



ANNUAL REPORT

2014



SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA
FACULTY OF CIVIL ENGINEERING

2014

ANNUAL REPORT

of the Faculty of Civil Engineering

Bratislava

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INTRODUCTION

The activities of the Faculty are ruled by Act No. 131/2002 Coll., on universities, by the Statute of STU, the Statute of the Faculty of Civil Engineering of STU and other principal documents of the Faculty, including the Long-Term Development Goals of the Faculty. An essential and inherent part of the process of evaluating the Faculty is also reassessing whether the Faculty's current administration is meeting the primary tasks and aims which have been incorporated in the document "The Long-Term Development Goals of the Faculty of Civil Engineering of STU in Bratislava from 2011 to 2015" with specified goals for the year 2014.

In accordance with the Bologna Declaration, **the studies** at the Faculty of Civil Engineering have three levels that implement the credit system for assessment. The instruction is realized in 30 study programs with the following structure: 8 at the bachelor level, 13 at the engineering level and 9 at the doctoral level. The offer of study programs for the academic year 2014/15 did not change.

In the process of the admission of students for bachelor studies, the entrance examination has been omitted since the academic year 2012/13. In addition, the Faculty of Civil Engineering organized a second round of the entrance examinations for bachelor and engineering studies in the assessed year. In spite of this fact, we again noticed a slight decline of students enrolled in the first year of the bachelor as well as the engineering studies. The number of graduates at the bachelor and doctoral study levels declined, while the number of graduates at the engineering level increased. The percentage of students who successfully completed the last year of the bachelor and engineering levels remained balanced.

A long-term positive trend is the number of students who achieve excellent study scores as well as the number of students of the Faculty of Civil Engineering who take part in various competitions organized by the commercial sector and who receive numerous awards. We managed to increase the number of students who went to study abroad, but the number of foreign students at the FCE is consistently low (2.6% of the number of students). One of the Faculty's goals is to increase the number of foreign students as well as the number of students of the Faculty of Civil Engineering who will take advantage of student mobility programs.

The Faculty of Civil Engineering applies various tools to monitor the teaching process. The Faculty regularly organizes

an anonymous evaluation of the teaching process by the students. In the previous semester 44% of the students took part in this anonymous survey. We require the lecturers to consider this information and respond to the students by an email sent to all of them. The students said they appreciated this activity at several meetings. They also appreciated the exhibition of their dissertations and inspections at their classes (a total of 262 this academic year).

The complex accreditation of the Faculty is continuing in the academic year 2014/15. The documents for the complex accreditation were sent to the accreditation committee in May 2014. A decision on conferring the right to award academic degrees for a new structure of study programs from the Ministry is expected by June 2015. There were 11 bachelor study programs submitted for the accreditation. The number of bachelor study programs has increased; however, some of them are temporary, so that they can enable our current students to complete their studies with a minimum amount of amendments. It is assumed that within a short period after the complex accreditation is finished; the number of study programs will be reduced to six. There were 13 study programs at the engineering level, including temporary ones submitted for the accreditation, but their number should be reduced to 11 after the accreditation. There are 9 study programs at the doctoral level, and their number will be maintained.

In compliance with the provisions of the Act on Higher Education, creative scientific and research work is an integral part of the university's educational activities. Over the long run **the strategy of the scientific-research work** of FCE, STU in Bratislava is based on the national policy on science as well as the predicted European and world trends in civil engineering and geodesy. The bodies of the Faculty have discussed, and the Scientific Board has approved, a new principal research orientation, while considering the condition of the experimental bases of the departments, the development of which was a priority for achieving a higher standard of outcomes. In the field of scientific-research activities, the Faculty of Civil Engineering will aim at intelligent construction and transportation systems, modern materials and constructions, modeling the processes of the internal environments of buildings, protection of the environment and renewable energy sources, automatic control systems in civil engineering, the safety and reliability of constructions, optimizing plans, exploitation of hydraulic structures and their interactions with the environment, and integrated protection from hydrospheric extremes, including the monitoring

of global and regional changes to the environment. The Faculty, through their employees and partners, has taken an active part in the creation of a transnational concept and state scientific policy – The strategy of research, development and innovations (RIS3). They have striven to incorporate the key issues of civil engineering and water management in the conceptual materials which are being prepared. The Faculty constantly strives to disseminate information to the practice by the creation and updating of international, European and domestic norms, as well as the realization of tasks requested by companies or institutions.

In 2014, research teams of the Faculty submitted a total of 64 new projects; however, final decisions about many projects submitted in 2014 have not been made yet. The Faculty has been working on 67 projects – out of that number, 42 were VEGA, 1 KEGA, 22 APVV, and two grant projects from the Ministry of Culture. Out of the 67 projects, 35 were completed in 2014 (19 VEGA projects, 13 APVV projects, 1 KEGA and 2 grant projects from the Ministry of Culture). The total amount of funding from the national budget for these projects was 1.3 million Euros.

Within the framework of the Operational Research and Development Program, the Faculty is involved in a number of university projects aimed at the field of diagnostics of deformations of the Earth's surface in Slovakia by the application of satellites, gravimetric and tropospheric measurements, the development of methods for the excavation of high-volume energy wells, the development of accumulative vacuum tanks, and the creation and development of environmental technologies in the flood protection of settlements in the region of the Small Carpathians. Projects are also aimed at the development of integration systems for the simulation of drain processes, the applied research of methods for the determination of climate and hydrological design variables, and the development of intelligent technologies for the use of electronics and computation in the systems and services of constructions. The Faculty devoted a large part of the year to the realization of tasks of the University Scientific Park and other projects funded from the Structural Funds (SF), receiving more than 7.5 million Euros for construction works and laboratory equipment.

The Presidium of the Faculty, along with the Scientific Board of the Faculty, has recommended diversifying the Faculty's research activities and focusing on themes that are a priority from the point of view of the EU and SR (e.g., environmental, energy, and transportation infrastructure issues and efficiency in the production and operation of constructions). At the same time it is necessary to improve the care of the Faculty's young scientific workers; therefore, the program of support for young researchers in the form of centrally subsidized postdoctoral positions has continued. Systematic research work substantiated by publications is one of the primary conditions for the success of the Faculty and the professional growth of its employees.

Therefore, the Presidium of the Faculty strives at all control levels to ensure favorable conditions for creative work, including publishing work.

Due to the activities of its employees, FCE, STU is currently participating in all the significant EU programs, including TEMPUS, SOCRATES, and ERASMUS+, but we also have to mention other international activities, especially the CEEPUS II program and bilateral programs based on our employees' contacts with foreign partner universities. A total of 16 projects within various forms of EU framework programs were submitted in 2014. The number of applications has been positively perceived. In 2014, the Faculty obtained 150,000 Euros for international projects and projects of the State Fund.

The Faculty has to extensively present its activities, even within our own country. Year by year the role of **Public Relations** has become more important in informing the public about the range of study programs at the Faculty, our graduates' job prospects, and the promotion of the civil engineering professions. In accordance with the Long-Term Goals of the Development of the Faculty of Civil Engineering, the Faculty's Public Relations activities cover the most fundamental areas, including the promotion of studying at STU, student life, representing the Faculty at trade fairs and professional and scientific events, activities of the Industrial Board, competitions, media activities, social events, and the care of its employees.

In the previous year the Presidium of the Faculty made, besides the teaching process, **improving the standard of services provided to the students** its priority. An opportunity was thereby provided to renovate the classrooms and the network's infrastructure and to equip several classrooms with data projectors. Launching the operation of the Plotter and Duplication Center and the replacement of multimedia equipment in the B101 lecture hall belong among these activities as well. Wi-Fi is now available in the classrooms in block B, where most classes are held, the atrium, the Faculty library, and the lecture halls. The students can connect to the Web in these rooms without using any cables in case they need to use their notebooks. The students can also consult on a daily basis with the professionals from the Center of Information Technologies of the Faculty. The computer classrooms are visited by an average of 1,500 students per week, i.e., more than 40,000 students per year.

The arrangement of specialized zones in the library for notebooks to be connected to the Internet has enhanced the capacity of the reading room and the comfort of its users. This has resulted in higher attendance in the Library and Information Center of the FCE, STU, with students spending longer periods of time there on average. The modernization of the library and its higher quality services has had a positive impact on attendance at the library's reading room, which steadily increases every year. There was a continuing trend of increased attendance in 2014 as well, and the number of visitors has reached almost 72,000

per year. The increased attendance at the library proves that the realization of the modernization project of the academic library at the Faculty of Civil Engineering STU has been successful and that the library has become a vital center for education and the meaningful use of free time during breaks between classes. However, it must be noted that if the increased rate of attendance and interest from the students continues, it will be necessary to find more room for an extension of the library.

Many projects for the **complex reconstruction** of the Faculty's buildings were realized in the previous period. This positive trend of the successive modernization of classrooms, restrooms, and internal spaces in block B has continued.

The restoration of the Faculty's laboratories, which are situated on the first and second basement floors in blocks A and B, was the most important accomplishment from the point of view of investments. This investment of 1.1 million Euros was financed from EU structural funds, the national budget, and STU funds from the University Scientific Park STU Bratislava project.

The Faculty's manor house in Kočovce belongs among the protected monuments registered on the Central List of the Monumental Fund of the SR under No. 1234/1-2. The manor house in Kočovce is used as an instruction and training facility for the Faculty of Civil Engineering of the STU in Bratislava. As its latest

reconstruction was realized in the 1970s, the manor house is exhibiting a number of significant defects. Reconstruction of the manor-house is a part of an approved project of OPVaV with the title of "Complex modernization of educational, tangible and information-communicational infrastructure CAMPUS – Bottova II. and reconstruction of the Kočovce instruction and training facility", which is being realized in cooperation with the Faculty of Material Engineering of STU in Trnava. The ongoing restoration of the windows and the interior of the manor house will cost 554,000 Euros.

The above-mentioned activities represent just a small part of the measures aimed at a common effort of improving the standard of our laboratories, the rooms where our lecturers have to work, and where our students learn. In this period there are opportunities for using financial resources of a relatively high amount other than government funding. However, this means more work and administrative burdens for many employees of the Faculty. A stable economic environment is a precondition for the successful realization of the Faculty's future investment goals. From this point of view, it is significant for the Faculty to make a profit either due to the Faculty's core or entrepreneurial activities. In the future it will be possible to continue this trend only through a higher degree of quality, not only in the Faculty's pedagogy, but also by focusing on international cooperation.

BODIES OF THE FACULTY

1. THE DEAN OF THE FACULTY

Prof. Ing. Alojz Kopáčik, PhD.

2. PRESIDIUUM OF THE FACULTY

Prof. Ing. Alojz Kopáčik, PhD.

Prof. Ing. Ján Szolgay, PhD.

Assoc. Prof. Ing. Peter Makýš, PhD.

Prof. Ing. Vladimír Benko, PhD.

Prof. Ing. Boris Bielek, PhD.

Ing. Tomáš Šatura

Prof. Ing. Stanislav Unčík, PhD. / Prof. Ing. Viliam Macura, PhD.

Bc. Kristína Vaňová / Petra Danišová

Ing. Miloslav Štujber

– The Dean

– The First Deputy Dean, Vice-Dean for Science, Research and Foreign Relations

– Vice-Dean for Education

– Vice-Dean for Public Relations

– Vice-Dean for Development of the Faculty

– Financial Manager

– Chairman of the Academic Senate FCE STU

– Chairperson of the Students' Association, FCE STU

– Chairman of the Trade Union Organisation

3. THE DEAN'S COUNCIL

Prof. Ing. Alojz Kopáčik, PhD.

Prof. Ing. Ján Szolgay, PhD.

Assoc. Prof. Ing. Peter Makýš, PhD.

Prof. Ing. Vladimír Benko, PhD.

Prof. Ing. Boris Bielek, PhD.

Ing. Tomáš Šatura

Prof. Ing. Stanislav Unčík, PhD. / Prof. Ing. Viliam Macura, PhD.

Bc. Kristína Vaňová / Petra Danišová

Ing. Miloslav Štujber

Prof. Ing. Juraj Bilčík, PhD.

Prof. Ing. Bystrík Bezák, PhD.

