actions on Structures and the Application of Eurocodes. In: CzechSTAV 2010, Civil Engineering and Technology, Hradec Králové, October 25-29, 2010, pp. 103-110. ISBN 978-80-86703-38-1 (in Slovak)

HUBOVÁ, O.: Wind Response of High-Rise Buildings. In: 10<sup>th</sup> International Scientific Conference VSU 2010. Vol. 2. Sofia, Bulgaria, June 3-4, 2010. pp. 54-58

HUBOVÁ, O.: Atmospheric Buffeting. In: New Trends in the Statics and Dynamics of Buildings, October 21 - 22, 2010, Svf STU Bratislava, pp. 53-56. ISBN 978-80-227-3371-1

HUBOVÁ, O.: A Simplified Approach for Assessing a Building's Wind Response. In: 10<sup>th</sup> International Scientific Conference VSU 2010. Vol. 2. Sofia, Bulgaria, June 3-4, 2010. pp. 59-63

IVÁNKOVÁ, O. - JAVOREK, T.: Resistance of Prefabricated Reinforced Concrete Structures. In: Dynamics of Rigid and Deformable Bodies 2010. Ústí nad Labem, Czech Republic, September 22-24, 2010. ISBN 978-80-7414-270-3. 7 pp. (in Slovak)

IVÁNKOVÁ, O. – JAVOREK, T.: Static and Dynamic Analysis of a Prefabricated Reinforced Concrete Hall. In: Structural and Physical Aspects of Civil Engineering, Štrbské Pleso, November 24-26, 2010, 8 pp. ISBN 978-80-553-0527-1 (in Slovak)



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# DEPARTMENT OF MATERIAL ENGINEERING

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Concrete Technology  
Technological Project  
Concrete Technology II  
Ceramics  
Prefabricated Constructions  
Testing Methods

#### Optional Subjects

Microstructure of Building Materials  
Technology of Repairs  
Binders

## 2. Research

### 2.1 Research projects

Study of the properties of mortars made from lime and lime-pozzolan binders for renewal of cultural heritage structures (Pavlík) (VEGA 1/0621/08)

Monitoring of the pore structure of a brick during freezing and thawing (Šveda) (VEGA 1/0538/08)

Use of recycled aggregates in the production of cement composites (Unčík) (VEGA 1/0554/08)

### 2.2 International cooperation

Faculty of Civil Engineering, Brno University of Technology, Czech Republic  
Klokner Institute, Czech Technical University in Prague, Czech Republic  
Faculty of Civil Engineering, VŠB Technical University of Ostrava, Czech Republic

## 3. Publications

#### Books

UNČÍK, S., BAJZA, A., ROUSEKOVÁ, I., JURÍČEK, I., KŇÁZE, P., GOČA, P.: Ready-Mixed Concrete: Bratislava, Eurostav, 2010. ISBN 978-80-89228-26-3, 176 pp. (in Slovak)

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KERESTÚR, M., ŠVEDA, M.: Application of Zeolite Wastes in Brickmaking. In: Waste Forum 2010, Results of Research and Development in Waste Management, Proceedings of 5th Symposium. Kouty nad Desnou, CR, 21.-23.4.2010. Conference proceedings on CD-ROM, ISBN 978-8085990-12-6 (in Slovak)

LEDEREROVÁ, M., UNČÍK, S., STRUHÁROVÁ, A.: Effect of Recycled Aggregate on the Properties of Concrete. In: Odpadové fórum 2010, Results of Research and Development in Waste Management, Proceedings of 5th Symposium. Kouty nad Desnou, ČR, 21.-23.4.2010. Conference proceedings on CD-ROM, ISBN 978-8085990-12-6 (in Slovak)

LEDEREROVÁ, M.: Building Waste – Optimization of Concrete Recycling Materials. In: Proceedings of 14<sup>th</sup> Conference on the Environment and Processing Minerals, Part III. VŠB-TU Ostrava 3.-5.6.2010. VŠB – Technical University of Ostrava, CR. ISBN 978-80-248-2210-5, pp. 137 – 142 (in English)

LEDEREROVÁ, M.: Environmental Aspects and Their Impact on the Use of Waste. In: Recycling 2010: Proceedings of 15th Conference. FSI VUT and ARRSM CR, Brno, 2010. ISBN 978-80-214-4061-6, pp. 108-114 (in Slovak).

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- ŠVEDA, M., KERESTÚR, M.: Use of Zeolite Wastes in the Ceramic Industry. In: Waste Recycling: Proceedings of 14th Conference. Košice, 2.-3.12.2010. Košice, Ústav geotechniky SAV, Conference proceedings on CD-ROM, ISSN 1335-7808. pp. 31-35 (in Slovak)

# DEPARTMENT OF BUILDING TECHNOLOGY

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## 1. Education

### 1.1 Graduate study

#### Mandatory subjects

Construction Site Facility (RS)  
Costs and Prices in the Building Industry (PSA)  
Environmental Protection and Creation (RS)  
Pre-Construction Design (TS)  
Professional Practice (RS)  
Protection and Restoration of Archit. Heritage (PSA-A/U)  
Technological Project II (RS)  
Technology of Construction Processes 1 (PSA)  
Technology of Construction Processes 1 (PSA)  
Technology of Construction Processes 1 (TMS)  
Technology of Construction Processes 1 (TMS)  
Technology of Construction Processes 3 (TMS)  
Technology of Construction Processes 3 (TMS)  
Technology of Finishing Processes (RS)  
Thesis (RS)

#### Mandatory elective subjects

Bachelor's Thesis (TMS)  
Bachelor's Thesis Seminar (TMS)  
Business Ethics (RS)  
Construction Engineering in Practice (TMS)  
Construction Engineering in Practice (VHVS)  
Construction of Buildings (PSA)  
Construction of Buildings (PSA)  
Construction of Buildings (TMS)  
Construction Site Facility (ERS)  
Costs and Prices (VHVS)  
Costs and Prices in the Building Industry (TMS)  
Costs and Prices in the Building Industry (TS)  
Forensic Activity (TS)  
Maintenance of Buildings (TS)  
Modelling of Construction Processes (TS)  
Non-Destructive Testing (TS)  
Optimising Construction Processes (RS)  
Pathology of Buildings (TS)  
Professional Field Trip (TMS)  
Professional Field Trip (TS)  
Professional Practice (TMS)  
Protection of the Environment (TMS)  
Protection of the Environment (TMS)  
Quality Management in the Construction Industry (TS)  
Quality Management System (TPB)  
Safety and Protection of Health in the Construction Process (TMS)  
Technological Project I (TS)  
Technology for Historical Buildings (RS)  
Technology of Building Renovation I (TS)  
Technology of Building Renovation II (RS)  
Technology of Building Service Renovations (TS)  
Technology of Construction Processes 2 (PSA)  
Technology of Finishing Processes (TS)  
Technology of Historical Buildings (ERS)  
Technology Problems in Forensic Engineering (RS)

#### Optional subjects

Historical Construction Technologies (PSA-A/U)

### In English (Civil Engineering)

Building Technology (CE)  
Construction and Maintenance Management (CE)

### 1.2 Postgraduate Courses

#### Technology of Construction

##### Subjects

Technology of Construction  
Postgraduate Study Project I-VI  
Pedagogic Activity I-V  
Publication Activity I-II

## 2. Theses

### 2.1 Bachelor theses

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### 2.2 Graduate theses

ABAŠANOVÁ, P.: Multifunctional House in Bernolákovo.  
Supervisor: Juríček, I.

BABINCOVÁ, Z.: CENTRUM Multifunctional House, Trnava.  
Supervisor: Juríček, I.

BENKO, Š.: Multifunctional House. Supervisor: Bizub, J.

BIELIKOVÁ, L.: Multifunctional Building on Dunaj Street, Bratislava. Supervisor: Gašparík, J.

BUDINSKÝ, P.: Harmónia Residential House, Nitra.  
Supervisor: Prokopčáková, K.

CECONÍK, M.: Entertainment–Business Centre MAX in Žilina. Supervisor: Búciová, M.

ČASNOCHA, J.: Vinohrady Residential House. Supervisor: Božík, M.

ČUHÁK, P.: Senior Housing in Jacovce. Supervisor: Gašparík, J.

DOMORÁK, M.: "Záhrady" Residential Houses in Kaplná.  
Supervisor: Jankovichová, E.

DVORSKÝ, D.: Devinský dvor Residential Complex.  
Supervisor: Božík, M.

FERANEC, V.: Residential Complex – Eden Park, Bratislava. Supervisor: Prokopčáková, K..

FUNTÍK, P.: Residential House, Hliny. Supervisor: Božík, M.

FUNTÍK, T.: Manor-House Renewal in Gbefany. Supervisor: Makýš, O.

GALLO, M.: Industrial Hall with Bituminous Shingles, Senica. Supervisor: Búciová, M.

GOČ, V.: Multifunctional Building, 29<sup>th</sup> August Street, Bratislava. Supervisor: Jankovichová, E.

GVIZD F., K.: Business Centre. Supervisor: Božík, M.

HALAČ, L.: Vlčince Residential Complex – 1<sup>st</sup> Step.  
Supervisor: Antošová, N.