– The Dean

– The First Deputy Dean, Vice-Dean for Science, Research and Foreign Relations

– Vice-Dean for Education

– Vice-Dean for Public Relations

– Vice-Dean for Development of the Faculty

– Financial Manager

– Chairman of the Academic Senate FCE STU

– Chairperson of the Students' Association, FCE STU

– Chairman of the Trade Union Organization

– Head of Department of Concrete Construction and Bridges

– Head of Department of Transportation Engineering

Assoc. Prof. Ing. Juraj Janák, PhD.	– Head of Department of Theoretical Geodesy
Ing. Ján Ježko, PhD.	– Head of Department of Surveying
Assoc. Prof. Ing. Ivan Slávik, PhD.	– Head of Department of Geotechnics
Prof. Ing. Viliam Macura, PhD.	– Head of Department of Land and Water Resources Management
Prof. Ing. Peter Dušička, PhD.	– Head of Department of Hydraulic Engineering
Prof. Ing. Anton Puškár, PhD.	– Head of Department of Building Construction
Prof. Ing. Ján Brodniansky, PhD.	– Head of Department of Steel and Timber Structures
Ing. Róbert Fencík, PhD.	– Head of Department of Mapping and Land Consolidation
Prof. RNDr. Radko Mesiar, DrSc.	– Head of Department of Mathematics and Descriptive Geometry
Assoc. Prof. RNDr. Jozefa Lukovičová, PhD.	– Head of Department of Physics
Prof. Ing. Norbert Jendželovský, PhD.	– Head of Department of Structural Mechanics
Prof. Ing. Stanislav Unčík, PhD.	– Head of Department of Material Engineering
Prof. Ing. Jozef Gašparík, PhD.	– Head of Department of Building Technology
Assoc. Prof. Ing. Štefan Stanko, PhD.	– Head of Department of Sanitary and Environmental Engineering
Assoc. Prof. Ing. Oľília Lulkovičová, PhD.	– Head of Department of Building Services
PhDr. Dagmar Špildová	– Head of Department of Languages
PaedDr. Ján Masarovič	– Head of Department of Physical Education
Ing. Katarína Heretiková, PhD.	– Head of Department of Humanities
Assoc. Prof. Ing. arch. Elena Dohňanská, PhD.	– Head of Department of Architecture
Assoc. Prof. Ing. Milan Nič, PhD.	– Head of Institute of Forensic Engineering

4. SCIENTIFIC BOARD OF THE FACULTY

Members of the Scientific Board (full members from the Faculty)

Chairman: Prof. Ing. Alojz Kopáčik, PhD.

Vice-Chairman: Prof. Ing. Ján Szolgay, PhD.

Prof. Ing. Ján Szolgay, PhD., First Deputy Dean, Vice-Dean for Science, Research and International Relations, Department of Land and Water Resources Management

Prof. Ing. Ivan Baláž, PhD., Department of Steel and Timber Structures

Prof. Ing. Bystrík Bezák, PhD., Department of Transportation Engineering

Prof. Ing. Juraj Bilčík, PhD., Department of Concrete Structures and Bridges

Assoc. Prof. Ing. arch. Elena Dohňanská, PhD., Department of Architecture

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Prof. Ing. Ján Hefty, PhD., Department of Theoretical Geodesy

Prof. Ing. Jozef Hraška, PhD., Department of Building Structures

Prof. Ing. Alojz Kopáčik, PhD., Dean of the Faculty, Department of Surveying

Prof. Ing. Jozef Kriš, PhD., Department of Sanitary and Environmental Engineering
Prof. Ing. Viliam Macura, PhD., Department of Land and Water Resources Management
Assoc. Prof. Ing. Peter Makýš, PhD., Department of Building Technology
Prof. RNDr. Radko Mesiar, DrSc., Department of Mathematics and Constructive Geometry
Prof. Ing. Dušan Petráš, PhD., Department of Building Services
Prof. Ing. Anton Puškár, PhD., Department of Building Structures
Dr.h.c. Prof. Ing. Ján Ravinger, DrSc., Department of Structural Mechanics
Prof. Ing. Milan Sokol, PhD., Department of Structural Mechanics
Prof. Ing. Andrej Šoltész, PhD., Department of Hydraulic Engineering
Prof. Ing. Peter Turček, PhD., Department of Geotechnics
Prof. Ing. Stanislav Unčík, PhD., Department of Material Engineering

Members of the Scientific Board (full members from external institutions)

RNDr. Ladislav Brimich, CSc., Geophysical Institute SAS Bratislava
Assoc. Prof. Ing. Peter Černík, PhD., STRABAG Development Slovakia, Ltd.
Assoc. Prof. RNDr. Ján Feranec, DrSc., Geographical Institute SAS Bratislava
Prof. Ing. Ivan Hyben, PhD., Faculty of Civil Engineering, Technical University of Košice
Ing. Peter Matiašovský, CSc., Institute of Construction and Architecture SAS Bratislava
Ing. Zoltán Sadovský, DrSc., Institute of Construction and Architecture SAS Bratislava
Prof. RNDr. Daniel Ševčovič, CSc., Faculty of Mathematics, Physics and Informatics of Comenius University Bratislava
Assoc. Prof. Ing. Peter Halaj, CSc.
RNDr. Pavla Pekárová, DrSc.

Members of the Scientific Board (honorary members)

The Scientific Board consists of the representatives of the following entities:

Dean of the Faculty of Civil Engineering, Czech University in Prague
Dean of the Faculty of Civil Engineering, Brno University of Technology
Dean of the Faculty of Civil Engineering, Technical University 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, Bureau of Geodesy, Cartography and Cadaster of the SR
President of the Slovak Association of Construction Entrepreneurs
Chairman of the Slovak Chamber of Civil Engineers
Chairman of the Directorate of the Chamber of Surveyors and Cartographers
President of the Slovak Chamber of Architects

5. THE FACULTY'S ACADEMIC SENATE

Chairman:	Prof. Ing. Viliam Macura, PhD.
Vice-Chairman:	JUDr. Jana Zajacová, PhD.
Executive Board:	Prof. Ing. Ľudovít Fillo, PhD., Prof. RNDr. Radko Mesiar, DrSc. Ing. Gabriela Szántová, Petra Danišová.

Members of the Academic Senate:

Assoc. Prof. Ing. Rudolf Ároch, PhD., Department of Steel and Timber Structures
Assoc. Prof. Ing. Katarína Bačová, PhD., Department of Transportation Engineering
Assoc. Prof. Ing. Michal Božík, PhD., Department of Building Technology
Mgr. Tatiana Filipoiu, Department of Languages
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Ing. Marek Fraštia, PhD., Department of Surveying
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Ing. Ľuboš Hruštinec, PhD., Department of Geotechnics
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Prof. Ing. Viliam Macura, PhD., Department of Land and Water Resources Management
Prof. RNDr. Radko Mesiar, DrSc., Department of Mathematics and Constructive Geometry
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Ing. Gabriela Pavlendová, PhD., Department of Physics
Assoc. Prof. Ing. Štefan Stanko, PhD., Department of Sanitary and Environmental Engineering
Ing. Jana Šabíková, PhD., Department of Building Services
Prof. Ing. Stanislav Unčík, PhD., Department of Material Engineering
JUDr. Jana Zajacová, PhD., Department of Humanities
Petra Danišová, Bc. Zuzana Barnová, Monika Csehová, Ing. Dagmara Čehelová, Bc. Beáta Kánová, Bc. Anna Kosíková, Bc. Martin Michalec, Monika Pračková, Ing. Gabriela Szántová, Bc. Kristína Vaňová, Bc. Lukáš Zanolit, Bc. Maroš Kamenský.

6. INDUSTRIAL BOARD

Ing. Daniel Baláž, Managing Director of Saint-Gobain Construction Products, Ltd., Division Weber – Terranova

Prof. Ing. Vladimír Benko, PhD., FCE STU Bratislava, Vice-Dean for Public Relations

Ing. Imrich Béreš, Prvá stavebná sporiteľňa, a. s. Bratislava, Chairman

Ing. Igor Beroun, Managing Director JOHNSON CONTROLS CZ and SK

Ing. Anton Bezák, PhD., Managing Director of Ingsteel Ltd., Bratislava

Prof. Ing. Boris Bielek, PhD., FCE STU Bratislava, Vice-Dean for Development of the Faculty

Ing. Mikuláš Bobik, CSc., Director of Applied Precision Ltd., Bratislava

Prof. Ing. Ľudovít Fillo, PhD., FCE STU Bratislava

Ing. Ľuboš Fúsek, Director of Baumit, Ltd.

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Ing. Oto Hornáček, Managing Director of Hornex, a.s. Bratislava

Ing. Marián Kmeť, Director of SOLHYDRO, Ltd., Bratislava

Ing. Tibor Kočvara, Managing Director Skanska SK

Prof. Ing. Alojz Kopáček, PhD., FCE STU Bratislava, the Dean

Ing. Miroslav Leško, Director of PREMAC, Ltd.

Ing. Zsolt Lukáč, President of ZSPS (The Association of Construction Entrepreneurs of Slovakia)

Ing. Ján Majerský, PhD., Director of Proma, Ltd., Žilina

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Prof. Ing. František Ohrablo, PhD., Honorary Chairman of the Alumni Club of FCE, STU in Bratislava

Prof. Ing. Dušan Petráš, PhD., FCE STU Bratislava

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Assoc. Prof. Ing. Peter Suchánek, PhD., REHAU, Ltd., Bratislava

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Ing. Vladimír Uhlík, Managing Director of Geodesy a.s. Bratislava

Prof. Ing. Stanislav Unčík, PhD., The Faculty of Civil Engineering

Ing. Anton Viazanko, General Director of Leier Baustoffe SK, Ltd.

Ing. František Zvrškovec, President of Divident Group Slovakia, Bratislava

DEPARTMENTS

DEPARTMENT OF CONCRETE STRUCTURES AND BRIDGES

Head of Department

Prof. Ing. Juraj Bilčík, PhD.

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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 (Slovak and English)

Execution of Concrete Structures

High – Rise and Span Structures

Masonry Structures of Buildings

Prestressed Concrete

Reinforced and Prestressed Members

Repair of Concrete Constructions

Special Problems of Concrete Structures

Obligatory elective subjects

Masonry Structures

Experimental Testing of Concrete Structures

Modeling of Civil Engineering Works

Optional subjects

Modeling of Concrete Structures

Recommended subjects

Modeling of Reinforced Concrete 2D Structures

Modeling of Reinforced Concrete 3D Structures

1.2 Postgraduate courses

Modeling of Concrete Structures

Experimental Testing of Concrete Structures

2. THESES

2.1 Bachelor theses

There were 16 works.

2.2 Graduate theses

Antol, J.: Road Bridge: Post-Tensioned Cast-in-Situ Concrete Structure
Supervisor: Borzovič, V.

Augustín, T.: High-Rise Apartment House: Bearing Structure
Supervisor: Gramblička, Š.

Budzák, J.: High-Rise Residential Building with an Atypical Shape: Cast-in-Situ RC Bearing Structure
Supervisor: Bartók, A.

Cífra, R.: Multifunctional Building: Cast-in-Situ RC Bearing Structure
Supervisor: Bartók, A.

Čajová, S.: Bottova Centre: Cast-in-Situ Reinforced Concrete Structure
Supervisor: Gajdošová, K.

Černaj, R.: Staré Grunty – Bratislava Hotel: Combined Cast-in-Situ Reinforced Concrete Structure with Stiffening Cores
Supervisor: Abrahim, I.

Dovičič, J.: Railway Bridge in Trenčín: Design and Assessment of the Lower Structure
Supervisor: Paulík, P.

Dudžáková, Z.: Hotel "TULA", Banská Bystrica: Cast-in-Situ RC Slab-Wall Structure on a Skeleton Pedestal with a Stiffening Core
Supervisor: Harvan, I.

Dvoranová, V.: Austria Trend Hotel: Cast-in-Situ Reinforced Concrete Structure
Supervisor: Gajdošová, K.

Filo, T.: High-Rise Building with a Polygonal Shape: Cast-in-Situ RC Bearing Structure
Supervisor: Bartók, A.

Gažovičová, N.: Letná Multifunctional Building: Cast-in-Situ Reinforced Concrete Structure
Supervisor: Gajdošová, K.

- Gonda, M.: Central Police Office in Bratislava: Multi-Storey RC Skeleton Structure with Stiffening Cores
Supervisor: Harvan, I.
- Heveši, A.: Multifunctional Building: 15-Storey Cast-in-Situ RC Slab-Wall Structure on a Skeleton Pedestal
Supervisor: Harvan, I.
- Jávor, P.: Motorway Bridge over the River Váh on the D1 Motorway Between Dubná Skala and Turany
Supervisor: Borzovič, V.
- Jurčovič, R.: Underground Parking Garage: Watertight Diaphragm Wall
Supervisor: Šoltész, J.
- Kelemenová, L.: Office Block: Cast-in-Situ RC Bearing Structure
Supervisor: Bartók, A.
- Keseli, O.: Large-Diameter Silo for the Storage of Corn
Supervisor: Šoltész, J.
- Krajčí, M.: Prestressed Cast-in-Situ Bridge on D1 Motorway over the River Váh
Supervisor: Halvoník, J.
- Krivý, M.: Reinforced Concrete Underground Collector for Cooling Water Pipes
Supervisor: Hudoba, I.
- Kruľák, J.: Incremental Launching Bridge in Nitra: Static Analysis of Upper Structure
Supervisor: Paulík, P.
- Kubiš, J.: Prestressed Cast-in-Situ Bridge on D1 Motorway Built by Cantilever Balanced Method
Supervisor: Halvoník, J.
- Laco, K.: Office Building with Water Tank: Cast-in-Situ Reinforced Concrete Structure
Supervisor: Borzovič, V.
- Lásková, M.: Load – Bearing Structure of a High-Rise Building with an Atypical Floor Plan
Supervisor: Gramblička, Š.
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Supervisor: Abrahaim, I.
- Magdolen, R.: 25 – Storey High-Rise Building of an Administration Centre. Cast-in-Situ RC Structure with Flat Slabs and a Stiffening Core
Supervisor: Harvan, I.
- Markocsy, E.: Multifunctional Residential Building: Cast-in-Situ Concrete Structure
Supervisor: Borzovič, V.
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Supervisor: Gramblička, Š.
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Supervisor: Gramblička, Š.
- Mrázik, R.: Design Calculations of a High-Rise Building Made from Structural Concrete
Supervisor: Fillo, L.
- Petková, V.: Prestressed Cast-in-Situ Bridge on R1 Expressway in Town of Nitra
Supervisor: Halvoník, J.
- Pták, M.: Design Calculations of an Office Block: Cast-in-Situ RC Structure
Supervisor: Bilčík, J.
- Rajcsányi, V.: Concrete High-Rise Building
Supervisor: Benko, V.
- Raszgyörgyová, A.: Office Building of an Automobile Centre: Bratislava Rožňavská: Cast-in-Situ Reinforced Concrete Combined Bearing Structure with a Stiffening Core
Supervisor: Abrahaim, I.
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Supervisor: Šoltész, J.
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- Škriputa, Š.: Office Building: Cast-in-Situ Reinforced Concrete Structure
Supervisor: Borzovič, V.
- Šlesariková, L.: “GREEN PARK – Part A, Podkolibská, Bratislava” Apartment House – Cast-in-Situ RC Frame Structure with Stiffening Cores
Supervisor: Abrahaim, I.
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Supervisor: Borzovič, V.

Štefula, M.: Design Calculations of Multi-Storey Garage: Cast-in-Situ RC Structure

Supervisor: Bilčík, J.

Tužinský, M.: Design Calculations of a Multi-Storey Garage: Precast Concrete Structure

Supervisor: Bilčík, J.

Vida, R.: Road Bridge over the Danube River at Komárno – Komárom

Supervisor: Halvoník, J.

Vyžinkár, P.: Multifunctional Building: Cast-in-Situ Reinforced Concrete Structure

Supervisor: Gajdošová, K.

Žideková, R.: Office Block in Komárno: Cast-in-Situ RC Bearing Structure

Supervisor: Bartók, A.

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Supervisor: Bilčík, J.

Kišac, M.: Nonlinear Analysis of the Safety of Slender Concrete Columns

Supervisor: Benko, V.

Laco, J.: Bonds of Prestressing Units Coated with Corrosion Protection Agents

Supervisor: Halvoník, J.

3. RESEARCH

3.1 Research projects

Holistic Design of Concrete Constructions (2012-2014, Bilčík, J.), VEGA /0784/12

Historical Experience and Current Requirements for the Design of Concrete Bridges and Knowledge Transfer of Information Acquired in Technical Practice (2013-2016, Halvoník, J.), APVV-0442-12
Diagnosis of Oldest Reinforced Concrete Bridges in Slovakia (2013-2015, Halvoník, J.), VEGA 1/0690/13

Reliability and Resistance of Concrete and Composite Steel-Concrete Structures (2014-2016, Fillo, L.), VEGA 1/0696/14

3.2 International cooperation

Cooperating institutions

Klokner Institute ČVUT Prague, Czech Republic

ETH – Laboratory for Building Materials, ETH Zurich, Switzerland

Baustoffinstitut, TU Munich, Germany

Institut für Baustatik und Konstruktion, ETH Zurich, Switzerland

Department of Civil and Materials Engineering, University of Illinois at Chicago, USA

RIB Bausoftware, Stuttgart, Germany

Betosan, s.r.o., Prague, Czech Republic

European Commission, DG Research, Brussels, Belgium

Imperial College for Science, Technology and Medicine, London, U.K.

St. Paul University, Brussels, Belgium

Fachhochschule Braunschweig – Wolfenbüttel, Germany

Institut für Massivbau, TU Darmstadt, Germany

Fachhochschule Coburg, Germany

Membership in international professional organizations

Bilčík, J.: American Concrete Institute

Fillo, L.: CEN TC 250 – SC2 Eurocode Design of Concrete Structures

Fillo, L.: Task Group *fib* TG 1.1 Design Application

Fillo, L.: Czech Concrete Society, Hradec Králové, Czech Republic

Halvoník, J.: CEN TC 250 SC1 Eurocodes

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- Laco, J.: Bond Analysis of a Seven-Wire Strand. In: Juniorstav 2014: 16th Scientific Conference of PhD Students with international participation, Brno, Czech Republic, 30.1.2014. 1st ed. 2014, CD ROM, 6 pp. ISBN 978-80-214-4851-3 (in Slovak)
- Laco, J. – Pažma, P.: Behavior of Bonds on Statically Indeterminate Constructions Due to Prestressing. In: Proceedings of Concrete Days 2014 Conference and 5th Post Congress Colloquium SNK fib. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, pp. 375-380. ISBN 978-80-8076-114-1 (in Slovak)
- Laco, J. – Pažma, P. – Halvoník, J.: Analysis of Secondary Effects and Bond Behavior Due to Prestressing. In: Proceedings of 21st Concrete Days 2014 Conference. 1st ed. Prague: Czech Concrete Society ČSSI, 2014, 6 pp. ISBN 978-80-903806-7-7 (in Slovak)
- Laco, K. – Borzovič, V. – Panuška, J.: Analysis of the Behaviour of a Bridge Approach Slab. In: Proceedings of Concrete Days 2014 Conference and 5th Post Congress Colloquium SNK fib. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, pp. 303-308. ISBN 978-80-8076-114-1 (in Slovak)
- Majtánová, L. – Hanzel, J. – Halvoník, J.: Reliability of Models for Assessment of the Shear Resistance of Punching. In: Proceedings of Concrete Days 2014 Conference and 5th Post Congress Colloquium SNK fib. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, pp. 245-250. ISBN 978-80-8076-114-1 (in Slovak)
- Majtánová, L.: Models for Assessment of the Shear Resistance of Flat Slabs without Shear Reinforcement. In: Advances in Architectural, Civil and Environmental Engineering: 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, CD ROM, pp. 537-544. ISBN 978-80-227-4301-3 (in Slovak)
- Paulík, P. – Pánik, M. – Nečas, V.: Construction of Concrete Bridges Using Reinforcement Made of Low Level Radioactive Steel. In: Improving Performance of Concrete Structures. Vol. I.: Proceedings of the 4th International fib Congress 2014. 1st ed. Mumbai, India: IMC – fib, 2014, 10 pp. ISBN 978-81-7371-919-6 (in English)
- Paulík, P.: Progressive Bridge Construction Methods. In: Proceedings of Concrete Days 2014 Conference and 5th Post Congress Colloquium SNK fib. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, pp. 439-448 ISBN 978-80-8076-114-1 (in Slovak)
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- Pažma, P.: Analysis of the Effects of Prestressing on Statically Indeterminate Structures. In: Advances in Architectural, Civil and Environmental Engineering: 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, CD ROM, pp. 558-564 ISBN 978-80-227-4301-3 (in Slovak)
- Sonnenschein, R. – Bilčík, J.: Design of Reinforcement for Control of Cracks Due to Changes in Volume. In: Proceedings of Concrete Days 2014 Conference and 5th Post Congress Colloquium SNK fib. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, pp. 279-284. ISBN 978-80-8076-114-1 (in Slovak)
- Sonnenschein, R. – Bilčík, J.: Control of Cracks Width in Reinforced Concrete Structures. In: MMK 2014. Proceedings of International Masaryk's Scientific Conference for PhD Students and Young Scientists, 1st ed. Hradec Králové, Magnanimitas, 2014, online, pp. 4005-4014. ISBN 978-80-87952-07-8 (in English)
- Sonnenschein, R.: Determination of Crack Widths in Reinforced Concrete Structures. In: Advances in Architectural, Civil and Environmental Engineering: 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, CD ROM, pp. 572-578. ISBN 978-80-227-4301-3 (in Slovak)
- Šoltész, J. – Ignačák, M.: Computation of the High Confidence of a Low Probability of Failure /HCLPF/ Parameters for 3D Shell Modelled RC Structures – Seismic Certificate. In: Improving Performance of Concrete Structures. Vol. I.: Proceedings of the 4th International fib Congress 2014. 1st ed. Mumbai, India: IMC – fib, 2014, pp. 111-114. ISBN 978-81-7371-919-6 (in English)
- Šoltész, J. – Ignačák, M. – Gajdošová, K.: Design of the Foundation Structures and Interaction with the Subsoil. In: SGEM 2014. GeoConference on Science and Technologies in Geology, Exploration and Mining: Conference Proceedings. Sofia: STEF 92 Technology Ltd., 2014, pp. 283-290. ISSN 1314-2704. ISBN 978-619-7105-08-7 (in English)

Šoltész, J. – Bukov, D. – Ignačák, M.: Variations of the Seismic Amplification of the NP EMO Fire Station. In: Proceedings of Concrete Days 2014 Conference and 5th Post Congress Colloquium SNK fib. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014, pp. 331-336. ISBN 978-80-8076-114-1 (in Slovak)

Zrubec, R. – Holly, I.: Experience in the Design of Prestressed Floor Slabs. In: Proceedings of Concrete Days 2014 Conference and 5th Post Congress Colloquium SNK fib. 1st ed. Bratislava: Slovak University of Technology In: Bratislava, 2014, pp. 77-80 ISBN 978-80-8076-114-1 (in Slovak)

DEPARTMENT OF TRANSPORTATION ENGINEERING

Head of Department

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Airports Planning and Design

Bachelor Thesis

Design Studio of Urban Planning I

Design Studio of Urban Planning II

Design Studio of Spatial Planning

Diploma Thesis

Environmental Transport

Experimental Verification

Excursion

Modeling and Graphics in Road Construction

Pavement Diagnosis and Reconstruction

Pavement Mechanics

Predictions and Scenarios for the Development of Transport

Project: Road Constructions

Railway

Roads in Urban Areas

Road Intersections

Transport Forecasting

Optional subjects

Design and Realization of a Transport Infrastructure

Ecology of Urban Settlements and Urban Transportation Planning

Experiments and Testing

Project II

Project II: Transport Infrastructure

Selected Chapters on Roads and Motorways

Special Lectures of Transportation Structures

Technology of Engineering Construction

Transport Construction

Urban Transportation Planning

Urban Planning I

2. THESES

2.1 Bachelor theses

There were 16 works.

2.2 Graduate theses

Peciar, A.: Concept of the Development of Cycling in Malacky
Supervisor: Ondrovič, M.

Keller, M.: Design of a Noise Barrier on the D1 Highway Fričovce – Svinia
Supervisor: Zuzulová, A.

Ďuriška, I.: Proposed Reconstruction of the I/75 Road Section in the District
Veľký Krtíš
Supervisor: Bačová, K.

Csánó, D.: Proposal for the Alignment of the Local Highway in Dunajská
Streda
Supervisor: Bačová, K.

Hrabovský, M.: Reconstruction of the II/580 Road Section Horný Prial – Lok in
km 31,250 – 33,300
Supervisor: Bačová, K.

Šarkózyová, H.: The Road Reconstruction in Rohožník
Supervisor: Bačová, K.

Čukan, B.: Revitalization of Transport Area in Pezinok
Supervisor: Zuzulová, A.

Krajčovič, J.: Study of the Transport Connection between Bojna and Nova
Lehota
Supervisor: Nemček, M.

2.3 Doctoral theses

Škoda, M.: Verification of Guiding Parameters and Determination of desired
Parameters of Calm Roads
Supervisor: Bezák, B.