- HAVRILA, J.: Ružinov Centre – Multifunctional Building and Garage in Ružinov, Bratislava. Supervisor: Makýš, P.
- HLAVÁN, R.: Complex Renewal of Manor House in Malacky. Supervisor: Makýš, O.
- HLAVATÝ, P.: Nuclear Power Station – Barbotage Turrets 3 and 4. Supervisor: Hulínová, Z.
- HLUCHÁ, K.: Selected Parts of a Construction-Technology Design. Administrative Centre, Röntgen Street, Bratislava. Supervisor: Juríček, I.
- HODÁL, P.: Selected Parts of a Construction-Technology Design: Faculty of Informatics and Information Technologies, Bratislava. Supervisor: Juríček, I.
- HOPJAK, P.: Selected Parts of a Construction-Technology Design: Multifunctional Complex, RAČANY BIANCO, 1<sup>st</sup> Period. Supervisor: Juríček, I.
- HRAŠKO, D.: Selected Parts of a Construction-Technology Design: Multifunctional House on Market Street in Bratislava. Supervisor: Szalayová, S.
- HRICKO, M.: Selected Parts of a Construction-Technology Design: Hotel on Vranov Street in Bratislava. Supervisor: Szalayová, S.
- HRÚZ, Ľ.: Multifunctional Houses in Mlynské Nivy. Supervisor: Hulínová, Z.
- HUDÁKOVÁ, S.: Logistics Centre of the Post Office: SPS Hall, Administration–Distribution Building, Ivánka pri Dunaji. Supervisor: Gron, A.
- CHLEBO, L.: New Construction of Three Residential Houses Complex in Nitra – Zobor. Supervisor: Somorová, V.
- CHOCHLÍK, A.: Selected Parts of a Construction-Technology Design: Multifunctional House on Vranov Street in Bratislava. Supervisor: Szalayová, S.
- IVANKO, M.: Bratislava-Centre Residential Building. Supervisor: Gašparík, J.
- JADROŇ, J.: Selected Parts of a Construction-Technology Design: Multifunctional House, Pajštún Street, Bratislava. Supervisor: Juríček, I.
- JÁGRÍK, M.: Vlčince Residential Complex – 2<sup>nd</sup> Step. Supervisor: Antošová, N.
- JENČA, D.: Residential House in Lamač. Supervisor: Božík, M.
- JURKOVIČ, J.: Administration–Operational Building and Garage, Poprad. Supervisor: Antošová, N.
- KITTNER, M.: Multifunctional House on Podunajská Street, Bratislava. Supervisor: Gašparík, J.
- KOHÚT, D.: Veľká Fatra 2 Medical Center, Turčianske Teplice. Supervisor: Makýš, P.
- KOTÚL, J.: Hotel. Supervisor: Božík, M.
- KRÁL, S.: Selected Parts of a Construction-Technology Design: Residential House in the Locality of Vtáčnik in Bratislava. Supervisor: Szalayová, S.
- KREMEL, P.: Selected Parts of a Construction-Technology Design: Policlinic on Betliar Street in Bratislava. Supervisor: Szalayová, S.
- KRIŽAN, M.: GALA RESIDENCE in Galanta. Supervisor: Gašparík, J.
- KUBÍK, T.: Selected Parts of a Construction-Technology Design: Dúbravia Residential House, Bratislava. Supervisor: Juríček, I.
- KUCHTOVÁ, Z.: Complex Conservation of the Pajštún Castle. Supervisor: Makýš, O.
- KULIFFAY, P.: Residential Complex in Dolné Lovčice. Supervisor: Gašparík, J.
- LANČARIČ, D.: Multifunctional Complex in Jarovce. Supervisor: Prokopčáková, K.
- LUKÁČ, M.: Residential House. Supervisor: Božík, M.
- MAGDOLEN, J.: Račany Bianco, Bratislava – Rača. Supervisor: Búciová, M.
- MARŤÁK, M.: TESCO Shopping Centre in Liptovský Mikuláš. Supervisor: Búciová, M.
- MASLO, J.: Tatra City Administration Building, Bratislava. Supervisor: Gron, A.
- MEĽO, P.: AIRCRAFT Multifunctional Centre Bratislava, Sport Centre. Supervisor: Búciová, M.
- MIČAŇ, P.: Renewal of Manor-House in Lúčnica nad Žitavou. Supervisor: Makýš, O.
- MORAWA, T.: Viktória Multifunctional House in Bratislava. Supervisor: Makýš, P.
- MYDLO, T.: 3-Star – Bôrik. Supervisor: Božík, M. 3-star – Bôrik.
- NECKÁROVÁ, M.: Multifunctional House in Kramáre, Bratislava. Supervisor: Gron, A.
- NEILINGER, P.: Business Centre. Supervisor: Bizub, J.
- OCHABOVÁ, B.: Hotel Minerál. Supervisor: Bizub, J.
- ONDRIČKO, T.: Zátvor II Residential Complex, Trnava. Supervisor: Makýš, P.
- PÁLOVÁ, M.: Business and Service Centre Bratislava – Rača. Supervisor: Antošová, N.
- PETROVSKÝ, A.: Juh Residential House. Supervisor: Božík, M.
- POLAŠKO, I.: Selected Parts of a Construction-Technology Design: Multifunctional House, Černyševský Street, Bratislava. Supervisor: Juríček, I.
- PRAZIENKOVÁ, Ľ.: Collector – Mlynské Nivy, Bratislava. Supervisor: Makýš, P.
- PROCHÁZKOVÁ, I.: Residential House on Osuský Street, Bratislava. Supervisor: Makýš, P.
- RUS, Z.: Devínsky dvor Residential Complex. Supervisor: Makýš, P.
- SEDLÁK, M.: Selected Parts of a Construction-Technology Design: Administrative and Business Centre on Holly Street in Púchov. Supervisor: Szalayová, S.
- SLAMKA, M.: Emporia Multifunctional City Residence. Supervisor: Somorová, V.
- STRIGÁČOVÁ, L.: Multifunctional Centre Mierová – Perla, Ružinov, Bratislava. Supervisor: Makýš, P.
- SUCHÝ, M.: Residential House Construction in Trenčianska Turňa. Supervisor: Makýš, O.
- ŠILÁK, M.: Selected Parts of a Construction-Technology Design: Multifunctional Building, Dunaj Street, Bratislava. Supervisor: Juríček, I.
- ŠMOTLÁK, M.: Residential House in Dúbravka, Bratislava. Supervisor: Makýš, P.

ŠTECH, P.: Multifunctional House in Žilina – Šašvárka. Supervisor: Búciová, M.

ŠTELMACH, P.: Residential Complex – Eden Park, Bratislava. Supervisor: Prokopčáková, K.

### 3. Research

#### 3.1 Research projects

JANKOVICHOVÁ, E.: Influence of Globalisation on the Management and Marketing of Construction Companies in Slovakia. VEGA, Project No.1/0683/08, 2008-2010.

SOMOROVÁ, V.: Use of the Facility Management Method in the Modeling of the Maintenance and Repair Costs of a Building. VEGA, Project No.1/0813/0.

MAKÝŠ, O.: Traditional Technologies for the Conservation of Wood, MK SR, OSSD, Project No. MK-OSSD-1736/2010/1.3.

BRIATKA, P.: Evaluation and Model of the Desorption of Water from Porous Stone for the Use of the Internal Curing of Concrete, Fund of the STU BA: Program for the Support of Young Researchers, Project No: Decision V-STU No. 2/17/2010.

MAKÝŠ, O.: Method of Renewing the Ceramic Tiles of the Facade of the Koch Sanatorium, STU BA: Project No. PD84.

MAKÝŠ, O.: Hainburg – Braunsberg, Restoration of the Model of the Celtic Fortification from the 1<sup>st</sup> Century BC on a Scale of 1:1, STU BA: Project No. PE57

MAKÝŠ, O.: Instrumental Analysis of the Construction-Realisation System of the Old Fortress in Komárno for the Needs of Monument Research. STU BA: Project No. PF26.

MAKÝŠ, O.: Technology of the Renovation of the Moistening and Salination of the Church of St. Ladislav in Nitra, STU BA: Project No. PD39.

MAKÝŠ, O.: Conservation Works on the Torso of the Church of St. Michael in Podhorany, STU BA: Project No. PF15.

MAKÝŠ, O.: Visualisation of the Roofs of the Strečno Castle, STU BA: Project No. PE56.

MAKÝŠ, O.: Technology of the Repair of a Rural House in Vajnory, STU BA: Project No. PC64.

#### 3.2 International cooperation

CNAM, Paris, France

CONTEC, Kralupy n. Vltavou, Czech Republic

Czech Technical University (ČVUT), Faculty of Building Engineering, Prague, Czech Republic

District Institute for the Preservation of Cultural Heritage, Brno, Czech Republic

ICCROM (International Centre of the Study of the Preservation and Restoration of Cultural Property), Rome, Italy

ICOMOS (International Council on Monuments and Sites) – Slovak branch, Bratislava, SK

National Institute for the Preservation of Cultural Heritage, Prague, Czech Republic

Purdue University, Division of Construction Engineering and Management, School of Civil Engineering, West Lafayette, IN, USA

Southampton Institute, Built Environment Division, Southampton, England, UK

Sparkasse Hainburg, Private Foundation, Hainburg, Austria

STOP - Society for the Technology of the Protection of Monuments, Prague, CZ

Technical University (VUT), Faculty of Building Engineering, Department of Building Technology, Brno, Czech Republic

University of Brighton, Faculty of Engineering and Environmental Studies, Brighton, England, UK

### 4. Publications

#### Books and Textbooks

BIZUB, J.: Optimal Selection of a Formwork. Brno: Tribun Ltd. 2010, 84 pp. ISBN 978-80-227-3405-9.

ELLINGEROVÁ, H., KALINOVÁ, G.: Economics of Construction. Bratislava: STU BA, 2010, ISBN 978-80-227-3362-5, pp. 67-127.

GAŠPARÍK, J.: Quality Management in a Construction Company and on a Construction Site. Methodical Examples of Documents According to STN EN ISO 9001:2009. Brno: Tribun EU, 2010, 209 pp., ISBN 978-80-7399-996-4.

GAŠPARÍK, J.: Quality Management and Assurance in a Company. Bratislava: STU v Bratislave, 2010, 107 pp., ISBN 978-80-227-3231-4.

JANKOVICHOVÁ, E.: Manager in the Construction Industry. Brno: TRIBUN EU, Ltd., 2010, 103 pp., ISBN 978-80-970530-9-3.

JURÍČEK, I., MAKÝŠ, O., GRON, A.: Standard Requirements for the Repair of Masonry Ruins. Pezinok: Renesans, Ltd., 2010, 72 pp., ISBN 978-80-89402-18-2.

JURÍČEK, I.: Transport, Placement, Compaction and Curing of Concrete. In: UNČÍK, S., et al.: Transportbetón: Basic Materials - Attributes – Production and Processing – Quality Control - Suppliers. Bratislava: Eurostav, 2010. Ch. 6, pp. 60-69, ISBN 978-80-89228-26-3.

MAKÝŠ, O. – GAŠPARÍK, J. – MAKÝŠ, P.: Construction Activities in Areas under the Protection of Architectural Heritage No.III. Pezinok: Renesans 2010, 19 pp., ISBN 978-80-89402-16-8.

MAKÝŠ, O. - KOHÚT, V. - STANÍK, I. - ZÁVACKÝ, J.: Surveying Ruins. Bratislava: Renesans, 84 pp., 2010, ISBN 978-80-89402-26-7.

MAKÝŠ, O. - KOHÚT, V. - STANÍK, I. - ZÁVACKÝ, J.: Surveying Ruins – 1<sup>st</sup> Stage. Bratislava: Renesans, 28 pp., 2010, ISBN 80-89402-26-7.

MAKÝŠ, O.: Technological and Methodic Directions for Saving Ruins in Slovakia. In: Construction Activities in Areas under the Architectural Heritage Protection – Selected Topics III., Bratislava: Renesans, pp. 30-50, 2010, ISBN 978-80-89402-16-8.

MAKÝŠ, O.: Methodical Documents Concerning Renovation of Monuments, Conservation of Masonry Exposed to Extreme Erosion Conditions, Building Construction Activities in Areas under Heritage Protection. In: Standard Requirements for the Repair of the Masonry of Ruins, Bratislava: Renesans, pp. 54-75, 2010, ISBN 978-80-89402-18-2.

MAKÝŠ, O.: Methods of Evaluating Factors, Which Influence the Selection of Technologies for the Restoration of Architectural Monuments. Bratislava: STU BA, 180 pp., 2010, ISBN 978-80-227-3329-8.



MAKÝŠ, O.: Technology for the Restoration of Architectural Monuments No. III. Bratislava: Renesans, Ltd., Issue 1, 2010, 72 pp., ISBN 978-80-89402-14-4.

MAKÝŠ, O.: Selected Topics from the Technology of Architectural Heritage Conservation III. Bratislava: Renesans, Ltd., Issue 1, 2010, 36 pp., ISBN 978-80-89402-15-1.

PROKOPČÁKOVÁ, K.: The Complex Maintenance of Construction Machinery – Selected Chapters. Brno: TRIBUN EU, Ltd., 2010, 79 pp. ISBN 978-80-7399-998-8.

SLAŠŤAN, J. - JURÍČEK, I., - KYŠKA, R.: Quality Control on Construction Sites. Bratislava: Eurostav, 2010, Vol.1, 353 pp., ISBN 978-80-89228-19-5.

SOMOROVÁ, V.: Maintenance of Buildings –Facility Management. Bratislava: STU BA, 2010. Issue 1, 72 pp., ISBN 978-80-227-3372-4.

### Journals

BRIATKA, P., GILÁNYI, L.: How to Drain Off Pavements Correctly. In: Materials for Construction, Vol. 16, No. 3, 2010, pp. 34-37, ISSN 1213-0311.

BRIATKA, P., MAKÝŠ, P.: Suitability of European Lightweight Aggregate Usage in the Internal Curing of Concrete. In: Materials for Construction, Vol. 16, No. 7, 2010, pp. 22-25, ISSN:1213-0311.

BRIATKA, P., MAKÝŠ, P.: Curing Fresh Concrete - 1. Water Loss from Concrete. In: Concrete. Technology – Construction - Repair, Vol. 10, No. 1, 2010, pp., 40-44, ISSN 1213-3116.

BRIATKA, P., MAKÝŠ, P.: Curing Fresh Concrete - 2. Superabsorbent Polymers. In: Concrete. Technology – Construction - Repair, Vol. 10, No. 2, 2010, pp. 35-37, ISSN: 1213-3116.

BRIATKA, P., MAKÝŠ, P.: Curing Fresh Concrete - 3. Saturated Lightweight Aggregate. In: Concrete. Technology – Construction - Repair, Vol. 10, No. 3, 2010, pp. 42-47, ISSN: 1213-3116.

BRIATKA, P., STERNOVÁ, Z.: Elastic Modulus of the Base Coat of ETICS. In: Materials for Construction, Vol. 16, No. 5, 2010, pp. 13-16, ISSN: 1213-0311.