3. RESEARCH

3.1 Research projects

Analysis of Mobility and Occupancy of Vehicles
(2014, Balkó, G.), Acronym: AMOS

BRAWISIMO
(2010-2014, Bezák, B.), Project No.: 00127

CENEX Sub Centre CETIS – Transportation Centre Infrastructure of Settlements
(2011-2013, Bezák, B.), Project No.: 26240120002

Traffic Area Structures in Integrated Transport Space (2013-2015, Bačová, K.),
VEGA 1/0351/13

Noise on the Pavement-Tire Contact
(2014-2015, Orthová, M.), Acronym: Nehlučná vozovka

STN 73 6101 – Design of Roads and Highways
(2013-2014, Bačová, K.), Analysis Work

STN 73 6102 – Design of Crossroads on Roads
(2013-2014, Nemček, M.), Analysis Work

STN 73 6110 – Design of Local Roads
(2010-2013, Bezák, B.), Analysis Work

WiWiT – Who is Who in Transport
(2014, Bezák, B.), Project No.: 00170

3.2 International cooperation

Cooperating institutions

Bauhaus-University Weimar, Weimar, Germany

Cologne University of Applied Science, Köln, Germany

Czech Technical University in Prague, Faculty of Civil Engineering, Prague, Czech Republic

Czech Technical University in Prague, Faculty of Transportation Sciences, Prague, Czech Republic

Hellenic Institute of Transport, Thessaloniki, Greece

Institute for Transport Studies, Department of Landscape, Spatial and Infrastructure Sciences, BOKU, Vienna, Austria

Krakov University of Technology, Faculty of Civil Engineering, Krakow, Poland

Széchenyi István University, Department of Transportation Infrastructure and Municipal Engineering, Győr, Hungary

University of Maribor, Faculty of Civil Engineering, Department of Transportation Engineering, Maribor, Slovenia

University of Pardubice, Jan Perner Transport Faculty, Pardubice, Czech Republic

Vienna University of Technology, Faculty of Civil Engineering, Institute of Transportation, Vienna, Austria

Vilnius Gediminas Technical University, Faculty of Transport Engineering, Vilnius, Lithuania

VŠB-Technical University of Ostrava, Faculty of Civil Engineering, Ostrava, Czech Republic

Wrocław University of Technology, Faculty of Civil Engineering, Institute of Building Engineering, Wrocław, Poland

Membership in international professional organizations

Bezák, B.: Member of the PIARC – TC 3.2 Design and Operation of Safer Road Infrastructure, 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

Cápayová, S.: Member of the PIARC – TC 4.2 Road Pavements, Paris, France

Gschwendt, I.: Member of the PIARC – TC 4.2 Road Pavements, Paris, France

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

Gschwendt, I.: Member of the Editorial Board – Inžinierske stavby, Slovakia

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

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

Ondrovič, M.: Member of the PIARC – TC 3.2 Design and Operation of Safer Road Infrastructure, Paris, France

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

Zuzulová, A.: Member of the Editorial Board – Przegląd komunikacyjny, Wrocław, Poland

4. PUBLICATIONS

Journals

Báčová, K.: Renewal and Reconstruction of Pavements. In: Eurostav. ISSN 1335-1249. – Vol. 20, Nos. 7-8 (2014), pp. 10-12 (in Slovak)

Báčová, K.: Rehabilitation and Reconstruction of Road Works. In: Magazín stavebné stroje a mechanizácia (Journal of Building Mechanism and Mechanization). ISSN 1336-958X. – Vol. 9, No. 1 (2014), p. 36 (in Slovak)

Bačová, K.: Research and Technical Development in Road Engineering. In: *Magazín stavebné stroje a mechanizácia (Journal of Building Mechanism and Mechanization)*. ISSN 1336-958X. – Vol. 9, No. 6 (2014), pp. 43-45 (in Slovak)

Zuzulová, A. – Gschwendt, I.: Airport Pavements 2014 International Conference. In: *Inžinierske stavby (Engineering Constructions)*. ISSN 1335-0846. – Vol. 62, No. 3 (2014), p. 7 (in Slovak)

Zuzulová, A.: Climate Conditions and Their Impact on Road Pavements. In: *Inžinierske stavby (Engineering Constructions)*. ISSN 1335-0846. – Vol. 62, No. 3 (2014), pp. 21-25 (in Slovak)

Conference Proceedings

Bačová, K. – Orthová, M. – Sitárik, J.: The Influence of Traffic Loads and Climate Change on Pavement Structure Designs. In: *QUAERE 2014, Hradec Králové, Czech Republic, 26.-30.5., 2014. – Hradec Králové: Magnanimitas, 2014, – ISBN 978-80-87952-04-7. – pp. 1616-1625 (in Slovak)*

Bačová, K.: Use of Recycled Materials for Subgrade Layers of Pavement Structures. In: *Podkladní vrstvy a podloží vozovek (Base Layers and Subgrade of Roads)*. 1st ed. Prague: Road Contractors Association Prague (Sdružení pro výstavbu silnic Praha), Czech Republic, 2014, – ISBN 978-80-903929-4-0. – pp. 62-66 (in Slovak)

Bačová, K.: Reinforced Earth Structures. In: *Research and Technical Development in Road Construction. 19th Seminar of Ivan Poliaček with international participation, Bratislava, Slovakia: Kongres STUDIO, 20.-21.11.2014. – ISBN 978-80-89565-16-0. – pp. 194-199 (in Slovak)*

Bachratá, M.: Environmental Mixtures Applied to a Transport Area in Trnava. In: *Advances in Architectural, Civil and Environmental Engineering: 24rd Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics*. CD ROM. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014. – ISBN 978-80-227-4301-3. – pp. 397-404 (in Slovak)

Balkó, G.: Efficiency Factors of Public Transport. In: *Advances in Architectural, Civil and Environmental Engineering: 24rd Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics*. CD ROM. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014. – ISBN 978-80-227-4301-3. – pp. 413-418 (in Slovak)

Bezák, B. – Skýva, M.: Parking of Motorcycles: Requirements and Options. In: *15th International Seminar: Dopravně – inženýrské dny. Parkování a bezpečnost provozu na komunikacích ve městech a obcích (Traffic – Engineering Days: Parking and Traffic Safety on Roads in the Cities and Urban Agglomerations)*, Mikulov, Czech Republic, 4.-5.6. 2014. 1st ed. Brno, Czech Republic, Česká silniční společnost (Czech Road Association), 2014. CD ROM. pp. 292-296 (in Slovak)

Bezák, B. – Skýva, M.: Traffic Calming Measures in Residential Zones and Their Efficiency. In: *15th International Seminar: Dopravně – inženýrské dny. Parkování a bezpečnost provozu na komunikacích ve městech a obcích (Traffic – Engineering Days: Parking and Traffic Safety on Roads in the Cities and Urban Agglomerations)*, Mikulov, Czech Republic, 4.-5.6. 2014. 1st ed. Brno, Czech Republic, Česká silniční společnost (Czech Road Association), 2014. CD ROM. pp. 269-274 (in Slovak)

Bezák, B.: Transport Area as a Sensitive Public Space. In: *Bardkontakt 2014: Problematika mestských pamiatkových centier. Doprava v historických centrách (The Issue of Urban Heritage Centers. Transport in Historic Centers)*. Conference Proceedings. Bardejov, 26.-27.8. 2014. – 1st ed. Bardejov: City Bardejov, 2014. – ISBN 978-80-971733-8-8. – pp. 67-76 (in Slovak)

Bezák, B. – Emberger, G. – Los, P. – Ripka, I.: Analysis and Models for Integrated Multimodal System in the Region of Vienna – Bratislava. In: *10th Fórum koľajovej dopravy (Rail Transport Forum): Conference Proceedings*. Bratislava, Slovakia, 18.-19. 3. 2014. 1. ed. Bratislava: FO ART, 2014. – ISBN 978-80-89664-08-5. – pp. 29-36. (in English)

Bezák, B. – Balkó, G.: Transport Area as a Sensitive Public Space in Historical City Centers. In: *Bardkontakt 2014 : Problematika mestských pamiatkových centier. Doprava v historických centrách (The Issue of Urban Heritage Centers. Transport in Historic Centers)*. Conference Proceedings. Bardejov, 26.-27.8. 2014. – 1st ed. Bardejov: City Bardejov, 2014. – ISBN 978-80-971733-8-8 (in Slovak)

Bezák, B. – Balkó, G.: BRAWISIMO – Cross-Border Mobility Surveys for Multimodal Modelling. In: *10th Fórum koľajovej dopravy (Rail Transport Forum): Conference Proceedings*. Bratislava, Slovakia, 18.-19. 3. 2014. 1st ed. Bratislava: FO ART, 2014. – ISBN 978-80-89664-08-5. – pp. 119-120 (in Slovak)

Bezák, B.: Activities of the National Committee of the Slovak Republic and Its Delegates on the WRA PIARC Technical Committees. In: *Cestná konferencia 2014 (Road Conference 2014): Conference Proceedings*. Bratislava, Slovakia, 25.-26.3.2014. – 1st ed. Bratislava: Kongres STUDIO, 2014. – ISBN 978-80-89565-13-9 (in Slovak)

Bezák, B. – Balkó, G. – Los, P.: BRAWISIMO – Mobility Characteristics of Cross-Border Public Transport. In: *Verejná osobná doprava 2014 (Public Passenger Transport 2014): International Conference Proceedings*. Bratislava, Slovakia. – 1st ed. Bratislava: Kongres STUDIO, 2014. – ISBN 978-80-89565-15-3. – pp. 144-149 (in Slovak)

Cápayová, S.: The Issue of Reusing Asphalt Mixtures. In: *Research and Technical Development in Road Construction. 19th Seminar of Ivan Poliaček with international participation, Bratislava, Slovakia: Kongres STUDIO, 20.-21.11.2014. – ISBN 978-80-89565-16-0. – pp. 207-212 (in Slovak)*

Gschwendt, I. – Cápayová, S.: Reconstruction of Airport Pavements Abroad. In: *Airport Pavements 2014 – 2nd International Conference*. Štrbské Pleso, Slovakia, 19.-20.5.2014. 1st ed. Bratislava: Kongres STUDIO, 2014. ISBN 978-80-89565-14-6. – pp. 57-66 (in Slovak)