BRIATKA, P., STERNOVÁ, Z.: Dark Facades - Yes or No?! In: Heat Protection of Buildings, Bratislava, Vol. 13, No. 1, 2010, pp. 21-30, ISSN 1213-0907.

BRIATKA, P., STERNOVÁ, Z.: Selection and Design of Final Coating of ETICS. In: Materials for Construction, Vol. 16, No. 2, 2010, pp. 18-21, ISSN:1213-0311.

BRIATKA, P.: Transport of Fresh Concrete. In: Materials for Construction, Vol. 16, No. 6, 2010, pp. 32-37, ISSN: 1213-0311.

BRIATKA, P.: Elimination of Concrete Cracks from Plastic Shrinkage. In: Concrete. Technology – Construction - Repair, Vol. 10, No. 2, 2010, pp. 56-61, ISSN 1213-3116.

BRIATKA, P.: Trouble with Industrial Floors? In: Construction Materials: Technologies, Products, Constructions, Vol. 6, No. 9, 2010, pp. 30-32, ISSN: 1336-7617.

BRIATKA, P.: Fiber-Reinforced Concrete - Properties and Performance. In: Materials for Construction, Vol. 16, No. 3, 2010, pp. 18-23, ISSN:1213-0311.

ELLINGEROVÁ, H.: Calculation of the Unit Prices of Construction Work. In: Pricing of Construction Work. ÚSI Bratislava, 2010, ISBN 978-80-970019-0-2, pp. 62-70.

GAŠPARÍK, J.: Integrated Management System in a Construction Company – Effective Tool for Improving Quality, the Environment and Safety Levels. In: OTMC Organization, Technology & Management in Construction. ISSN 1847-5450. Vol. 1, Issue 1 (2009), pp. 15-21.

HENKENSIEFKEN, R., BRIATKA, P., BENTZ, D., NANTUNG, T., WEISS, J.: Plastic Shrinkage and Cracks in Internally Cured Mixtures: Prewetted Lightweight Aggregate Can Reduce Cracking. In: Concrete International, Vol. 32, No. 2, 2010, pp. 49-54, ISSN 0162-4075

HULÍNOVÁ, Z.: Using Stochastic Modelling Methods in the Preparation of Construction. In: Transport & Logistics. Vol. 18, 2010, pp. 1-16, ISSN 1451 – 107X.

JANKOVICHOVÁ, E.: Essence and Importance of Business Ethics in Construction. In: Almanac of an Authorised Expert, Vol. VIII., 2009, No. 4, pp. 28-32, ISSN 1336-3174.

JANKOVICHOVÁ, E.: The Global Economy and Its Influence on the Slovak Construction Sector. In: Slovak Journal of Civil Engineering, Vol. XVIII, 2010, No. 1, pp. 17-23, ISSN 1210-3896.

MAKÝŠ, O.: Restoration of the Baroque Chimneys of the Mansion in Malacky. In: Euro-stav, 2009, Vol. 15, No.12, pp. 24-26, Bratislava: Eurostav, Ltd., ISSN 1335-1249.

MAKÝŠ, O.: Masonry Torsos. In: Construction Materials, Vol. V., No.11, pp. 50-52, Bratislava: Jaga Group, Ltd., 2009, ISSN 1336-7617.

SOMOROVÁ, V.: European Standard prEN 15221-6 as a Basis for Specification of the Area during Calculation of Heat Consumption for a Leased Building. In: TZB Haustechnik, ISSN 1210-356X, Vol. 18, No. 3, 2010, pp. 42-43.

SOMOROVÁ, V.: Quality of the Maintenance of Heating Equipment Using Outsourcing. In: Administration of Buildings, ISSN 1337-6233, Vol. 4, No. 2, 2010, pp. 38-39.

SOMOROVÁ, V.: Intelligent Administrative Buildings and Facility Management. In: Eurostav, Bratislava, ISSN 1335-1249, Vol. 16, No. 3, 2010, pp. 30-31.

SOMOROVÁ, V.: Quality in Facility Management - prEN 15221-3. In: The Building, ISSN 1335-5406, Vol. 13, No. 4, 2010, pp. 82-86.

SZALAYOVÁ, S. – VARGOVÁ Z.: When Balconies Cause Problems, In: Nice Housing, Bratislava, Vol. 12, 2010, No. 4, pp. 78-81.

### Conferences

ANTOŠOVÁ N.: Actual "ETICS" Problems – Technical Solutions. In: Design, Preparation and Realisation of Constructions: International Scientific Conference - CONECO 2010, Bratislava: STU BA, 2010, pp. 1-8, ISBN 978-80-7399-931-5.

ANTOŠOVÁ N.: Pathology of Buildings - Scientific Discipline in the Field of Building Technology. In: TECHSTA 2010, 8<sup>th</sup> International Conference on Management and Technologies for Sustainable Development in the Building Industry. Prague: ČVUT, 2010, pp. 344-348, ISBN 978-80-01-04605-0.

BIZUB, J.: Duties of a Construction Supervisor during the Additional Insulation of Buildings. In: International Scientific Conference, CONECO 2010, Bratislava, 2010, pp. 26-29.

BOŽÍK M. The Influence of the Quality of Piping on the Quality of Transported Media. In: International Scientific Conference, CONECO 2010, Bratislava: INCHEBA EXPO, STU BA, ISBN 978-80-7399-932-2, pp. 30-33.

- BRIATKA, P. - MAKÝŠ, P.: Elimination of Plastic Shrinkage and Cracking in Concrete. In: Junior Scientist Conference 2010, Vienna, Austria: 2010. Vienna: University of Technology, 2010, pp. 171-172, ISBN 978-3-200-01797-9.
- BRIATKA, P., STERNOVÁ, Z.: Importance of the Selection and Design of an ETICS Final Coat. In: Anniversary Volume on the Construction Industry 2010, JAGA, 2009, pp. 122-125, ISBN 978-80-8076-076-2.
- BRIATKA, P.: Elastic Modulus of an ETICS Base Coat. In: JUNIORSTAV 2010, 12<sup>th</sup> Experts Conference of PhD Student Studies, Brno: VUT, 2010, p. 115, ISBN 978-80-214-4042-5.
- BRIATKA, P.: Reduction of Plastic Shrinkage and Cracking in Concrete Pavements and Elimination of Maintenance Expenses. In: YEAR 2010: The Young European Arena of Research. 2010.
- BRIATKA, P.: Internal Curing of Fresh Concrete Using Lightweight Aggregates. In: Design, Preparation and Realisation of Constructions: International Scientific Conference – CONECO 2010. Bratislava: STU BA, 2010, pp. 34-39, ISBN 978-80-7399-931-5.
- ELLINGEROVÁ, H.: Preparation of Public Works. In: Design, Preparation and Realisation of Constructions. International Scientific Conference – CONECO, Bratislava 2010. Brno: TRIBUN EU, Ltd., 2010, ISBN 978-80-7399-931-5, pp. 63-67.
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- GAŠPARÍK, J. - GAŠPARÍK, M.: Optimizing Method with Software Support for Machinery Selection for Construction Processes. In: 27<sup>th</sup> International Symposium on Automation and Robotics in Construction (ISARC): Proceedings. Bratislava, 2010, Brno: Tribun EU, 2010, pp. 442-451, ISBN 978-80-7399-974-2.
- GAŠPARÍK, J. - GAŠPARÍK, M. - SZALAYOVÁ, S.: Integrated Management System in a Construction Company as a Part of TQM. In: Advancing and Integrating Construction Education, Research and Practice: Proceedings of the Second International Conference on Construction in Developing Countries. Cairo, Egypt, 2010. Karachi: Department of Civil Engineering, 2010, pp. 358-366, ISBN 1-884342-02-4.
- GAŠPARÍK, J.: Analysis of the Quality Management Improvement Processes in Construction Companies. In: TECHSTA 2010: 8<sup>th</sup> International Conference on Management and Technologies for Sustainable Development in the Building Industry, Prague, 2010, ČVUT, 2010, pp. 121-125, ISBN 978-80-01-04605-0.
- HAVRAN, J.: Total Guarantee of Facility Management. In: Facility Management 2010, Proceedings of the 8<sup>th</sup> Conference with International Participation, Bratislava, SSTP, 2010.
- HAVRAN, J.: The Tasks of a Facility Manager during the Realisation of a Building. In: Design, Preparation and Realisation of Constructions: International Scientific Conference – CONECO, Bratislava, STU BA, 2010.
- HULÍNOVÁ, Z.: Risk Analysis in Facility Management. In: Facility Management 2010, Proceedings of the 8<sup>th</sup> Conference with International Participation, Bratislava, 2010, pp. 53-56, ISBN 978-80-89216-34-5.
- HULÍNOVÁ, Z.: Systemic Approach to Analyzing Risks in the Construction Industry. In: International Conference – CONECO 2010. Bratislava, 2010, pp. 99-102, ISBN 978-80-7399-931-5.
- HULÍNOVÁ, Z.: The Safety of Work Coordination Systems at Building Sites. In: 8<sup>th</sup> International Conference on Management and Technologies TECHSTA 2010. Prague: 2010, pp. 79-84, ISBN 978-80-01-04 605-0.
- CHAMULOVÁ, B.: Dynamic Time Planning and a Method for Its Creation. In: Design, Preparation and Realisation of Constructions: International Scientific Conference – CONECO 2010, Bratislava, 2010, STU BA, pp. 103-108, ISBN 978-80-7399-931-5.
- CHAMULOVÁ, B.: Implementantion of the Priorities of a Private Developer and Constructor into the Construction Planning Process. In: Juniorstav 2010, JUNIORSTAV 2010, 12<sup>th</sup> Expert Conference of PhD Student Studies, Brno: VUT, 2010, ISBN 978-80-214-4042-5.
- JANKOVICHOVÁ, E.: Expectations for the Development of the Slovak Construction Sector. In: Design, Preparation and Realisation of Constructions: International Scientific Conference – CONECO 2010, Bratislava, 2010, STU BA, pp. 109-113, ISBN 978-80-7399-932-2.
- LAMOŠ R.: Proposed Measures to Prevent Wasting Water during Construction Processes. In Design, Preparation and Realisation of Constructions: International Scientific Conference – CONECO 2010, Bratislava: STU BA, pp. 164-166, ISBN 978-80-7399-931-5.
- MAKÝŠ, O.: Application of the Incremental Approach Method for Solving the Dampness Problems of the Manor House in Malacky. In: Design, Preparation and Realisation of Constructions – CONECO 2010, Bratislava, Brno: Tribun EU, 2010, pp. 167-173, ISBN 978-80-7399-931-5.
- MAKÝŠ, O.: Condition Surveys – Basis for Preservation of Ruins. In: Proceedings of 8<sup>th</sup> International Conference TECHSTA 2010, Prague, September 2010, Prague: ČVUT, pp. 40, ISBN 978-80-01-04 605-0.
- MAKÝŠ, P. - BRIATKA, P.: Elimination of the Effect of Water Losses from Concrete – Cracks within a Plastic State. In: Građevinarstvo – nauka i praksa: Treći internacionalni naučno-stručni skup. Knjiga 1. Žabljak, 15.-19.2.2010, Podgorica: Univerzitet Crne Gore, 2010, pp. 741-746. ISBN: 978-86-82707-18-9.
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- MALENKOVÁ, J.: Use of Facility Management in Technical Administration. In: Design, Preparation and Realisation of Constructions, International Scientific Conference CONECO 2010, Bratislava: STU BA, pp. 181-183.
- MATÚŠEK, R.: Renovation of a Building on Most Street with the Application of Facility Management. International Scientific Conference – CONECO 2010, Bratislava: STU BA, pp. 184-188.

PROKOPČÁKOVÁ, K.: Asbestos as a Dangerous Construction Waste. In: 5th Waste Forum Symposium, Kouty nad Desnou, 2010, pp.74-77.

PROKOPČÁKOVÁ, K.: Dust as a Negative Influence in the Realisation of Constructions. In: International Scientific Conference CONECO 2010, Bratislava, 2010, pp. 244-249.

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SOMOROVÁ, V: Measurement of an Area as a Basis for Calculating the Heat Consumption at a Leased Building According to European Standard prEN 15221-6. In: Heating 2010. Proceedings from 18<sup>th</sup> International Conference, Stará Ľubovňa, 2010, Bratislava: SPTP, ISBN 978-80-89216-32-1, pp. 499-502.

SOMOROVÁ, V: Maintenance of Dwellings as a Part of Facility Management. In: Regeneration of Dwellings – Dynamics of Housing Changes: Proceedings of 12<sup>th</sup> Conference, Ostrava: Technical University in Ostrava, 2010, ISBN 978-80-248-2184-9, pp. 67-70.

SOMOROVÁ, V: The Role of Facility Management in the Design Phase of a Building from the Point of View of Its Future Maintenance. In: Design, Preparation and Realisation of Constructions: International Scientific Conference - CONECO 2010, Bratislava: STU BA, ISBN 978-80-7399-931-5, pp. 258-262.

SZALAYOVÁ, S.: Recycling Construction Waste. In: TOP 2010 - Environmental Protection Techniques, Častá - Papiernička, 2010, pp. 359-364.

SZALAYOVÁ, S.: Design Principles and the Measurement of Selected Properties of Low Energy Buildings. In: Design, Preparation and Realisation of Constructions: International Scientific Conference - CONECO 2010, Bratislava: STU BA, pp. 276-280.

TARÁBKOVÁ L.: Safety Risks in the Construction Process. In: Design, Preparation and Realisation of Constructions: International Scientific Conference - CONECO 2010. Bratislava: STU BA, 2010, pp. 296-300, ISBN 978-80-7399-931-5.

# DEPARTMENT OF SANITARY AND ENVIRONMENTAL ENGINEERING

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Environmental Technology VHVS  
Environmental Technology  
Water Chemistry and Hydrobiology  
Chemistry of Water, Soil, Air and Waste  
Environmental Hygiene  
Landscape Engineering  
Infrastructure of Urban Regions  
Landscape Eng. and Infrastr. of Urban Regions  
Water Pollution Control  
Sanitary Engineering Structures  
Design and Execution of Water Management Structures  
Water Supplies and Water Treatment  
Public Utility Networks  
Solid Waste Management  
Public Utility Networks and Water Management Structures  
Sewerage and Waste Water Treatment  
In-Situ Training  
Practical Training  
Solid Waste Management  
Urban Hygiene  
Selected Water Supply and Water Treatment Chapters  
Selected Sewerage and Waste Water Treatment Chapters  
Spas and Mineral Waters  
Special Excursion  
Special Seminar  
Realization of Sanitary Structures  
Water Management  
Automation of Engineering Works  
Theory and Techniques of Air Protection  
Final Thesis

#### Optional Subjects

Pumping Stations  
Industrial Water Management  
Urban and Regional Planning  
Rehabilitation of Old Waste Disposal Sites  
Urban Hydrology  
Operation and Maintenance of Sanitary  
Engineering Structures

## 2. Theses

### 2.2 Graduate theses

BEČÁR, M.: Trenchless methods of laying engineering systems, Supervisor: Kriš, J.  
BUGÁRDI, V.: Pool attractions., Supervisor: Božiková, J.  
BUJŇÁK, P.: Hydraulic analysis water networks of city Modra, Supervisor: Tóthová, K.  
ČÁKOVÁ, K.: Impact Study of infiltrating water to sewer systems Pezinok, Supervisor: Sokáč, M.  
GALÍK, M.: Water Supply in villages Lackova and Forbasy, Supervisor: Kriš, J.  
GEMERAN, M.: Design of the municipal sewage system in Cierny Balog, Supervisor: Stanko, Š.

GOLEJ, P.: Study of Sewerage System Agglomerated with a Waste Water Treatment Plant in the Municipality of Gbelce, Supervisor: Rusnák, D.

GOTZINGEROVÁ, A.: Reconstruction of WWTP in Lojev - Belorus, Supervisor: Stanko, Š.

HRDÁ, K.: Integrated Permitting of Dumping Sites, Supervisor: Škultétyová, I.

IVANIČ, M.: Design of Sewerage System of the Village of Tajov, Supervisor: Stanko, Š.

KŘÍŽ, J.: Removal of Iron and Manganese from Untreated Water and Removal of Secondary Iron in the Water Supply Resulting from Aggression, Supervisor: Ilavský, J.

ĽUPTÁK, P.: Study of Sewerage System Agglomerated with Waste Water Treatment Plant in the Municipality of Búč, Supervisor: Rusnák, D.

MICHALIDES, J.: Development and Design of Water System Management, Supervisor: Tóthová, K.

MIKOLÁŠEK, L.: Technical and legislative requirements of the design of the water supply system in the village Kukučínov, Supervisor: Dubová, V.

MOLNÁR, T.: Design of Water Supply for Recreational Area in the Village of Divín, Supervisor: Barloková, D.

MORÓCZOVÁ, C.: Application of facility for material appreciation of biologically decomposable waste, Supervisor: Horanová, Ľ.

NAGYOVÁ, I.: Natural materials in the treatment of groundwater, Supervisor: Barloková, D.

NEMEŠ, P.: Optimization of water distribution network Komárno, Supervisor: Tóthová, K.

NOVÁK, M.: Brhlovce – drinking water supply, Supervisor: Kriš, J.

RAŠO, J.: Sewerage system in village Vefký Biel, Supervisor: Sokáč, M.

SEGLA, M.: Consideration of sewer network capacity in the industrial area, Supervisor: Rusnák, D.

SLOUKOVÁ, E.: Design of the composting plant for municipal waste, Supervisor: Škultétyová, I.

ŠPANKA, J.: Removal of nickel from water using sorption materials, Supervisor: Ilavský, J.

ŠTEFANEC, B.: Sewage System appraisal in town Pezinok, Supervisor: Sokáč, M.

TRIZNA, D.: Watering of green flat roofs, Supervisor: Božiková, J.

VANČÍKOVÁ, R.: Mechanical-biological waste treatment, Supervisor: Škultétyová, I.

VILČEKOVÁ, M.: Removal of heavy metals from water, Supervisor: Ilavský, J.

FRAŠTACKÁ, I.: Water supply of village Močenok, Supervisor: Barloková, D.

### 3. Research

#### 3.1 Research projects

Determination of Dispersion Phenomenon Dependencies on the Principal Hydraulic Parameters of Streams, (Sokáč, M.) (VEGA 2-0101-08)

Optimization of the Design and Renovation of Sewage Systems in Urban Areas and Alternative Uses (Stanko, Š.) (VEGA 1/0854/08)

Sewerage of Urban Areas (Rusnák, D.) (KEGA 3/7452/09)

Utilization of New Filtration Materials in Water Treatment (Barloková, D.) (APVV 0379-07)

Master Training Network in Technologies of Water Resources Management – Netwater (Kriš, J.) (Tempus Project No. 15311-TEMPUS-IT-TEMPUS-JPCR)

Towards Sustainable Water Resources Management in Central Asia - Swan (Kriš, J.) (Tempus Project No. 158982-TEMPUS-ES-TEMPUS-JPCR)

Tools for Urban Water Infrastructure Management (Stanko, Š.) (Austria – Slovakia - Co-operation in Science and Education No. 64s0002)

The NATO Science for Peace and Security Programme: Advanced Water Supply and Wastewater Treatment: a Road to a Safer Society and Environment (Mahříková)

CEIPO Project, Research Center of Excellence of Integrated Flood Protection of an Area (Kriš)

Competitive and Safe Waste Management Systems (Škultétyová, I.) (VEGA 1/0559/10).

#### 4. Publications

##### Books and Textbooks

ILAVSKÝ, J.: Removal of Heavy Metals from Water. Bratislava : STU Bratislava SvF, 2010, 159 pp. - ISBN 978-80-227-3327-4.

SOKÁČ, M.: Modelling the Influence of Discontinuous Pollution Sources on Receiving Water. Bratislava : STU Bratislava SvF, 2010. 104 pp. - ISBN 978-80-227-3328-1.

ŠKULTÉTYOVÁ, I. STANKO, Š., MAHRÍKOVÁ, I.: Environmental Engineering : Selected Papers. Bratislava : STU Bratislava, 2010. 162 pp. - ISBN 978-80-227-3289-5.

##### Journals

BARLOKOVÁ, D., HRIVNÁK, J., TÖLGYESSY, P., KRÁLOVIČOVÁ, E.: Improved On-Column Injection System and Large Volume Needle Trap Device Used in Water Headspace Analysis. In: Chromatographia. Vol. 71, 2010, No. 9/10, ISSN 0009-5893. pp. 953-955.

BOŽÍKOVÁ, J.: Water and Sewerage Connections. In: Urob si sám. Vol.13, 2010, No. 3, ISSN 1335-4604. pp. 39-53.

KRIŠ, J. - BALÁŽ, M.: Outdoor Family Pool. In: Urob si sám. Vol.13, 2010, No. 5, ISSN 1335-4604. pp. 42-54.

KRIŠ, J. GHAWI, A. H.: Improvement of the AL-Wathba Settling Tank Operation Using a CFD Model with a PC Simulation of Flowing Liquid. In: Journal of Hydrology and Hydromechanics. Vol. 58, 2010, No. 3, - ISSN 0042-790X. pp. 201-210.

MAHRÍKOVÁ, I., KRIŠ, J., ŠKULTÉTYOVÁ, I.: Expanding Sewerage Coverage. In: IWA Yearbook 2010. International Water Association Journal, 2010. ISBN 9781843393795. pp. 19-20.

MAHRÍKOVÁ, I.: Evaluation of the Activities of the Slovak National Committee IWA in the Year 2009. In: Vodohospodársky spravodajca. Vol. 53, No. 1-2, 2010. ISSN 0322-886X. pp. 34-35.

TÓTHOVÁ, K.: Active Control of Water Leakages in a Public Water Supply System. In: Plynár - vodár - kúrenár + klimatizácia. Vol. 8, No<sup>s</sup>. 5, 2010. ISSN 1335-9614. pp. 5-9.

VELÍSKOVÁ, Y., DULOVIČOVÁ, R., SOKÁČ, M.: Determination of the Longitudinal Dispersion Rate in a Flow with a Free Surface in a Prismatic Channel. Part 1: Straight Direct Line. In: Acta Hydrologica Slovaca. Vol. 10, No. 1 2010, ISSN 1335-6291. pp. 35-43

##### Conferences

BOŽÍKOVÁ, J.: Use of Natural Mineral and Curative Water in Slovakia. In: Proceedings of 15<sup>th</sup> Sanhyga 2010 International Conference, Piešťany 2010. ISBN 978-80-89216-35-2. - pp. 11-16.

BRONIŠOVÁ, M., NÁMER, J.: Lessons Learned from the Preparation and Realization of the Sewerage in the Agglomeration of Galanta. In: Proceedings of 6<sup>th</sup> Biennial International Conference on Waste Water 2010, 20.- 22. 10. 2010, Štrbské Pleso. ISBN 978-80-89088-94-2. pp. 234-239.

CHABAL, L., RUSNÁK, D.: Use of a Sewer Pump Station Network. In: Proceedings of 6<sup>th</sup> Biennial International Conference on Waste Water 2010, 20.- 22. 10. 2010, Štrbské Pleso. ISBN 978-80-89088-94-2. pp. 222-227.

DUBOVÁ, V.: Monitoring a Water Supply Network and Seasonal Consumption. In: Proceedings of 13th International Conference on Water, Zlín 2010. 11.- 12.3.2010 Hranice, Czech Republic. ISBN 978-80-254-6368-0. pp. 147-152.

DUBOVÁ, V., TÓTHOVÁ, K.: Seasonality of Drinking Water Consumption. In: Proceedings of 13th International Conference on Drinking Water 2010. 5.-7.10.2010 Trenčianske Teplice. ISBN 978-80-969974-3-5. pp. 303-308.

GALBOVÁ, K.: Landfill Capping, Recultivation and Monitoring. In: Proceedings of International Conference on Water 2010. Water and Health – Water Supply. 1.-2.7.2010 Beladice. ISBN 978-80-227-3314-4. pp. 210-218.