- Hodáková, D.: Temperature Stresses in Cement Concrete Pavements. In: Juniorstav 2014 Proceedings of 16th Professional Conference of Postgraduate Students. VUT, Brno, Czech Republic, 30.1.2014. – 1st ed. Brno : VUT, 2014. – ISBN 978-80-214-4851-3 (in Slovak)
- Nemček, M.: Signalised Intersections with Blinking Green Lights in Bratislava. In: 15th International Seminar: Dopravně – inženýrské dny. Parkování a bezpečnost provozu na komunikacích ve městech a obcích (Traffic – Engineering Days: Parking and Traffic Safety on Roads in the Cities and Urban Agglomerations), Mikulov, Czech Republic, 4.-5.6.2014. – 1st ed. Brno, Czech Republic, Česká silniční společnost (Czech Road Association), 2014. – pp. 256-259 (in Slovak)
- Orthová, M.: Asphalt Surfaces and Their Impact on Traffic Noise. In: Juniorstav 2014 Proceedings of 16th Professional Conference of Postgraduate Students. VUT, Brno, Czech Republic, 30.1.2014. – 1st ed. Brno : VUT, 2014. – ISBN 978-80-214-4851-3 (in Slovak)
- Orthová, M.: Road Surfaces for Reducing Traffic Noise. In: Conference NITT SK 2014: Transfer technologií na Slovensku a v zahraničí (Technology Transfer in Slovakia and Abroad). Bratislava, Slovakia, 8.10.2014. – 1st ed. Bratislava : CVTI SR, 2014. – ISBN 978-80-89354-33-7 (in Slovak)
- Orthová, M. – Bachratá, M.: Construction of a Road Designed with Regard to the Environment. In: Research and Technical Development in Road Construction. 19th Seminar of Ivan Poliaček with international participation, Bratislava, Slovakia: Kongres STUDIO, 20.-21.11.2014. – ISBN 978-80-89565-16-0. – p. 261 (in Slovak)
- Orthová, M.: Roadway Surface Properties. In: Advances in Architectural, Civil and Environmental Engineering: 24rd Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. CD ROM. 1st ed. Bratislava: Slovak University of Technology in Bratislava, 2014. – ISBN 978-80-227-4301-3. – pp. 551-557 (in Slovak)
- Orthová, M.: Noisiness and Roughness of Pavements. In: International Masaryk Conference for Ph.D. Students and Young Researchers 2014, Online conference. – 1st ed. Hradec Králové: Magnanimitas, Czech Republic, 2014. – ISBN 978-80-87952-07-8. – pp. 3981-3985 (in English)
- Sitárik, Jozef. Energy Consumption, Material and Energy Saving in Road Construction. In: Juniorstav 2014 Proceedings of 16th Professional Conference of Postgraduate Students. VUT, Brno, Czech Republic, 30.1.2014. – 1st ed. Brno : VUT, 2014. – ISBN 978-80-214-4851-3 (in Slovak)
- Cápayová, S. – Zuzulová, A.: Environmental Efficiency of Transport in Slovak Republic. In: QUAERE 2014, Hradec Králové, Czech Republic, 26.-30.5., 2014. – Hradec Králové: Magnanimitas, 2014, – ISBN 978-80-87952-04-7. – pp. 1585-1590 (in English)
- Zuzulová, A.: Load Transfer Measurements at Joints of Concrete Slabs on Airport Pavements. In: Airport Pavements 2014 – 2nd International Conference. Štrbské Pleso, Slovakia, 19.-20.5.2014. 1st ed. Bratislava: Kongres STUDIO, 2014. ISBN 978-80-89565-14-6. – pp. 25-32 (in Slovak)
- Zuzulová, A. – Hodáková, D.: Influence of Climatic Conditions on the Behavior of Airport Concrete Pavements. In: Airport Pavements 2014 – 2nd International Conference. Štrbské Pleso, Slovakia, 19.-20.5.2014. 1st ed. Bratislava: Kongres STUDIO, 2014. ISBN 978-80-89565-14-6. – pp. 33-41 (in Slovak)
- Zuzulová, A. – Cápayová, S. – Orthová, M.: Roughness and Noisiness of Pavement Surfaces. In: RDIT 2014 : Seminar Proceedings. Vysoké Mýto, Czech Republic, 30.10.2014. 1st ed. Ostrava : VŠB – Technical University of Ostrava, 2014. – ISBN 978-80-248-3613-3. – pp. 61-67 (in Slovak)
- Zuzulová, A. – Cápayová, S. – Orthová, M.: Materials and Technologies from the Point of View of Sustainable Development. In: Pozemní komunikace 2014 (Roads 2014): Conference with international participation, Prague, Czech Republic, 2.10. 2014. – Prague : Czech Technical University in Prague, 2014. – ISBN 978-80-01-05559-5 (in Slovak)
- Zuzulová, A. – Gschwendt, I.: Measurements and Evaluation of the Bearing Capacity of Cement Concrete Pavements. In: 12th International Symposium on Concrete Roads 2014 : Conference Proceedings, Prague, Czech Republic. 23.-26.9.2014. – 1st ed. Prague : GUARANT International, 2014, USB key (in English)
- Zuzulová, A.: Efficiency of Dowel Bars in Concrete Pavements. In: Research and Technical Development in Road Construction. 19th Seminar of Ivan Poliaček with international participation, Bratislava, Slovakia: Kongres STUDIO, 20.-21.11.2014. – ISBN 978-80-89565-16-0. – pp. 185-193 (in Slovak)
- Zuzulová, A.: Dowel Bars for Concrete Pavements. In: Research and Technical Development in Road Construction. 19th Seminar of Ivan Poliaček with international participation, Bratislava, Slovakia: Kongres STUDIO, 20.-21.11.2014. – ISBN 978-80-89565-16-0. – pp. 252-26

DEPARTMENT OF THEORETICAL GEODESY

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Information Technologies

Processing and Analysis of Measurements 1

Processing and Analysis of Measurements 2

Geoinformatics

Geoinformatics (Institute of Management)

Local Geodetic Networks

Global Geodesy 1

Geodesy in Spatial Planning (Institute of Management)

Programming

Physical Geodesy 1

Spherical Astronomy and Space Geodesy

Global Navigation Systems

Field Education in Geodetic Controls

Global Geodesy 2

Space Geodesy

Processing and Analysis of Measurements 3

Physical Geodesy 2

Spatial Data Management

Satellite Geodesy

Spatial Modelling in GIS

Metrology in Geodesy

Mathematical Models in Geodesy

Specialized Field Education

GIS in Building Sciences

Obligatory elective subjects

Gravimetry

Geodynamics

GIS Design and Implementation

Database Systems in GIS

Optional subjects

Quality Analysis of Geodata

Geometry and Relativity in Geodesy

Object-Oriented Programming in C#

Programming Websites Using PHP and JavaScript

1.2 Postgraduate courses

Processing and Analysis of Measurements

Global Geodesy

Geodynamics

Geographic Information Systems

2. THESES

2.1 Bachelor theses

There were 11 works.

2.2 Graduate theses

Babiarová, A.: Combined Processing of Various Types of Satellite Observations
Supervisor: Gerhátovej, L.

Čuporáková, V.: 3D Modeling of Spatial Objects Based on ZB GIS
Supervisor: Ďuračiová, R.

Čuraj, M.: Recent Trends in Determining a Precise Geoid
Supervisor: Janák, J.

Džugan, J.: Analysis of Long-Term GNSS in Local Geodetic Networks
Supervisor: Papčo, J.

Garai, R.: Local Tomography of the Troposphere from GPS Measurements
Supervisor: Hefty, J.

Hroboň, A.: Modelling Tidal Potential in MATLAB
Supervisor: Hábel, B.

Ježko, J.: Creating a Geographic Information System to Support Archeological Research
Supervisor: Lieskovský, T.

Letko, P.: Quantification of Relativistic Effects in Space Geodesy Methods
Supervisor: Husár, L.

Molitorisová, M.: Relational Joint Database of Geographical Names and Associated Spatial Objects in Slovakia
Supervisor: Ďuračiová, R.

Pencáková, R.: Impact of Water Mass Variations on Geodetic Measurements
Supervisor: Mojžeš, M.

Poláček, P.: Increasing the User Friendliness of Web Mapping Portals
Supervisor: Ďuračiová, R.

Ryšavá, P.: Analysis of the Application Possibilities of STN EN ISO 19152 in the Cadastre of the Slovak Republic
Supervisor: Ďuračiová, R.

Sekereš, R.: Creation and Publication of a Land Cover Layer Based on the Depiction of the Territory of Slovakia Realized by Historical Maps
Supervisor: Lieskovský, T.

Vaňová, V.: Long-Term Monitoring of Geodetic Point Stability in Various Environmental Conditions
Supervisor: Gerháťová, L.

Vrabcová, V.: Application of Neural Networks to the Analysis of Spatial Data
Supervisor: Lieskovský, T.

2.3 Doctoral theses

Gálová, L.: Geoinformation Support for Flood Protection Management
Supervisor: Janák, J.

Pitoňák, M.: Solving Geodetic Boundary Value Problems with Data from Satellite Gradiometry
Supervisor: Janák, J.

Stopková, E.: Development and Application of 3D Analytical Functions in Spatial Analyses
Supervisor: Hefty, J.

3. RESEARCH

3.1 Research projects

National Centre for Diagnosing the Earth's Surface Deformations in Slovakia (2010-2015, Mojžeš, M.), ITMS 26220220108

Detection of Ground Deformations Using the Radar Interferometry Technique (2011-2014, Papčo, J. – Bakoň, M.), ESA: Earth Observing Principal Investigator Project, No. 9981

Bouguer New Generation Anomalies and the Gravimetrical Model of the Western Carpathians (2011-2014, Papčo, J., principal investigator, Pašteka, R., from Comenius University in Bratislava), APVV-0194-10

Recognition of Objects Based on High Resolution Radar Imagery (2012-2015, Papčo, J. – Bakoň, M.), TSX-Archive-2012, Project ID LAN1583 Accepted by DLR

Monitoring the Ground Stability of the Bratislava Region Using InSAR Technology (2013-2014, Bakoň, M.), Fund of SUT Bratislava: Program for the Support of Young Researchers

3D-Geokinematics of Continental Europe Inferred from Combinations of Long-Term Geodetic Satellite Positioning (2013-2015, HEFTY, J.), VEGA 1/0642/13

Monitoring Slope Instability in Various Areas of the World (2014, Hlaváčová, I. – Bakoň, M. – Sousa, J.j. – Lazecký, M.), ESA: Earth Observing Category 1, Project ID 28760

Dam Monitoring Using InSAR (2014, Hlaváčová, I. – Lazecký, M. – Bakoň, M.), ESA: Third Party Missions Radarsat, Project ID 28247

Evaluation of Potential Threats to the Stability of Linear Structures Using InSAR Technology (2014, Lazecký, M. – Bakoň, M. – Hlaváčová, I. – Rapant, P.), ESA: Third Party Missions Radarsat, Project ID 21629

Multi-Sensor InSAR Ground Deformation Monitoring and SAR Image Processing. Case Study in Bratislava, Slovakia (2014, Papčo, J. – Bakoň, M.), ESA: Third Party Missions Radarsat, Project ID 21655

RemotWatch – Alert and Monitoring System for Physical Structures (2014, Sousa, J.j. – Lazecký, M. – Hlaváčová, I. – Bakoň, M.), University of Trás-os-Montes and Alto Douro, Vila Real (Portugal), BI/COMPETE/38732/UTAD/2014

3.2 International cooperation

Cooperating institutions

CEGRN – Central European Geodynamic Regional Network Consortium

EPN – EUREF Permanent Network

Freie Universität Berlin – Tell Fecheriye Research Project, Germany

Chinese University of Hong Kong, Institute of Space and Earth Information Science, China SAR

Italian National Research Council, Institute for Marine Sciences, Italy

Kiel University, Institute of Geosciences, Germany

North Carolina State University, Department of Marine Earth and Atmospheric Sciences, United States of America

Purdue University, School of Civil Engineering, Indiana, United States of America

Research Institute of Geodesy, Topography and Cartography, Czech Republic

Technical University of Ostrava, Institute of Geoinformatics, Czech Republic

UNAVCO – A Non-Profit University-Governed Consortium, Facilitates
Geoscience Research and Education Using Geodesy

University of Environmental and Life Sciences, Institute of Geodesy and
Geoinformatics, Wrocław, Poland

University of New Brunswick, Department of Geodesy and Geomatics
Engineering, Canada

University of Stuttgart, Institute of Navigation, Germany

University of Trás-os-Montes e Alto Douro, Vila Real, Portugal

University of Trieste, Department of Earth Sciences, Italy

University of Trieste, Department of Mathematics and Geosciences, Italy

University of Vienna, Department of Meteorology and Geophysics, Austria

University of West Bohemia in Pilsen, Faculty of Applied Sciences,
Department of Mathematics, Czech Republic

Warsaw University of Technology, Faculty of Geodesy and Cartography,
Poland

Membership in international professional organizations

Hefty, J.: American Geophysical Union

Hefty, J.: European Geosciences Union

Hefty, J.: International Association of Geodesy

Hefty, J.: International Astronomical Union

Janák, J.: European Geosciences Union

Mojzeš, M.: American Geophysical Union

Mojzeš, M.: CEGRN Consortium

Mojzeš, M.: European Geosciences Union

Mojzeš, M.: International Association of Geodesy

Pitoňák, M.: European Geosciences Union

4. PUBLICATIONS

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Lieskovský, T. – Horáková, L. – Drápela, T.: The Beginning of the Mapping of the Ch'anal/El Manantial Site. In: *Excavaciones En El Peten Noreste III. Ch'anal y Tz'ibatnah. Temporadas 2013 y 2014*. Bratislava: SAHI, ISBN 978-80-89704-02-6, 2014, online, pp. 120-128 (in Spanish)

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Textbooks

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Husár, L.: *Metrology in Geodesy*, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4283-2, 141 pp. (in Slovak)

Journals

Bucha, B. – Janák, J.: A MATLAB-Based Graphical User Interface Program for Computing Functionals of the Geopotential Up to Ultra-High Degrees and Orders: Efficient Computation at Irregular Surfaces. In: *Computers & Geosciences*, ISSN 0098-3004. – Vol. 66 (2014), pp. 219-227 (in English)

Daňová, K.: Experimental Verification of the Possibility of Using LIDAR Data from a Forested Area in Archeology. In: *Kartografické listy*, ISSN 1336-5274. – Vol. 22, No. 2 (2014), pp. 81-89 (in English)

Drápela, T. – Lieskovský, T.: The Spirit of the City of Maya. Urbanism in the Service of Cosmology. In: *Historická revue*, ISSN 1335-6550. – Vol. 25, No. 10 (2014), pp. 22-26 (in Slovak)

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Kliment, T. – Gálová, L. – Ďuračiová, R. – Fencík, R. – Kliment, M.: Geospatial Information Relevant to the Flood Protection Available on the Mainstream Web. In: *Slovak Journal of Civil Engineering*, ISSN 1210-3896. – Vol. 22, No. 1 (2014), pp. 9-18 (in English)