ILAVSKÝ, J., BARLOKOVÁ, D.: Comparison of the Efficiency of Sorption Materials in the Removal of Arsenic from Water, In: Proceedings of 10<sup>th</sup> International Conference on Water 2010. 17.-20.5.2010, Tábor, Czech Republic. ISBN 978-80-254-6854-8. pp. 157-161.

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ILAVSKÝ, J., BARLOKOVÁ, D.: Removal of Nickel with Adsorption Materials. In: Proceedings of 13th International Conference on Drinking Water 2010. 5.-7.10.2010 Trenčianske Teplice. ISBN 978-80-969974-3-5. pp. 263-268.

KRIŠ, J.: Impact of Environmental Advances in a Water Supply. In: Proceedings of ARW, Advanced Water Supply and Wastewater Treatment: a Road to a Safer Society and Environment, 19.-22.5.2010. Lviv, Ukraine.

- KRIŠ, J., ŠKULTÉTYOVÁ, I., STANKO, Š., ADLER, P.: Use of Groundwater Aquifers Overlapping the Borders of States. In: Proceedings of 21st International Scientific and Technical Conference, Water Supply and Water Quality. Poznań, Poland, 2010. ISBN 978-83-89696-33-9. pp. 139-149.
- MAHRÍKOVÁ, I.: Sludge Treatment on Small and Mid-Sized WWTP. In: Proceedings of International Conference, Decentralized Disposal of Waste Waters 22.4.2010. Brno, Czech Republic.
- MAHRÍKOVÁ, I.: Sludge Tanks at a Communal WWTP. In: Proceedings of International Conference, Urban Water 2010, 30.9.-1.10.2010 Velké Bílovice, Czech Republic. ISBN 978-80-86020-71-6. pp. 265-271.
- MAHRÍKOVÁ, I.: Operation of Sludge Tanks in Small and Mid-Sized Waste Water Treatment Plants. In: Proceedings of ARW, Advanced Water Supply and Wastewater Treatment: a Road to a Safer Society and Environment, 19.-22.5.2010. Lviv, Ukraine
- MRNČO, I.: Hydroinformatics-Support Tool of Water Network Management. In: Proceedings of International Conference on Water 2010. Water and Health – Water Supply. 1.-2.7.2010 Beladice. ISBN 978-80-227-3314-4. pp. 119-127.
- PIKOROVÁ, T., HLAVÍNEK, P., PAGÁČOVÁ, P.: Comparison of Two Flat Sheet Membrane Modules Used in an Actual Domestic WWTP. In: Proceedings of ARW, Advanced Water Supply and Wastewater Treatment: a Road to a Safer Society and Environment, 19.-22.5.2010. Lviv, Ukraine
- PIKOROVÁ, T., HLAVÍNEK, P., MATULOVÁ, Z., DRTIL, M., RUSNÁK, D.: Operation of Domestic MBR WWTP with a Membrane Module. In: Proceedings of Fifth International PhD, DLA Symposium 19.-20.10.2009, Pécs, Hungary. ISBN 978-963-7298-34-9. pp. 58-59.
- PIKOROVÁ, T., RUSNÁK, D.: Requirements for a Small WWTP and Operation of a Household WWTP with Membrane Filtration. In: Proceedings of 12<sup>th</sup> International Doctoral Study Conference of VUT Brno, VUT, 24.2.2010. Brno, Czech Republic. ISBN 978-80-214-4042-5.
- RUSNÁK, D.: Appraisal of an Overflow Function. In: Proceedings of 6<sup>th</sup> Biennial International Conference on Waste Water 2010, 20.- 22. 10. 2010, Štrbské Pleso. ISBN 978-80-89088-94-2. pp. 97-102.
- RUSNÁK, D.: Preparatory Plan for the Renovation of Public Sewerage. In: Proceedings of International Conference AQUA 2010 : Water and Health – Waste Water Disposal. 21-23.9.2010 Trenčín. ISBN 978-80-227-3368-7. pp. 11-18.
- RUSNÁK, D.: Recommended Processes of Sewage Renewal, In: Proceedings of 9<sup>th</sup> International Conference on Water Supply, Sewage Systems, Solid Waste. Small Water Works. Alternative Energy Sources. 21.-24.11. 2010, High Tatras, Štrbské Pleso. ISBN 978-80-89385-11-9. pp. 89-97.
- SOKÁČ, M.: Implementation of the Regional Project "Environmental Improvement of the Liptov". In: Proceedings of 6<sup>th</sup> Biennial International Conference on Waste Water 2010, 20.- 22. 10. 2010, Štrbské Pleso. ISBN 978-80-89088-94-2. pp. 20-24.
- SOKÁČ, M., VELÍSKOVÁ, Y., DULOVIČOVÁ, R.: Determination of the Longitudinal Dispersion Rate in Sewer Networks. In: Proceedings of 6<sup>th</sup> Biennial International Conference on Waste Water 2010, 20.- 22. 10. 2010, Štrbské Pleso. ISBN 978-80-89088-94-2. pp. 214-217.
- SOKÁČ, M.: Quantification of Overflow Impacts from CSO on the Quality of Receiving Water. In: Proceedings of International Conference on Hydrological Days 2010. Water in a Changing Environment. 25.-27.10.2010, Hradec Králové, Czech Republic. ISBN 978-80-86690-84-1. pp. 557-563.
- STANKO, Š.: Possible Design of a Sewage System in a Flat Area. In: Proceedings of International Conference on Water 2010. Water and Health – Water Supply. 1.-2.7.2010 Beladice. ISBN 978-80-227-3314-4. pp.138-143.
- STANKO, Š., KRIŠ, J., ŠKULTÉTYOVÁ, I.: Types of Sewer System - Technical and Environmental Advances and Arrangements. In: Proceedings of ARW, Advanced Water Supply and Wastewater Treatment: a Road to a Safer Society and Environment, 19.-22.5.2010. Lviv, Ukraine
- STANKO, Š.: What Type of Sewer System is Suitable for a Sewer System Design. In: Proceedings of International Conference AQUA 2010 : Water and Health – Waste Water Disposal. 21-23.9.2010 Trenčín. ISBN 978-80-227-3368-7. pp. 133-142.
- HOLUBEC, M., STANKO, Š. : Using Mathematic Modelling for a Sewage System with an Emphasis on Climate Change. In: Proceedings of 9<sup>th</sup> International Conference on Water Supply, Sewage Systems, Solid Waste. Small Water Works. Alternative Energy Sources. 21.-24.11. 2010, High Tatras, Štrbské Pleso. ISBN 978-80-89385-11-9. pp. 136-142.
- ŠKULTÉTYOVÁ, I.: Risk of Waste Management Operations. In: Proceedings of International Conference on Water 2010. Water and Health – Water Supply. 1.-2.7.2010 Beladice. ISBN 978-80-227-3314-4. pp.194-199.
- ŠKULTÉTYOVÁ, I.: Waste Management as a System. In: Proceedings of International Conference on Water 2010. Water and Health – Water Supply. 1.-2.7.2010 Beladice. ISBN 978-80-227-3314-4. pp.188-193.
- ŠKULTÉTYOVÁ, I.: Operation of Solid Waste Management. In: Proceedings of 9<sup>th</sup> International Conference on Water Supply, Sewage Systems, Solid Waste. Small Water Works. Alternative Energy Sources. 21.-24.11. 2010, High Tatras, Štrbské Pleso. ISBN 978-80-89385-11-9. pp.173-177.
- TÓTHOVÁ, K., GREGOROVÁ, J., HALUSKA, J.: The Issue of Water Loss Prevention in Water Companies within Cross-Border Cooperation. In: Proceedings of 13th International Conference on Drinking Water 2010. 5.-7.10.2010 Trenčianske Teplice. ISBN 978-80-969974-3-5. pp. 309-314.
- TÓTHOVÁ, KATARÍNA - DUBOVÁ, VANDA : Management of Water Losses in a Public Water Supply System. In: Proceedings of 9<sup>th</sup> International Conference on Water Supply, Sewage Systems, Solid Waste. Small Water Works. Alternative Energy Sources. 21.-24.11. 2010, High Tatras, Štrbské Pleso. ISBN 978-80-89385-11-9. pp. 45-52.

# DEPARTMENT OF BUILDING SERVICES

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

Building services I  
Building services II  
Building services III  
Internal Water Piping  
Internal Drainage  
Heating I  
Heating II  
Design IV  
Design V  
Design VI  
Air Conditioning  
Sanitary Techniques  
Water Delivery and Drainage  
Computer Design Systems  
Measuring and Control I  
Measuring and Control II  
Energy Supply of Buildings  
Excursions  
Building Control Systems  
Special Seminar  
Heating Systems  
Industrial Installations  
Renewable Energy in Technical Equipment of Buildings  
Ventilation and Air Conditioning Systems I  
Fire-Fighting Equipment  
Diploma Seminar

#### Optional Subjects

Technical Equipment  
Sanitary-Technical Equipment  
Heating Systems  
Combustion Theory and Techniques  
Ventilation and Air Conditioning Systems  
Industrial Air Conditioning Systems II  
Sanitation Audit  
Heating Audit  
Ventilation Audit  
Operation of Air Conditioning Systems  
Heat Delivery to Buildings  
Renovation of Building Services  
Indoor Environment of Buildings  
Environmental Audit of Buildings

#### Postgraduate courses

Indoor Environment of Buildings	Petráš
Energy Audit of Buildings	Petráš
Ph.D. Project I, II, III	Petráš
Ph.D. Project IV, V, VI	Petráš
Teaching I – IV	Petráš
Sanitary Installations	Petráš
Heating	Petráš
Ventilation and Air Conditioning	Petráš

## 2.Thesis

### 2.1 Graduate theses

ADAMČÍKOVÁ, G.: Heating in a Residential Building – Biomass Base.  
Supervisor: Kalús, D.

BABÁLOVÁ, V.: Comparison of a Local and Open-Space Ventilation Systems for Canteen Ventilation.  
Supervisor: Boďo, R.

BABINSKÝ, J.: Analysis of Ventilation Systems in Underground Garages for an Office Building.  
Supervisor: Székyová, M.

BALÁŽ, M.: Application of Solar and Geothermal Energy for Heating and Ventilation in a Residential Building.  
Supervisor: Kalús, D.

BARABASOVÁ, A.: Evaluation of Renewable Energy Systems in a Family House.  
Supervisor: Patráš, D.

BENČOVÁ, E.: Design of Underfloor Electric Heating in a Residential Building.  
Supervisor: Koudelková, D.

CINTULOVÁ, E.: Design of Heating and Hot Water Preparation in a Kindergarden. Biomass Base.  
Supervisor: Valášek, J.

DALECKÝ, P.: Design of Gas Boiler Room, and Hot Water Preparation in a Family House. Solar Energy Base,s  
Supervisor: Valášek, J.

ĎURINÍKOVÁ, M.: Evaluation of Selected Indoor Environment Parameters.  
Supervisor: Šabíková, J.

GULÍK, M.: Design of a Heating System in a Residential Building. Water – Water Heat Pump System.  
Supervisor: Fűr, B.

GULÍKOVÁ, V.: Design of a Concept for Biomass Heat Use in a Basic School.  
Supervisor: Takács, J.

HASZNOS, T.: Analysis of Supported Renewable Energy Sources in a Residential Building.  
Supervisor: Kalús, D.

HAČKOVÁ, K.: The Possibilities of a Local Waste Utilization.  
Supervisor: Takács, J.

JANOŠKOVÁ, D.: Project of Liquidation and Utilization of Rain Water Use in an Industrial Area.  
Supervisor: Jánošková, T.

JAROŠOVÁ, I.: Utilization of Solar Energy for Electricity Production.  
Supervisor: Takács, J.

JURÁK, P.: Technical – Economical Evaluation of Heat Pump with Gas Motor Use  
Supervisor: Fűr, B.

KRÁTKA, D.: Cleaning of Waste Water from Solid Areas.  
Supervisor: Peráčková, J.

MUDRONČÍK, T.: Project of Sanitary Renovation in a Semifunctional Building.

Supervisor: Jánošková, T.

ŠTEFANIČKA, M.: Energy Evaluation of a Residential Building.

Supervisor: Petráš, D.

HESEK, M.: Analysis of Energy Sources for Low Energy House.

Supervisor: Kalús, D.

ŠTROBOVÁ, L.: Conceptual Design of an Energy System for Heating and Hot Water Preparation in a Semifunctional Building.

Supervisor: Lulkovičová, O.

PADUŠŇÁKOVÁ, K.: Evaluation of Selected Indoor Environment Parameters in a Hospital.

Supervisor: Šabíková, J.

BARČIAK, J.: Hydronic Control in a Residential Building.

Supervisor: Takáče, J.

BOŽOŇ, O.: Ventilation in an Industrial Building.

Supervisor: Boďo, R.

BUGÁŇ, J.: Calculation and Design of Water Underfloor Heating in a Holiday Resort.

Supervisor: Petráš, D.

FAKTOR, J.: Design of an Automatic Sprinkler System, in a Hall.

Supervisor: Jánošková, T.

FODOROVÁ, J.: Design of a Heat Source for a Residential Building. Biomass Base.

Supervisor: Lulkovičová, O.

CHLEBO, M.: Energy Audit and Hydronic Control of a Heating System.

Supervisor: Petráš, D.

CHLEPKO, S.: Heat Source. Biomass Base.

Supervisor: Takács, J.

JURKA, P.: Calculation and design of a Heat Source – Delivery Station for a Thermal Swimming Pool in Velky Meder.

Supervisor: Takács, J.

KOTÚL, J.: Design of a Low Energy System for Heating for a Basic School. Biomass Base.

Supervisor: Fűri, B.

KOSA, M.: Heating and Cooling of a Semifunctional Building via Heat Pump.

Supervisor: Fűri, B.

KRÁLIK, M.: Application of Energy Systems in a Low Energy Residential Building with Renewable Energy Source Use.

Supervisor: Kalús, D.

LEŠKO, J.: Indoor Environment Technique in a Residential Building.

Supervisor: Petráš, D.

MUDRÁKOVÁ, L.: Ventilation in a Canteen.

Supervisor: Boďo, R.

NEMČEKOVÁ, J.: The Alternatives for Hot Water Preparation in a Residential Buildings.

Supervisor: Peráčková, J.

ORSZÁGHOVÁ, M.: Calculation and Design of a Heat Source for a Senior House. Biomass Base.

SZIKHARDT, M.: Fountain Technology and its Connection to Water and Drainage System.

Supervisor: Valášek, J.

VIDO, M.: Heat Source for a Holiday Resort. Biomass Base.

Supervisor: Lulkovičová, O.

VETRÁK, M.: Design and a Project of a Technology for a Food Court.

Supervisor: Jánošková, T.

ZEMÁNEK, P.: Air Conditioning System in an Office Building.

Supervisor: Székyová, M.

KOVÁČOVÁ, E.: Hydronic Control of a Heating System in a Residential Building.

Supervisor: Petráš, D.

VEREŠ, V.: Air Conditioning in an Operation Hall.

Supervisor: Székyová, M.

## 2.2 Doctoral theses

JANUŠKA, J.: Analysis Hydronic Conditions of Heating Systems in Residential Buildings

Supervisor: Takács, J.

TÓTHOVÁ, V.: Analysis of energy use in the high geothermal energy system for objects intended for planting vegetables and flowers

Supervisor: Takács, J.

BALÁŽOVÁ, I.: Effect of Exposure to Multiple Indoor Environmental Parameters on Human Comfort, Perception and Performance of Office Work

Supervisor: Petráš, D.

KRAJČOVIČOVÁ, B.: Analysis of the Influence of the Air Distribution on Ventilation Efficiency and Energy Efficiency of Indoor Climate Design

Supervisor: Székyová, M.

## 3. Research

### 3.1 Research projects

CEEPUS II – Education without Borders (Lulkovicova)

KEGA – Preparation of Teaching Materials for Building Service Specializations (Lulkovičová) (Project Number: 3/4105/06)

VEGA – Determination of Energy Balance of Building Services Using Renewable Energy as a Base for an Energy Audit, Certificate, and Monitoring (Petráš) (Project Number:1/0730/08)

VEGA – Analysis of Energy and Environmental Measures During Operation of Sanitary Installations and Ventilation Systems in Low Energy Buildings (Peráčková) (Project Number:1/0730/08)

SLOVAK – NORWEGIAN Project: Implementation of Tools and Software for Energy Certification, Audit and Monitoring of Buildings for Slovak Conditions (Petráš) (Project number: SK 0013)

### 3.2 International cooperation

#### Visit of staff members to foreign institutions

ENSI – Energy Saving International AS, Oslo, Norway; D. Petráš

Hansa, AG, Burglengenfeld, Germany  
Geberit, AG, Rottenbrunn, Germany  
GAS, Ltd, Prague, Czech Republic



CVUT – Civil Engineering Faculty, Prague, Czech Republic; D. Petráš, O. Lulkovičová, J. Peráčková, VUT, Brno, Czech Republic; D. Lulkovičová, D. Petráš VUT, Ostrava, Czech Republic, O. Lulkovičová, J. Takács, J. Peráčková, M. Kurčová, J. Šabíková  
 Deutsche Institute für Bautechnik, Berlin, Germany, J. Valášek  
 Czech Association of Civil Engineers, Prague, Czech Republic; J. Valášek, D. Petráš  
 ASHRAE, Winter Meeting, New York, USA; D. Petráš  
 REHVA, Brussels, Belgium; D. Petráš  
 GA – REHVA, Berlin, Germany, D. Petráš  
 Fachhochschule, Pinkafeld, Austria, D. Petráš  
 The Danish Technical University – International Center for the Indoor Environment and Energy, Lyngby, Denmark; D. Petráš, I. Balážová, B. Halvoňová, J. Šabíková  
 UNI, in Seoul, Korea, D. Petráš  
 INNER project, Marua, Portugal, D. Petráš  
 GA – ALA, Tallin, Estonia, D. Petráš  
 GA – SEFI, Aalborg, Denmark, D. Petráš  
 ERSF, Grenoble, France, D. Petráš  
 ENSI, Oslo, Norway, D. Petráš  
 B4 – UNI meeting, Vienna, Austria, D. Petráš  
 Metropolit UNI, Warszawa, Poland, D. Petráš  
 SAE meeting, Dubai, D. Petráš

#### Membership in international professional organizations

ASHRAE – USA, Petráš, D.  
 REHVA – Brussels, Belgium, Petráš, D

## 4. Publications

### Books

BABIÁK, J. - OLESEN, B. W. - PETRÁŠ, D.: Low temperature heating and high temperature cooling. - Lisboa : REHVA, 2009. - 113 p. - ISBN 978-989-8152-02-2.  
 PETRÁŠ, D. - LULKOVIČOVÁ, O. - TAKÁCS, J. - FÜRI, B.: Renewable energy sources for low temperature systems. - Bratislava : Jaga Group, 2009. - 221 p. - ISBN 978-80-8076-075-5. (in Slovak)

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### Textbooks

DAHLSVEEN, T. - MIŠCI, J. - TCHERVILOV, L. - HOLUBOVÁ, I. - GRYTSENKO, N. - TEIGEN, O. - KRAJČÍK, M.: Energetický audit, certifikácia a monitoring budov : Manuály pre softwér. - Bratislava : STU v Bratislave, 2009. - 96 p. - ISBN 978-80-227-3192-8. (in Slovak)  
 PETRÁŠ, D. - KRAJČÍK, M. - MURAN, J. - CHMÚRNÝ, I. - FÜRI, B. - KONKOL', R. - TAKÁCS, J. - KURČOVÁ, M. - PERÁČKOVÁ, J. - SMOLA, A. - ŠABÍKOVÁ, J. - JANUŠKA, J.: Energy audit of the Elementary School Budatínska street No.61. - Bratislava : STU v Bratislave, 2010. - 105 p. - ISBN 978-80-227-3285-7. (in Slovak)

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CVÍČELA, M. – KALÚS, D.: Wall heating and cooling systems suitable for application in low-energy and passive houses. In: TZB Haustechnik. - ISSN 1210-356X. - Vol.18, No. 3 (2010), p. 24-25. (in Slovak)

DAHLSVEEN, T. - PETRÁŠ, D.: Energy audit and certification of buildings 9 part From audit through certification till monitoring. In: TZB Haustechnik. - ISSN 1210-356X. - Vol.17, No. 9 (2009), p. 16-19. (in Slovak)

EHRENWALD, P.: Intelligent buildings from the view of theory and practice. In: Eurostav. - ISSN 1335-1249. - Vol.16, No.3 (2010), p. 13-15. (in Slovak)

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KALÚS, D. - CVÍČELA, M.: Energy systems of walls suitable for application in passive houses. In: Stavebnictví. - ISSN 1802-2030. - Vol. 4, No. 1 (2010), p. 52-54. (in Slovak)

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- ŠABÍKOVÁ, J.: Environmental Evaluation Principles as a Part of Building Energy Evaluation. In: Vykurovanie 2010. Energetická efektívnosť systémov výroby, distribúcie a odovzdávania tepla : Zborník prednášok z 18. medzinárodnej konferencie. Ľubovňa, SR, 1.- 5. 3. 2010. - Bratislava : Slovenská spoločnosť pre techniku prostredia, 2010. - ISBN 978-80-89216-32-1. - p. 59-61. (in Slovak)
- ŠTEFANIČKA, F. - TAKÁCS, J.: Rated operating thermal spa in the Veľký Meder. In: Vykurovanie 2010. Energetická efektívnosť systémov výroby, distribúcie a odovzdávania tepla : Zborník prednášok z 18. medzinárodnej konferencie. Ľubovňa, SR, 1.- 5. 3. 2010. - Bratislava : Slovenská spoločnosť pre techniku prostredia, 2010. - ISBN 978-80-89216-32-1. - p. 209-212. (in Slovak)
- TAKÁCS, J.: Are we so rich we do not need geothermal energy source? In: Vodovody, kanalizácie, odpady. Malé vodné diela. Alternatívne zdroje energie. 8. : Zborník z konferencie s medzinárodnou účasťou. Vysoké Tatry, Stará Lesná, 30.11.-2.12.2009. - : Elsewa, s.r.o., 2009. - ISBN 978-80-89385-06-5. - nestr. (in Slovak)
- TAKÁCS, J.: Evaluation of performance and quality of district heating and large systems. In: Vykurovanie 2010. Energetická efektívnosť systémov výroby, distribúcie a odovzdávania tepla : Zborník prednášok z 18. medzinárodnej konferencie. Ľubovňa, SR, 1.- 5. 3. 2010. - Bratislava : Slovenská spoločnosť pre techniku prostredia, 2010. - ISBN 978-80-89216-32-1. - p. 173-176. (in Slovak)
- TAKÁCS, J.: Modernization of residential exchange station. In: Komplexná obnova bytových domov 2009 : III. medzinárodná konferencia. Financovanie a programy na úsporu energie. Podbanské, 18.-19.11.2009. - : Združenie pre podporu obnovy bytových domov, 2009. - ISBN 978-80-227-3195-9. - p. 118-123. (in Slovak)
- TAKÁCS, J. - ŠTEFANIČKA, F.: Possibilities of using heat exchangers in recreational facilities using geothermal energy. In: Sanhyga 2010 : 15.medzinárodná konferencia/Piešťany, 14.-15.10.2010. - Bratislava : Slovenská spoločnosť pre techniku prostredia, 2010. - ISBN 978-80-89216-35-2. - p. 135-142. (in Slovak)
- TAKÁCS, J.: Use of geothermal energy for air conditioning systems in recreational facilities. In: Vetrание a klimatizácia 2010 : Zborník prednášok z 12.konferencie.7.-8.6.2010. - Bratislava : Slovenská spoločnosť pre techniku prostredia, 2010. - ISBN 978-80-89216-33-8. - p. 75-78. (in Slovak)
- TÓTHOVÁ, V.: Utilization of geothermal energy in heating systems of greenhouses. In: Vodovody, kanalizácie, odpady. Malé vodné diela. Alternatívne zdroje energie. 8. : Zborník z konferencie s medzinárodnou účasťou. Vysoké Tatry, Stará Lesná, 30.11.-2.12.2009. - : Elsewa, s.r.o., 2009. - ISBN 978-80-89385-06-5. - nestr. (in Slovak)