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Bucha, B. – Bezděk, A. – Janák, J.: Global Gravity Field Determination from Kinematic Orbits of CHAMP, GRACE and GOCE Satellites by Means of Spherical Radial Basis Functions. In: *Geomatics in Projects 2014*. Štáhlavy, Czech Republic, 1.-2.10.2014. – Brno: Tribun EU, 2014. – ISBN 978-80-263-0796-9. – pp. 87-88 (in English)

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Đuračiová, R. – Gálová, L. – Lieskovský, T. – Rášová, A.: The Impact of the Quality of Data on the Results of GIS-Supported Decision-Making Processes. In: *Enviro-i-Fórum 2014*. Zvolen, Slovakia, 24.-25.6.2014. – Bratislava: Technical University in Zvolen, 2014. – ISBN 978-80-228-2659-4. – pp. 18-36 (in Slovak)

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- Rášová, A.: Modeling of the Factors Affecting Visibility in GIS. In: Geomatics in Projects 2014. Štáhlavy, Czech Republic, 1.-2.10.2014. – Brno: Tribun EU, 2014. – ISBN 978-80-263-0796-9. – pp. 28-29 (in Slovak)
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Stopková, E.: Optimization of Selected Methods of Spatial Statistics in Three-Dimensional Space Using Kd-Tree. In: GIS Ostrava 2014: Geoinformatics for Intelligent Transportation. Ostrava, Czech Republic, 27.-29.1.2014. – Ostrava: VŠB – Technical University of Ostrava, 2014. – ISBN 978-80-248-3310-1. – p. 6 (in Slovak)

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DEPARTMENT OF SURVEYING

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Engineering Surveying I, II

Geodetic Work Legislation

History of Surveying

Industrial Surveying

Photogrammetry I, II

Professional Practice

Special Seminar

Surveying I, II, III

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)

Surveying in Civil Engineering (English)

Terrain Geodesy Education

Obligatory elective subjects

Applied Close-Range Photogrammetry

Bachelor's Thesis

Diploma Thesis

Surveying in Underground Areas

Optional subjects

Measuring Systems in Engineering Surveying

1.2 Postgraduate courses

Engineering Surveying

Photogrammetry

2. THESES

2.1 Bachelor theses

There were 21 works.

2.2 Graduate theses

Bagín, T.: The Measurement of the Geometric Parameters of Crane Rails Using a Spatial Polar Method
Supervisor: Bajtala, M.

Ďuriš, V.: Electro-Optical Rangefinders – Control Procedures According to STN ISO 17123-4: 2013
Supervisor: Ježko, J.

Ďurková, D.: Monitoring Survey of an Industrial Object
Supervisor: Kyrinovič, P.

Hatala, I.: Testing Terrestrial Radar Systems from the Point of View of Their Application in Geodesy
Supervisor: Kopáček, A.

Hatalová, M.: Using Terrestrial Laser Scanning Methods for the Documentation of Baroque Era Bridges
Supervisor: Sokol, Š.

Hroššo, B.: Deformation Monitoring of the Steel Construction of a Bridge Using TLS
Supervisor: Erdélyi, J.

Kottáš, M.: Extraction, Description and Matching of Feature Points in Digital Images Using Parallel Algorithms
Supervisor: Fraštia, M.

Martvoňová, K.: Analysis of Changes in the Position of the Projection Center of TLS
Supervisor: Erdélyi, J.

Novarová, M.: Technical Map of a Town
Supervisor: Kyrinovič, P.

Oros, M.: Analysis of 3D Data Collection Using VISION Technology
Supervisor: Bajtala, M.

Radinger, F.: 3D Model Viewers – Testing Them and Their Potential Uses in Information Systems
Supervisor: Fraštia, M.

Sury, T.: Universal Measuring Stations – Control Procedures According to STN ISO 17123-5: 2013
Supervisor: Ježko, J.

Ščevíková, S.: Deformation Measurements of Bridge Structures by a Terrestrial Radar System
Supervisor: Kopáček, A.

Ševců, M.: Use of the Method of Terrestrial Laser Scanning in the Documentation of Early Gothic Style Churches
Supervisor: Sokol, Š.

Valáška, D.: Reconstruction of Ceramic Vessels from Archeological Excavations Using Image Scanning Technology
Supervisor: Marčíš, M.

Vičáková, V.: Use of Low Cost Devices for Navigation in Indoor Spaces
Supervisor: Kyrinovič, P.

2.3 Doctoral theses

Lipták, I.: Automation of Deformation Measurements of Bridge Structures
Supervisor: Kopáček, A.

Hamid, S. E. A.: Identification and Analysis of Land Use and Land Cover in the Darfur Region by Satellite Data
Supervisor: Kopáček, A.

3. RESEARCH

3.1 Research projects

Monitoring the Structural Health of Bridges Via Repeated Dynamic Tests (2013-2017, Sokol, M. – Kopáček, A. – Kyrinovič, P. – Erdélyi, J. – Lipták, I.), APVV-0236-12

Indoor Navigation Equipment (2013-2015, Kopáček, A. – Kyrinovič, P. – Erdélyi, J. – Lipták, I. – Lukáč, Š. – Kajánek, P. – Ilkovičová, L.), VEGA 1/0445/13

Competence Center for SMART Technologies for Electronics and Informatics Systems and Services (2011-2014, Kopáček, A. – Kyrinovič, P. – Lipták, I. – Erdélyi, J.), ITMS 26240220072

Detection of an Area and Discrete Shifts in a Fragile Territory Using Low-Cost Photogrammetry, Terrestrial and Satellite Technologies (2014-2016, Sokol, Š.), VEGA 1/0133/14

Localisation in the Indoor Space of Buildings Using QR Codes (2014-2015, Ilkovičová, L.) Young Research Project

Monitoring Rock Cliffs Using Low-Cost UAV Photogrammetry (2014-2015, Trhan, O.) Young Research Project

3.2 International cooperation

Cooperating institutions

Department of Special Geodesy, Czech Technical University in Prague, Czech Republic

Institute of Geodesy, Brno University of Technology, Czech Republic

Institute of Geodesy and Mine Surveying, Technical University of Ostrava, Czech Republic

Technische Universität München, Germany

University of Zagreb, Croatia

Geodetic and Geophysical Institute MTA, Hungary

Vienna University of Technology, Austria

Kavala Institute of Technology, Greece

“1 Decembrie 1918” University of Alba Iulia, Romania

University of West Hungary, Hungary

“Politehnica” University of Timisoara, Romania

Central Mining Institute, Poland

Membership in international professional organizations

Fraštia, M.: International Society for Photogrammetry and Remote Sensing (ISPRS)

Kopáček, A.: Bavarian Academy of Sciences: Surveying Commission

Kopáček, A.: FTBGU

Kopáček, A.: International Association of Geodesy, SC4 WG2: Building Structures as Kinematic Systems

Kopáček, A.: National delegate to International Federation of Surveyors (FIG), Commission 6: Engineering Surveying

Kopáček, A.: National delegate to International Federation of Surveyors (FIG), WG 6.2: Engineering Surveying for Industry and Research

Kopáček, A.: European Education in Geodetic Engineering, Cartography and Surveying, WG1: Pregraduate Education

Lukáč, Š.: National delegate to International Federation of Surveyors (FIG), Commission 1: Professional Standards & Practice

Lukáč, Š.: International Federation of Surveyors (FIG), Working Group 6.1: Deformation Measurements and Analysis

4. PUBLICATIONS

Books

Erdélyi, J.: Determination of Displacements of Bridge Structures Using TLS, Ed. of Scientific Works No. 136, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4230-6, 126 pp. (in Slovak)

Marčíš, M.: Protection and Restoration of a Cultural Heritage Using Methods of Digital Photogrammetry, Ed. of Scientific Works No. 138, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4230-7, 119 pp. (in Slovak)

Journals

Erdélyi, J. – Kopáčik, A. – Ilkovičová, L. – Lipták, I. – Kajánek, P.: Monitoring of a Concrete Roof Using Terrestrial Laser Scanning. In: *Geoinformatics*. ISSN 1802-2669. Vol. 13 (2014), pp. 25-30 (in English)

Fraštia, M.: – Likáč, Š.: Intergeo 2014 and 20th Polish – Czech – Slovak Geodetic Days in Berlin. In: *Slovak Surveyor and Cartographer*. ISSN 1335-4019. Vol. 19, No. 4 (2014), pp. 22-26 (in Slovak)

Ilkovičová, L. – Erdélyi, J. – Kopáčik, A.: Proposed Positioning System in an Indoor Environment Using QR Codes. In: *Transfer*. ISSN 1337-9747. Vol. 6, No. 1 (2014), pp. 4-7 (in Slovak)

Ilkovičová, L. – Erdélyi, J. – Kopáčik, A.: Barcode Based Localisation System in Indoor Environment. In: *Geoinformatics*. ISSN 1802-2669. Vol. 13 (2014), pp. 31-36 (in English)

Ježko, J.: Quality Control of Building Elements and Constructions Using Surveying Techniques. In: *Constructions*. ISSN 1213-8762. Vol. 13, No. 4 (2014), pp. 82-88 (in Slovak)

Ježko, J. – Sokol, Š. – Bajtala, M.: The Methods of Making Geodetic Data for the Protection and Reconstruction of an Immovable Cultural Heritage. In: *Museology and Cultural Heritage*. ISSN 1339-2204. No. 2 (2014), pp. 33-48 (in Slovak)

Ježko, J. – Sokol, Š. – Bajtala, M. – Černota, P.: Testing the Accuracy of Determining 3-dimensional Cartesian Coordinates Using the Universal Measuring Station S8 Trimble DR Plus ROBOTIC. In: *Mineral Engineering*. ISSN 1640-4920. Vol. 15, No. 1 (33) (2014), pp. 85-90 (in English)

Kajānek, P.: Testing the Possibilities of Using IMUs with Different Types of Movements. In: *Geoinformatics*. ISSN 1802-2669. Vol. 12 (2014), pp. 61-66 (in English)

Kajānek, P.: Monitoring Dynamic Deformations of the SNP Bridge in Bratislava. In: *GaKO*. ISSN 0016-7096. Vol. 60 (102), No. 9 (2014), pp. 240-245 (in Slovak)

Kyrinovič, P. – Erdélyi, J. – Lipták, I.: Measuring Deformations of a Lock Chamber by the Leica Nivel 220 Tilt Sensor. In: *Slovak Surveyor and Cartographer*. ISSN 1335-4019, Vol 19, No. 3 (2014), pp. 15-23 (in Slovak)

Lipták, I. – Erdélyi, J. – Kopáčik, A. – Kyrinovič, P.: Monitoring of Bridge Dynamics by Radar Interferometry. In: *Geoinformatics*. ISSN 1802-2669. Vol.12 (2014), pp. 10-15 (in English)

Lukáč, Š. – Prvý, M.: Legislative Assurance Aspects of Measuring Deformations of Water Structures in Slovakia. In: *Slovak Surveyor and Cartographer*. ISSN 1335-4019, Vol 19, No. 3 (2014), pp. 5-8 (in Slovak)

Marčíš, M. – Fraštia, M. – Trhan, O.: Deformation Measurements of Gabion Walls Using Image Based Modeling. In: *Geoinformatics*. ISSN: 1802-2669. Vol. 12 (2014), pp. 48-54 (in English)

Kyrinovič, P.: IN GEO 2014. In: *GaKO*. ISSN 0016-7096. Vol. 60 (102), No. 6 (2014), pp. 163-164 (in Slovak)

Sokol, Š. – Bajtala, M. – Lipták, M.: Analysis of the Present Acquisition Methods of Spatial Information About the Objects With Spatial Composition. In: *Mineral Engineering*. ISSN 1640-4920. Vol. 15, No. 1 (33) (2014), pp. 31-38 (in English)

Sokol, Š. – Bajtala, M. – Lipták, M.: Influence of the Density of Source Data on a Volume Estimation Using DEM. In: *Mineral Engineering*. ISSN 1640-4920. Vol. 15, No. 1 (33) (2014), pp. 39-46 (in English)

Conference Proceedings

Bajtala, M. – Sokol, Š. – Lipták, M.: Elimination of the Influence of Vertical Refractions on Height Measurements Using a Regression Model. In: *Technologies in the Spatial Modeling of Landscapes – Accesses and Applications*. Bratislava, SR, 16.6.2014. Bratislava: Publisher SUT, 2014. ISBN 978-80-227-1458-3. 12 pp. (in Slovak)

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Bajtala, M. – Sokol, Š. – Oros, M.: Acquisition of Spatial Data Using VISION and IMAGING Technology. In: *Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International Conference, Tatranské Matilare, SR, 17.9.-19.9.2014*. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 12 pp. (in Slovak)