VALÁŠEK, J.: Distribution of hot water from galvanized pipes: saving or gambling? In: Sanhyga 2010 : 15.medzinárodná konferencia/Piešťany,14.-15.10.2010. - Bratislava : Slovenská spoločnosť pre techniku prostredia, 2010. - ISBN 978-80-89216-35-2. - p. 59-62. (in Slovak)

VALÁŠEK, J.: Energy certification of buildings taking into account the need for energy for production of hot water. In: Energy in Buildings on Blue Planet : 3rd Visegrad Engineering Conference. Zuberec, Slovak Republic, October 2010. - : Slovenská komora stavebných inžinierov, 2010. - ISBN 978-80-89113-64-4. - p. 49-52. (in Slovak)

VALÁŠEK, J. – NAGY, J.: Need energy for hot water. In: Energy Efficiency and Energy Certification of Buildings. - Bratislava : Jaga Group, 2010. - ISBN 978-80-8076-060-1. - p. 150-166. (in Slovak)

VALÁŠEK, J.: Optimal design of hot water in buildings. In: Nákladovo optimálne opatrenia na úsporách energie v budovách.Teória a konštrukcie pozemných stavieb : 17. konferencia s medzinárodnou konferenciou.Bratislava,24.3.2010. - Bratislava : BB Print,s.r.o., 2010. - ISBN 978-80-969158-7-3. - p. 72-74. (in Slovak)

VALÁŠEK, J. – NAGY, J.: Reducing energy needs for hot water. In: Energy Efficiency and Energy Certification of Buildings. - Bratislava : Jaga Group, 2010. - ISBN 978-80-8076-060-1. - p. 267-270. (in Slovak)

# DEPARTMENT OF ARCHITECTURE

Department Head  
Assoc. Prof. Ing. Elena Dohňanská, PhD.

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## 1. Education

### 1.1 Graduate study

#### Obligatory subjects

History of Architecture and Civil Engineering  
History of Architecture and Art 1  
Typology 1  
Design Studio 1  
Design Studio 2  
Composition and Colour in Architecture  
Typology 2  
Bachelor's Work  
Typology 4  
Typology 5  
Design Studio 5 (Civic Buildings)  
History of Architecture and Art 3

#### Optional Subjects

Typology 3  
Renovation of Buildings and Preservation of Monuments 1  
Urbanism  
Drawing and Modelling  
History of Architecture and Art 2  
Drawing and Composition  
Colour in Architecture  
Urbanism 2  
Internship  
Restoration and Preservation of Monuments 2  
Thesis  
Special Seminar  
Philosophical, Aesthetic and Compositional Principles in Architectural Design  
History of Urban and Rural Settlements  
History of Drawing and Sketching  
Landscape Design

#### Recommended subjects

Ecological Design in the Solar Age  
Interior Design 2  
Colour in Architecture 2

### 1.2 Postgraduate courses

Doctoral Degree Study Theory and Construction of Building Structures  
Typology  
Restoration and Preservation of Monuments

## 2. Thesis

### 2.1 Bachelor's Work

13 Bachelor's Works

### 2.2 Graduate Thesis

BAJAN, M.: Aquapark  
Supervisor: Kuráň, J.  
BODÓVA, A.: Piešťany Gallery  
Supervisor: Sedlák, P.  
BOTH, G.: Ecumenical Centre  
Supervisor: Sedlák, P.

BYSTRÍČAN, D.: Zlaté Piesky Leisure Time Centre  
Supervisor: Liščák, J.  
DEBRECKÝ, P.: Multifunctional Centre  
Supervisor: Liščák, J.  
FRÝVALDSKÝ, I.: Low-Energy Housing  
Supervisor: Nádaská, Z.  
FLOREKOVÁ, M.: Staromestská Multifunctional Structure  
Supervisor: Bauer, P.  
KAŠIAROVÁ, E.: B. Štiavnica Wellness Centre Using Geothermal Energy  
Supervisor: Húsenicová, J.  
KAŇOVSKÝ, L.: Modern Art Gallery  
Supervisor: Kuráň, J.  
KOREŇ, M.: Yacht Club  
Supervisor: Kuráň, J.  
KELLEROVÁ, R.: Office Building  
Supervisor: Kuráň, J.  
KISS, Š.: Multifunctional Building in Bratislava  
Supervisor: Sedlák, P.  
KRALOVIČ, J.: Staromestská Multifunctional Structure  
Supervisor: Bauer, P.  
MAJDOVÁ, D.: Agrotourist Centre  
Supervisor: Turček, I.  
MATUSOVÁ, S.: Gallery  
Supervisor: Kubišová, M.  
MEĽO, M.: Martin Bus Station  
Supervisor: Grandtnerová, A.  
PISARČÍK, T.: Gallery  
Supervisor: Nádaská, Z.  
PRISTAŠOVÁ, V.: Chorvátsky Grob Thermal Spa  
Supervisor: Grandtnerová, A.  
RAFAJ, P.: Hippo Therapeutic Farm  
Supervisor: Dohňanská, E.  
STRAPEK, P.: Low-Energy Housing  
Supervisor: Dohňanská, E.  
ŠMAHELOVÁ, K.: Agrotouristic Centre  
Supervisor: Šimkovičová, V.  
ŠVANCÁR, J.: Martin Tomčany Airport  
Supervisor: Grandtnerová, A.  
ŠVANTNEROVÁ, T.: Gallery  
Supervisor: Šimkovičová, V.  
TIMKOVÁ, B.: Agrotouristic Centre  
Supervisor: Turček, I.  
NABOUTOVÁ, K.A.: Příbovce Cultural Centre  
Supervisor: Dohňanská, E.  
VALOVIČOVÁ, E.: Multifunctional Building  
Supervisor: Kuráň, J.  
VARGOVÁ, K.: Funeral Home  
Supervisor: Sedlák, P.  
KAŇOVSKÝ, L.: Gallery  
Supervisor: Mudrončík, M.



### 3. Research

#### 3.1 International Cooperation

VŠB-TU Ostrava, Faculty of Civil Engineering

ČVUT-Czech Technical University in Prague, Faculty of Civil Engineering

#### Visits of Staff Members to Foreign Institutions

Dohňanská, E.

Húsenicová, J.

#### 3.2 Workshops

International Workshop: "Crossroads of Architecture", Prague 15-19.09.2010, Nádaská, Z., Tibenská, M., Pavle, M., and 5 Students ( Building Structures and Architecture Study Programme )

### 4. Publications

#### Journals

ORAVCOVÁ, K., GULDAN, M.: Ecological Materials. In: Stavebníctvo a bývanie. - ISSN 1336-0191. - Vol.12, August (2010), pp. 108-111.

ŠIMKOVIČOVÁ, V., ORAVCOVÁ, K., GULDAN, M.: Viticulture Architecture. In: Stavba. - ISSN 1335-5406. - Vol.13, No.4 (2010), pp. 32-35.

#### Conferences

BÍZIK, L.: Restoration and Revitalization of the Industrial Architecture of the First Half of the 20th Century in Bratislava In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 88-93.

CHMELÍK, V., BAUER, P.: Extension of the Funeral Home in Jacovce. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 68-75.

GRANDTNEROVÁ, A., MUNDIER, R.: Reconstruction of the Kočovce Manor House. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 98-102.

GULDAN, M.: Wineries in the Small Carpathians. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 114-118.

HÚSENICOVÁ, J.: More Sustainable Municipal Land Use Design. In: International conference on Landscape Ecology : Book of abstracts. Brno, CR, 3.-6.9.2010. - Brno : Mendel University in Brno, 2010. - ISBN 978-80-254-8064-9. - p. 32.

HÚSENICOVÁ, J.: New Factors in Rural Land Development in the Slovak Republic. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 21-27.

KAPALOVÁ, G.: Windows in Monument Restorations. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 76-78.

KRÁLOVÁ, Z.: Ways of Treatment of the Folk Architecture Buildings While Maintaining Their Authenticity and Monumental Values. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 189-193.

KRÁLOVÁ, Z.: The Contribution of Folk Architecture to the Tourism Revival in the Countryside. In: Man, Buildings and Spatial Planning 4 : Colloquium, 31.5. 2010. - Prague : ČVUT, 2010. - ISBN 978-80-01-04538-1. - pp. 114-120.

KUBIŠOVÁ, M., NÁDASKÁ, Z.: Leisure Activities - Sandberg. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 66-67.

KUBIŠOVÁ, M., NÁDASKÁ, Z.: Manor House Kočovce - STU Training Centre with Accommodation - Additional Building, In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-227-3127-0. - pp. 58-60.

KURÁŇ, J.: Family Housing Proposals. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1.-pp. 47-54.

NABOUTOVÁ, K.A.: Global Experience with Social Housing and the Use of Certain Low Energy Elements in Social Housing in Different Climates. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1.-pp. 43-46.

ORAVCOVÁ, K.: South Moravian Winery Buildings. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 111-113.

ORSZÁGHOVÁ, K.: Ecological Inspiration for Roofs in the Countryside. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 167-172.

PIJÁK, O.: Urban Sprawl -How to Regulate It with Taxes. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 28-30.

PRIBYLINEC, P., NÁDASKÁ, Z.: Low-Energy Information Center - Support for Low-Energy Thinking in Architecture. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 131-137.

SIVONĚ, P.: Aspects of Rural Regeneration in the Western Tatras. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 194-199.

TIBENSKÁ, M. : Social Housing - Gipsy Slums. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 59-61.

VANEK, S.: Let's Build Economically and Ecologically, Let's Build with Clay. In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 173-178.

WIRTHOVÁ, P.: Development of Cyclotourism (Cycling System as a Part of the Transport Infrastructure of the Slovak Countryside). In: Proceedings of International Scientific Conference on Urban, Architectural and Technical Aspects of Rural Renewal IX.: Bratislava, SR, 22.4.2010. - Bratislava STU SvF, 2010. - ISBN 978-80-89113-65-1. - pp. 37-40.

## 5. Activity in the Field Of Arts

Pribiš, M., Czech National Bank Design Competition: Commemorative Silver Coin, 200<sup>th</sup> Anniversary of K. J. Erben Prague, February 2010, Award

Pribiš, M., Czech National Bank Design Competition: Commemorative Silver Coin, 100<sup>th</sup> Anniversary of Flight of J. Kašpar, Prague, March 2010, Award

Pribiš, M., Czech National Bank Design Competition: Commemorative Silver Coin, 100<sup>th</sup> Anniversary of J. Trnka, Prague, October 2010, Award

Řehák, I., International Medal Exhibition: Bronze Medal, Tampere, June 2010

Řehák, I., Czech National Bank Design Competition: Commemorative Silver Coin, 500<sup>th</sup> Anniversary of J. Melantrich from Aventinum, April 2010, Award

Řehák, I., Czech National Bank Design Competition: Commemorative Silver Coin, 150<sup>th</sup> Anniversary of A. Mucha, 2010, Award

Řehák, I., Czech National Bank Design Competition: Commemorative Silver Coin: 600<sup>th</sup> Anniversary of Construction of the Prague Astronomical Clock, 2010, Award

Řehák, I., Slovak National Competition: Collector's Silver Coin, Protection of the Landscape and Nature – National Park Poloniny, January 2010

Nádaská, Z., Artist Miloš Balgavý Exhibition – Architectural Design of the Exposition, Miloš Alexander Bazovský Gallery Trenčín, September – October 2010

Kubišová, M. (tutor), Sedlák, I. (student), Competition: "Give a Chance to Young Talent", Design of a Family House, 1<sup>st</sup> prize, May 2010

# INSTITUTE FOR FORENSIC ENGINEERING

Department Head  
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## 1. Education

Specialized courses for experts have been provided by the Institute for Forensic Engineering since 1999 in accordance with a program approved by the Scientific Council of the Institute. Experts in property valuation lecture on technical and economic subjects. After approval of the study program, the Faculty of Civil Engineering of the Slovak University of Technology as an expert institute was charged with providing specialized courses in the Building Industry field (No. POA: 0473/2009/392/1) and specialized courses (No. POA: 0473/2009/392/2) concerning the performance method of expert activities (experts minimum) by the Ministry of Justice of the Slovak Republic. The Institute also provides specialized courses (No. POA: 0473/2010/113/1) "Improvement of Experts".