Brunčák, P. – Chlepková, M. – Haličková, J.: Using Image-Based Modelling in Archeology and the Digitalization of a Cultural Heritage. In: *Technologies in the Spatial Modelling of Landscapes – Accesses and Applications*. Bratislava, SR, 16.6.2014. Bratislava: Publisher SUT, 2014. ISBN 978-80-227-1458-3. 13 pp. (in Slovak)

Brunčák, P. – Haličková, J. – Sučíková, A.: Using TLS in the Creation of Monument Documentation. In: *Technologies in the Spatial Modeling of Landscapes – Accesses and Applications*. Bratislava, SR, 16.6.2014. Bratislava: Publisher SUT, 2014. ISBN 978-80-227-1458-3. 15 pp. (in Slovak)

Erdélyi, J. – Kopáčik, A. – Ilkovičová, L. – Lipták, I. – Kajánek, P.: Deformation Monitoring of a Parabolic Roof Structure Using TLS. In: *INGEO 2014: 6th International Conference on Engineering Surveying, Prague, CR, 3.-4.4.2014*. Prague: Czech Technical University, 2014. ISBN 978-80-01-05469-7. pp. 75-80 (in English)

Erdélyi, J. – Lipták, I. – Kyrinovič, P. – Kopáčik, A.: Determination of the Vertical Deformations of the Supporting Structure of Selected Bridge Objects by Terrestrial Laser Scan Technology. In: *Geodesy and Cartography in Transportation: 12th International Conference*. Olomouc, CR, 4.-5.9.2014. Prague: Czech Union of Surveyors and Cartographers, 2014. ISBN 978-80-02-02553-5. pp. 191-204 (in Slovak)

- Erdélyi, J. – Lipták, I – Kyrinovič, P. – Kopáček, A.: Geodetic Monitoring of the Most Slobody Bridge Using TLS. In: In: Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International Conference, Tatranské Matliare, SR, 17.9.-19.9.2014. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 6 pp. (in Slovak)
- Erdélyi, J.: Processing of Point Clouds for Deformation Monitoring. In: Technical Computing Bratislava 2014: 22nd Annual Conference Proceedings. Bratislava, 4. 11. 2014. Prague: Institute of Chemical Technology, 2014. ISBN 978-80-7080-898-6. 6 pp. (in English)
- Fraštia, M. – Marčíš, M. – Talarovič, M.: Determining the Shape of a Gabion Wall of an Expressway by an Image-Based Modelling Method. In: Geodesy and Cartography in Transportation: 12th International Conference. Olomouc, CR, 4.-5.9.2014. Prague: Czech Union of Surveyors and Cartographers, 2014. ISBN 978-80-02-02553-5. pp. 248-257 (in Slovak)
- Fraštia, M. – Marčíš, M. – Plakinger, M. – Beck, J.: Verification of the Expected Impact of the Mining Industry Using the Gatewing X100 Unmanned Aerial Vehicle. In: Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International Conference, Tatranské Matliare, SR, 17.9.-19.9.2014. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 7 pp. (in Slovak)
- Fraštia, M. – Holubec, M.: Comparison of Elevation Models Obtained by Aerial Laser Scanning and Image Based Modelling Method. In: 22nd Slovak Geodetic Days. Žilina, SR, 6.-7.11.2014. Bratislava: Chamber of Surveyors and Cartographers, 2014. ISBN 978-80-89623-07-5. 1 pp. (in Slovak)
- Fraštia, M. – Marčíš, M. – Liščák, P. – Žilka, A: Complex Geodetic and Photogrammetric Monitoring of the Kralovany Rock Slide. In: Safety and Protection of Buildings in Mining Areas. Katowice: Main Institute of Mining, 2014. 11 pp. (in English)
- Ilkovičová, L.: Analysis of the GLONASS Satellite Measurements of the EUREF Permanent Network. In: Juniorstav 2014: 16th Professional Conference of Postgraduate Students. Brno, CR, 30.1.2014. Brno: Brno University of Technology, 2014. 10 pp. (in Slovak)
- Ilkovičová, L. – Erdélyi, J. – Kopáček, A.: Positioning in Indoor Environment Using QR Codes. In: INGENEO 2014: 6th International Conference on Engineering Surveying, Prague, CR, 3.4.4.2014. Prague: Czech Technical University, 2014. ISBN 978-80-01-05469-7. pp. 117-122 (in English)
- Ilkovičová, L. – Kajánek, P. – Kopáček, A.: Determining the Trajectory of Pedestrian Movement in Indoor Environment. In: Technical Computing Bratislava 2014: 22nd Annual Conference Proceedings. Bratislava, 4.11.2014. Prague: Institute of Chemical Technology, 2014. ISBN 978-80-7080-898-6. 9 pp. (in English)
- Ilkovičová, L. – Kopáček, A.: Positioning System in an Indoor Building Environment Using QR Codes. In: Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International Conference, Tatranské Matliare, SR, 17.9.-19.9.2014. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 6 pp. (in Slovak)
- Ilkovičová, L. – Kajánek, P. – Kopáček, A.: Determining the Trajectory of a Pedestrian in an Indoor Environment. In: Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International Conference, Tatranské Matliare, SR, 17.9.-19.9.2014. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 8 pp. (in Slovak)
- Ilkovičová L.: Navigation of Persons – System Design for SvF. In: Advances in Architectural, Civil and Environmental Engineering: 24rd Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. Bratislava, SR, 30. 10. 2014. Bratislava: Publisher SUT, 2014. pp. 159-168 (in Slovak)
- Ježko, J.: Testing and Checking Rotary Laser Devices for Construction Work. In: Testing and Quality in the Construction Industry 2014. Brno, CR, 7.-8.10.2014. Brno: Brno University of Technology, 2014. ISBN 978-80-214-5032-5. pp. 113-128 (in Slovak)
- Ježko, J.: Testing and Checking Surveying Devices – Technical Norms. In: Geodesy and Mining Surveying 2014: 21st SDMG Conference, Tábor, CR, 13.-15.10.2014. Ostrava: VŠB – Technical University of Ostrava, 2014. ISBN 978-80-248-3599-0. 9 pp. (in Slovak)
- Ježko, J.: Professor Pavel Gál – Memories of His Work at the Department of Surveying. In: Technologies in the Spatial Modeling of Landscapes – Accesses and Applications. Bratislava, SR, 16.6.2014. Bratislava: Publisher SUT, 2014. ISBN 978-80-227-1458-3. 12 pp. (in Slovak)
- Ježko, J.: Testing and Controlling Rotary Laser Instruments for the Needs of Geodesy and the Building Industry. In: Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International Conference, Tatranské Matliare, SR, 17.9.-19.9.2014. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 9 pp. (in Slovak)
- Ježko, J.: Professor Pavel Gál and His Work at the Department of Surveying. In: 22nd Slovak Geodetic Days. Žilina, SR, 6.-7.11.2014. Bratislava: Chamber of Surveyors and Cartographers, 2014. ISBN 978-80-89623-07-5. 12 pp. (in Slovak)
- Ježko, J.: Geodetical Bases and Documentation – Trends of a Creation and Outcomes. In: CzechSTAV 2014. Building Industry Changeovers. Hradec Králové, CR. Hradec Králové: Magnanimitas, 2014. pp. 33-42 (in Slovak)
- Kajánek, P. – Kopáček, A.: Monitoring Dynamic Deformations of the SNP Bridge in Bratislava. In: Juniorstav 2014: 16th Professional Conference of Postgraduate Students. Brno, CR, 30.1.2014. Brno: Brno University of Technology, 2014. 7 pp. (in Slovak)
- Kajánek, P. – Kopáček, A.: Testing the Possibilities of Using IMUs with Different Types of Movements. In: INGENEO 2014: 6th International Conference on Engineering Surveying, Prague, CR, 3.4.4.2014. Prague: Czech Technical University, 2014. ISBN 978-80-01-05469-7. pp. 137-142 (in English)
- Kajánek, P. – Kopáček, A.: Using an Inertial Measuring System in the Determination of the Trajectory of Movements of Testing Equipment. In: Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International

- Conference, Tatranské Matliare, SR, 17.9.-19.9.2014. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 8 pp. (in Slovak)
- Kopáčik, A. – Lipták, I. – Erdélyi, J. – Kyrinovič, P.: Bridge Monitoring Using TLS, Accelerometers and Ground Based-Radar Interferometry. In: 25th FIG Congress 2014: Kuala Lumpur, Malaysia, 16.21.6.2014. 2014. ISBN 9788792853219. 15 pp. (in English)
- Kopáčik, A. – Lipták, I. – Erdélyi, J. – Kyrinovič, P.: Automated System for Geodetic Structural Health Monitoring of Bridges. In: CTM 2014 Construction Technology and Management: Proceedings of International Scientific Conference. Bratislava, SR, 9.11.9.2014. Bratislava: Publisher SUT, 2014. ISBN 978-80-227-4243-6. pp. 244-253 (in English)
- Kopáčik, A.: Measuring of Shifts and Deformations of Building Structures, Constructions and Technological Equipment. In: Measurement, Monitoring and Evaluation of Shifts in Water Structures. Bratislava, SR, 16.9.2014. Bratislava: Publisher SUT, 2014. ISBN 978-80-227-4245-0. 13 pp. (in Slovak)
- Kyrinovič, P. – Erdélyi, J. – Lipták, I.: Measuring Deformations of Lock Chambers. In: Geodesy, Cartography and GIS 2014: 8th Scientific-Professional International Conference, Tatranské Matliare, SR, 17.9.-19.9.2014. Košice: Technical University of Košice, 2014. ISBN 978-80-553-1781-6. 8 pp. (in Slovak)
- Kyrinovič, P. – Erdélyi – J. Lipták, I.: Using TLS Technology for the Reconstruction of an Object in the Project Preparation Phase of a Construction. In: Technologies in the Spatial Modeling of Landscapes – Accesses and Applications. Bratislava, SR, 16.6.2014. Bratislava: Publisher SUT, 2014. ISBN 978-80-227-1458-3. 10 pp. (in Slovak)
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- Sokol, Š. – Ježko, J. – Bajtala, M.: Verification of Selected Precision Parameters of the Trimble S8 DR Plus Robotic Station. In: INGENEO 2014: 6th International Conference on Engineering Surveying, Prague, CR, 3.4.2014. Prague: Czech Technical University, 2014. ISBN 978-80-01-05469-7. pp. 281-288 (in English)
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- Sokol, Š. – Bajtala, M. – Lipták, M. – Brunčák, P.: Analysis for Volumes in Terms of Data Diversity Surface. In: Safety and Protection of Buildings in Mining Areas. Katowice: Main Institute of Mining, 2014. 10 pp. (in English)
- Trhan, O.: Experimental Verification of the Precision of the Height of a DSM Generated by an Unmanned Aerial Vehicle. In: Juniorstav 2014: 16th Professional Conference of Postgraduate Students. Brno, CR, 30.1.2014. Brno: Brno University of Technology, 2014. 7 pp. (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

Foundations 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. THESES

2.1 Bachelor theses

There were 8 works.

2.2 Graduate theses

Banioras, D., E.: Slope Stabilization

Supervisor: Frankovská, J.

Belko, M.: Design of Measures for Stabilizing the Upstream Slopes of Dams and Banks of Reservoirs Threatened with Abrasion

Supervisor: Minárik, M.

Červeň, M.: The Piarg Water Management System in the Past and Today

Supervisor: Bednárová, E.

Chalupková, V.: Geotechnical Expertise of the Foundation of Eurovea – Selected Problems

Supervisor: Hruštinec, Ľ.

Charalampidis, I.: Geotechnical Design of Deep Foundations – Case Study

Supervisor: Frankovská, J.

Kováčik, M.: Calculation of the Settlement of a Hydropower Plant Building in Gabčíkovo

Supervisor: Hruštinec, Ľ.

Kozák, M.: Suitability of the Design Method for a Retaining Structure

Supervisor: Turček, P.

Kysel, V.: Redevelopment of the Failure of the Dam of Lime-Settling Pond
Supervisor: Slávik, I.

Mrázik, R.: Securing a Deep Excavation by Nailing
Supervisor: Súľovská, M.

Panuška, J.: Laboratory Investigation of the Selected Geotechnical
Parameters of Soils
Supervisor: Frankovská, J.

Pitoňáková, A.: The Influence of the Long-Lasting Operation of a Water
Reservoir on Efficiency of a Grouting Curtain
Supervisor: Bednárová, E.

Štefunková, V.: Alternative Solutions for the Červený Kút Tunnel Lining
Connection
Supervisor: Chabroňová, J.

Zrubeková, K.: Stability of a Landslide Area at a Water Construction in the
Carpathian Flysch
Supervisor: Kopecký, M.