### 1.1 Graduate study

#### Optional subjects

Basics of Legal Expertise  
Real Estate Valuation

### 1.2 Postgraduate Courses

Specialized courses in the Building Industry field, 450 hours  
Specialized courses concerning the performance method of expert activities, 30 hours  
Specialized courses "Improvement of Experts", 20 hours

#### Obligatory subjects

Basics of Legal Expertise  
Basics of Civil Law  
Basics of Criminal Law  
Basics of Commercial Law  
Methodology of Expert Opinions  
Building Structures  
Building Materials and Conformity to Certification  
Land Registry  
Transport Engineering  
Building Physics  
Planning and Technology of Buildings  
Soil Mechanics, Foundations and Mining Work  
Analysis of Building Structures  
Real Estate Valuation Theory  
Evaluating Business Property  
Real Estate Valuation According to Previous Price Legislation  
Real Estate Value Estimation  
Building Act  
Water Construction  
Real Estate Valuation, Restitution  
Real Estate Valuation, Foreign Approach  
Defects in Buildings and Their Diagnosis  
Estimation of the Value of Construction and Design Work  
Automated Engineering Work

## 2. Thesis

### 2.1 Doctoral thesis

NOVÁČIKOVÁ, J.: Control and Testing Activities in the Additional Thermal Protection of Envelope Structures.  
Supervisor: Nič, M.

HUDCOVSKÁ, J.: Development of Real Estate Values in the Years of 1990-2009 in Selected Regions of the Slovak Republic in the Context of Socio-Economic Reforms.  
Supervisor: Nič, M.

## 3. Research

### 3.2 International cooperation

VUT Brno, Czech Republic

## 4. Other activities

### 4.1 Commercial Activities for Firms and Institutions

The Institute provides expert opinions in the fields of Building Structures, Real Estate Valuation, Cost Estimates of Constructions and Designs, Building Constructions and Statics. Clients include:

District Court in Galanta  
District Court in Komárno  
Regional Court in Bratislava  
District Court in Trenčín  
District Court in Nitra  
Hydromeliorácie, Inc., Bratislava  
Land Registry in Liptovský Mikuláš  
The Arbitration Court of the Slovak Chamber of Commerce

## 5. Publications

### Parts of Books

NIČ, M. – MELEN, V. Z. W. – BÓB, J.: Chapter No. 4: Slovak Republic, pp. 448-458. In: Gelbtuch, H. C.: Real Estate Valuation in Global Markets, Appraisal Institute 2010, ISBN 978-1-935328-12-4, 617 pp.

### Journals

GREGUŠOVÁ, S.: Expert Opinion for Voluntary Auction of Real Estate. In: Almanach znalca. - ISSN 1336-3174. - Vol. 8, No. 4 (2009), pp. 8-11. (in Slovak)

NOVÁČIKOVÁ, J. - FRAŠTIA, M. - NIČ, M.: Evenness of Measurement of Facades of Apartment Blocks. In: Almanach znalca. - ISSN 1336-3174. - Vol. 9, No. 1 (2010), pp. 24-28 (in Slovak)

SKÁKALA, P.: An Expert Award Should Be Paid. In: Almanach znalca. - ISSN 1336-3174. - Vol. 9, No. 2 (2010), pp. 10-12 (in Slovak)

SOJKOVÁ, V. - SEDLÁČEK, M.: MiniPlan - The Software that Creates Floor Plans as You Measure. In: Almanach znalca. - ISSN 1336-3174. - Vol. 9, No. 2 (2010), pp. 15-18 (in Slovak)

## Conferences

CICANIČ, M.: Renovation of the Baroque Wooden Roof of the Palfy Mansion in Malacky. In: Junior Forensic Science Brno 2010 : 2<sup>nd</sup> Conference of PhD Study. Brno University of Technology, Czech Republic, ISBN 978-80-214-4090-6 (in Slovak)

GREGUŠOVÁ, S.: Comparison of Pore Structure of Selected Types of Bricks. In: Junior Forensic Science Brno 2010 : 2<sup>nd</sup> Conference of PhD Study. Brno University of Technology, Czech Republic, ISBN 978-80-214-4090-6 (in Slovak)

GREGUŠOVÁ, S. - UNČÍK, S.: Comparison of the Sorption Properties of Selected Types of Burnt-Clay Brick. In: Construmat 2010: Proceedings of 16<sup>th</sup> International Conference. Kočovce, SR, 2.-4.6.2010. - Bratislava: STU in Bratislava, 2010. - ISBN 978-80-227-3297-0. pp. 313-316 (in Slovak)

KAREL, J.: Common Rental Value of Flats/Apartments. In: Junior Forensic Science Brno 2010: 2<sup>nd</sup> Conference of PhD Study. Brno University of Technology, Czech Republic, ISBN 978-80-214-4090-6 (in Slovak)

MAGULOVÁ, L.: The Development of Building Land Prices in the Slovak Republic. In: Junior Forensic Science Brno 2010: 2<sup>nd</sup> Conference of PhD Study. Brno University of Technology, Czech Republic, ISBN 978-80-214-4090-6 (in Slovak)

URBANOVSKÝ, P.: The Relationship between Rent and the General Value of Selected Buildings. In: Junior Forensic Science Brno 2010: 2<sup>nd</sup> Conference of PhD Study. Brno University of Technology, Czech Republic, ISBN 978-80-214-4090-6 (in Slovak)

# DEPARTMENT OF LANGUAGES

Department Head  
PhDr. Dagmar Špíldová

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## 1. Education

### 1.1 Graduate study

#### Optional Subjects

English  
German

### 1.2 Postgraduate courses

Ph.D. courses in advanced English and German.  
UNICert – ESP certificate courses in English and German.

## 2. Research

### 2.1 Research projects

Lifelong Learning Programme 2007-2013, Leonardo da Vinci. Research team leader: Kristin Brogan, Recipients: D. Špíldová, V. Lesňáková (LLP/LdV/TOI/2007/IRL-501 VOCAL-VOCAL LdV)

### 2.2 International cooperation

British Council, Bratislava, Slovakia  
University of Washington, Washington, USA  
Institute of Technology, Tralee, Ireland

## 3. Publications

#### Parts of Books

FILIPOIU, T.: Giving a Presentation. In: Teaching of Foreign Languages in the 21<sup>st</sup> Century, Bratislava 2010, pp. 84-88 (in Slovak)

PÁLOVÁ, A.: On the Concepts of Technical Communication. In: Teaching of Foreign Languages in the 21<sup>st</sup> Century, Bratislava 2010, pp. 186-188 (in German)

ŠPILDOVÁ, D.: Teaching ESP at Technical Universities: Problems and Strategies. In: Teaching of Foreign Languages in the 21<sup>st</sup> Century, Bratislava 2010, pp. 130-134

#### Thesis

PÁLOVÁ, A.: Fachsprache im akademischen Bereich – I. vyd. - Bratislava 2010, 126 pp. (in German)

#### Journals

NĚNIČKOVÁ, J.: Competition – Win a Trip to England – Friendship - February 2010,  
Published by: FLP for the SR and the CR

NĚNIČKOVÁ, J.: Abraham Lincoln Presidential Library and Museum - Friendship – February 2010,  
Published by: FLP for the SR and the CR

NĚNIČKOVÁ, J.: Abraham Lincoln - Friendship - February 2010,  
Published by: FLP for the SR and the CR

NĚNIČKOVÁ, J.: When Love Hurts, It is Not Love – Friendship – February 2010,  
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Volume: 13, No. 1 (2010), pp. 90-92

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## **Editing**

1. Gambrill, D.: Annual Report 2009
2. Gambrill, D.: Journal of Civil Engineering  
Volume XVIII  
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2010/2  
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2010/4

## **Conferences**

Hoboth, K.: Teaching Technical Language in Bilingual Circumstances, In: Teaching of Foreign Languages in the 21st Century  
ISSN 1335-6445  
Bratislava, Ekonóm 2010 (in Slovak)

# DEPARTMENT OF PHYSICAL EDUCATION

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PaedDr. Ján Masarovič

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E-mail: jan.masarovic@stuba.sk

## 1. Education

### 1.1 Graduate study

#### Optional Subjects

Aerobics  
Basketball  
Swimming  
Volleyball  
Football  
Skiing  
Bodybuilding  
Water Sports /Kayaking, Canoeing/  
Tennis  
Squash  
Floorball  
Hiking  
Aquagymnastics

#### Recommended subjects

swimming courses  
skiing courses  
white water rafting  
cross-country skiing  
physical fitness exercises  
cardio-vascular fitness

## 2. Research

### Cooperation

The Faculty of Physical Education and Sports, Comenius  
University, Bratislava

# DEPARTMENT OF HUMANE SCIENCES

Department Head  
Ing. Katarína Heretiková, PhD.

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E-mail: katarina.heretikova@stuba.sk

## 1. Education

### 1.1. Graduate Study

#### Obligatory subjects

Basic Law  
Civil Law  
Construction and Commercial Law  
Construction and Commercial Law  
Construction and Land Law  
Entrepreneurship Law  
Environmentalism  
Geoecology  
History of Civil Engineering  
History of Civil Engineering & Surveying  
Land Law  
Macroeconomics  
Philosophy  
Political Science  
Public Administration

#### Optional subjects

Commercial Law  
Construction Law  
Engineering Ethics  
Environmental Law  
Globalization  
Sociology

## 2. Research

### 2.1. Research Projects

Tempus-Tacis Joint European Project 25186-2004: FRELP – Master's Degree in Environmental Law and Policies in the Russian Federation, Š. Huszár

### 3.2 International cooperation

#### Visit of staff members to foreign institutions

- Tambov State Technical University, Tambov, Russian Federation  
- Czech Technical University, Prague, Czech Republic

## 4. Publications

### Books

ŠPIRKOVÁ, D. – ZAJACOVÁ, J.: Real Estate Market - Financial and Legal Instruments. Bratislava : STATIS, 2010. - 167 pp. - ISBN 978-80-85659-62-7 (in Slovak)

### Part of Books

RYBÁRIK, J.: Humanities and the Social Sciences and Humanitarian Education for Technical Intelligence in the Globalization Process.. In: The Humanities and Their Importance in the Education and Development of the Core Competencies of Technical University Students: Proceedings of refereed scientific papers in Conference with International Participation at 20th Anniversary of the Department, Košice : University of Technology, Košice, Department of Social Sciences, 2010. - ISBN 978-80-553-0523-3. - pp. 228-233 (in Slovak)

ZAJACOVÁ, J.: Legislative Terms of the Rental of Agricultural Land in Slovakia. In: Urban Investments. Bratislava: STATIS, 2010. - ISBN 978-80-85659-57-3. - pp. 161-166

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HERETIKOVÁ, K.: Changes in the Structure of Society - Formation of a Knowledge-Based Economy. In: Social Changes as a Result of Globalization, International Colloquium, Bratislava, 14.10.2010. Bratislava: STU in Bratislava, Faculty of Civil Engineering, 2010. - pp. 10-14 (in Slovak)

HUSZÁR, Š.: The Effects of the Global Crisis and Possible Outcomes. In: Social Changes as a Result of Globalization, International Colloquium, Bratislava, 14.10.2010. Bratislava: STU in Bratislava, Faculty of Civil Engineering, 2010. - pp. 24-26 (in Slovak)

KOPŠOVÁ, O.: Construction Contracts and the Extent of Liability for Damages. In: Social Changes as a Result of Globalization, International Colloquium, Bratislava, 14.10.2010. Bratislava : STU in Bratislava, Faculty of Civil Engineering, 2010. - pp. 27-32 (in Slovak)

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