2.3 Doctoral theses

Gatíal, M.: Geotechnical Properties of Loess-Like Sediments Determined by a
Dynamic Penetration Test
Supervisor: Turček, P.

Kasana, A.: The Effect of Geotechnical Factors on the Safety of Low Earthfill
Dams
Supervisor: Bednárová, E.

3. RESEARCH

3.1 Research projects

The Effect of Long-Term Loading on the Safety of Embankments of Hydraulic
Structures (2013-2015, Bednárová, E.), VEGA 1/ 0318/13

Prediction and Verification of the Geotechnical Aspects of Environmental
Burdens and Constructions (2012-2014, Masarovičová, M.), VEGA
1/1309/12

Determination of the Critical Parameters of the Activation of Landslide Areas
that Threaten Transport Construction and Waterworks (2014-2016 Kopecký,
M.), VEGA 1/0533/14

Prediction of the Development of Deformations of Geotechnical Structures
Depending on the State of the Stress (2013-2015, Turček, P.), VEGA 1/
0241/13

3.2 International cooperation

Membership in international professional organizations

Frankovská, J.: Representative of the Slovak Republic on the Czech and
Slovak Committee of the International Society for Soil Mechanics and
Geotechnical Engineering (ISSMGE)

Frankovská, J.: Representative of the Slovak Republic on CEN – TC 250/SC7
Geotechnics

Frankovská, J.: Representative of the Slovak Republic on ETC 10 Evaluation
of Eurocode 7 of the International Society for Soil Mechanics and
Geotechnical Engineering (ISSMGE)

Hruštinec, Ľ.: Representative of the Slovak Republic on the Czech and Slovak
Committee of the International Society for Soil Mechanics and Geotechnical
Engineering (ISSMGE)

Hulla, J.: Representative of the Slovak Republic on the Czech and Slovak
Committee of the International Society for Soil Mechanics and Geotechnical
Engineering (ISSMGE)

Kopecký, M.: Representative of the Slovak Republic on the Slovak Committee
of the International Association of Engineering Geology (IAEG)

Masarovičová, M.: Representative of the Slovak Republic on the Regional
Committee of the International Association for Computer Methods and
Advances in Geomechanics (IACMAG)

Masarovičová, M.: Representative of the Slovak Republic on the Czech
and Slovak Committee of the International Society for Soil Mechanics and
Geotechnical Engineering (ISSMGE)

Minárik, M.: Representative of the Slovak Republic on the International
Committee of ICOLD (International Commission on Large Dams) –
Computational Aspects of Analysis and Design of Dams.

Ondrášik, M.: Representative of the Slovak Republic for the International
Association for Engineering Geology and the Environment (IAEG)

Slávik, I.: Representative of the Slovak Republic on the Czech and Slovak
Committee of the International Society for Soil Mechanics and Geotechnical
Engineering (ISSMGE)

Súľovská, M.: Representative of the Slovak Republic on the Czech and Slovak
Committee of the International Society for Soil Mechanics and Geotechnical
Engineering (ISSMGE)

Turček, P.: Representative of the Slovak Republic on the Czech and Slovak
Committee of the International Society for Soil Mechanics and Geotechnical
Engineering (ISSMGE)

Turček, P.: Representative of the Slovak Republic for CEN – TC 250/SC7
Geotechnics

Turček, P.: Representative of the Slovak Republic for the ETC 10 Evaluation of
Eurocode 7 of the International Society for Soil Mechanics and Geotechnical
Engineering (ISSMGE)

4. PUBLICATIONS

Books

Slávik I.: Monitoring the Geotechnical Properties of the Geomaterials of Tailing Dams, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4155-2, 159 pp. (in Slovak)

Journals

Baliak, F. – Ondrášik, M. – Brček, M.: Water as Geological Factor of the Environment and Its Influence on Humans. In: *Acupuncture and Natural Medicine*, ISSN 1339-4703, No. 1 (2014), pp. 50-52 (in English)

Durmeková, T. – Frankovská, J. – Kopecký, M.: Correlation between the Point Load Index and Uniaxial Compressive Strength for Soft and Weak Rocks. In: *Acta Geologica Slovaca*, ISSN 1338-0044, Vol. 6, No. 1 (2014), pp. 61-69 (in Slovak)

Grambličková, D. – Bednárová, E. – Babečka, J.: Karolína Dam – Analysis of Seepages and Design of Treatment Measures. In: *Geotechnika*, ISSN 1211-913X, Vol. 17, No. 4 (2014), pp. 20 – 26 (in Slovak)

Grambličková, D. – Bednárová, E. – Lipták, A.: The Safety Assessment of the Psiare Flood Protection Dyke at Section km 0.275 – 0.544 and the Design of Treatment Measures. In: *Geotechnika*, ISSN 1211-913X, Vol. 17, Nos. 1-2 (2014), pp. 24-29 (in Slovak)

Grambličková, D. – Turček, P. – Súľovská, M. – Ravinger, R.: Verification of the Stability of the Left-Side Dike of the Veľké Kozmálovce Dam. In: *Acta Hydrologica Slovaca*, ISSN 1335-6291, Vol. 15, No. 1 (2014), pp. 68-77 (in Slovak)

Hoľko, M. – Stacho, J.: Comparison of Numerical Analyses with a Static Load Test of a Continuous Flight Auger Pile. In: *Slovak Journal of Civil Engineering*, ISSN 1210-3896, Vol. 22, No. 4 (2014), pp. 1-10 (in English)

Hruštinec, L. – Sumec, J. – Kuzma, J.: Comparison Numerically Calculated and In Situ Measured Values of the Settlements of ISFSF Building. In: *Roczniki Inżynierii Budowlanej*, ISSN 1505-8425, Vol. 13, No. 13 (2013), pp. 21-26 (in English)

Kopecký, M. – Ondrášik, M.: Geotechnical Monitoring of Landslides on Slopes of Water Reservoirs. In: *Slovak Geological Magazine*, ISSN 1335-096X, Vol. 14, No. 1 (2014), pp. 115-125 (in English)

Kralovičová, L. – Šimková, I. – Vlčko, J. – Durmeková, T. – Brček, M. – Boháč, V.: Monitoring the Water Content of Rock Mass Dwellings in the Village of Brhlovce Based on Thermophysical Parameter Measurements. In: *Acta Geologica Slovaca*, ISSN 1338-0044, Vol. 6, No. 1 (2014), pp. 41-50 (in Slovak)

Pollák, P. – Zlatinská, L.: Influence of Subsoil Quality on Design of Slab Foundation. In: *Roczniki Inżynierii Budowlanej*, ISSN 1505-8425, Vol. 13, No. 13 (2013), pp. 105-110 (in English)

Snopko, J. – Očenášová, V. – Bednár, M. – Chabroňová, J.: The Veľká Fatra Tunnel: A Complex Solution of the Transport in the D1 Section at Turany – Hubová. In: *Inžinierske stavby*, ISSN 1335-0846, Vol. 62, No.1 (2014), pp. 44–49 (in Slovak)

Snopko, J. – Očenášová, V. – Chabroňová, J. et. al.: Synergistic Effects of the Veľká Fatra Tunnel or a Comprehensive Solution for the Transport in the Turany – Hubová Section. In: *Tunel*, ISSN 1211-0728, Vol. 23, No. 1. (2014), pp. 71–83 (in Slovak)

Stacho, J. – Chropeň, J. – Frankovská, J.: Analysis of Drilled Piles Using the Cavity Expansion Theory. In: *Geotechnika*, ISSN 1211-913X, Vol. 17, No. 3 (2014), pp. 16-25 (in Slovak)

Šimeková, J. – Liščák, P. – Ondrejka, P. – Fraštia, M. – Kopecký, M. – Žilka, A. – Kováčik, M. – Paudiš, P. – Balík, D.: Monitoring the Movement Activities of the Rock Landslide in the Municipality of Kraľovany. In: *Geologické práce*, ISSN 0433-4795, 2014, pp. 7 – 27 (in Slovak)

Conference Proceedings

Antolová, D. et. al.: Stability Analysis of a Landslide Slope on a Water Structure. In: *Proceedings of 16th PhD. Student Conference Juniorstav*, Brno, Czech Republic, 2014 (in Slovak)

Antolová, D.: Stability Analysis of a Landslide Slope on a Water Structure. In: *Proceedings of Seminar on New Knowledge in Geotechnical Engineering*, Kočovce, Slovakia, 2014, ISBN 978-80-227-4123-1, pp. 6-17 (in Slovak)

Baliak, F. – Ondrášik, M. – Brček, M. – Janták, V. – Mušec, P.: Slope Failures on Road Cut Slopes of the R1 Expressway (Nitra – Tekovské Nemce) in the Slovak Republic. In: *Proceedings of 15th Danube – European Conference on the Geotechnics of Roads and Railways*, Vienna, Austria, 2014, ISBN 978-3-902593-01-6, pp. 403-408 (in English)

Baliak, F. – Brček, M. – Janták, V. – Mušec, P.: Slope Failures and Their Remediation on the Road Cut Slopes of the R-1 Expressway (Nitra – Tekovské Nemce, Northern Bypass of Banská Bystrica). In: *Proceedings of 14th Hydro-Geological Congress on Exploration, Utilization and Protection of Groundwater*, Liberec, Czech Republic, 2014, ISBN 978-80-903635-4-0, pp. 8 (in Slovak)

Baliak, F. – Janták, V. – Mušec, P. – Brček, M.: Development of Slope Deformations and Their Remediation on the Slopes of the Road-Cuts of the R1 Expressway, Selenec – Tekovské Nemce Section. In: *Proceedings of 14th International Conference on Geotechnics*, Horný Smokovec, Slovakia, 2014, ISBN 978-80-248-3519-8, pp. 41-49 (in Slovak)

Bednárová, E. – Grambličková, D. – Babečka J. – Glaus, P.: Lessons Learned and Experiences from Treatment Works on Hydraulic Structure Karolína. In: *Proceedings of 82nd International ICOLD Symposium on Dams in a Global Environmental Challenges*, Bali, Indonesia, 2014, Vol. 2, pp. 273-281 (in English)

Bednárová, E. – Minárik, M. – Grambličková, D.: How We Managed Flood Discharges on the Danube in Bratislava in 2013. *Proceedings of 10th Conference on Water Economics and Hydrotechnics*, Struga, Republic of Macedonia, 2014, ISBN 978-608-65373-3-3, pp. 45-52 (in English)

- Bednárová, E. – Minárik, M. – Grambličková, D.: Special Methodological Approaches for Clarifying of Anomalies in the Seepage Regime of Hydraulic Structures. In: Proceedings of 14th International Multidisciplinary Scientific GeoConference SGEM 2014, Albena, Bulgaria, 2014, ISBN 978-619-7105-08-7, Vol. 2, pp. 839-846 (in English)
- Bednárová, E. – Minárik, M. – Lipták, B. – Kasana, A. – Mackovjak, P.: Water Reservoirs and Expected Climate Changes. In: Proceedings of 82nd International ICOLD Symposium on Dams in a Global Environmental Challenges, Bali, Indonesia, 2014, Vol. 7, pp. 219-226 (in English)
- Bednárová, E.: The Role of Reservoirs in the Climate Changes Expected. In: Proceedings of 13th Seminar on World Water Day, Poprad, Slovakia, 2014, p. 5 (in Slovak)
- Bednárová, E. – Minárik, M.: 82nd ICOLD Annual Meeting, Bali, Indonesia. In: Proceedings of 34th "Dam Days" Conference, Horný Smokovec, Slovakia, 2014, ISBN 978-80-971596-6-5 (in Slovak)
- Bednárová, E.: Sustainable Development of Water Reservoirs. In: Proceedings of 18th Seminar on District Water Days, Michalovce, Slovakia, 2014, ISBN 978-80-89139-32-3, pp. 21-26 (in Slovak)
- Dobrodenková, V.: Standard Penetration Test for the Determination of Geotechnical Parameters. In: Proceedings of Seminar on New Knowledge in Geotechnical Engineering, Kočovce, Slovakia, 2014, ISBN 978-80-227-4123-1, pp. 57-67 (in Slovak)
- Dobrodenková, V.: Changes in the Consistency Limits of Soils Treated with Lime. In: Proceedings of 24th Annual PhD. Student Conference on Advances in Architectural, Civil and Environmental Engineering, Bratislava, Slovakia, 2014, ISBN 978-80-227-4301-3, pp. 432-438 (in Slovak)
- Frankovská, J. – Kopecký, M. – Turček, P.: The Correlation of Surface Area with Hydraulic Conductivity of Fine-Grained Soils. In: Proceedings of 14th International Multidisciplinary Scientific GeoConference SGEM 2014, Albena, Bulgaria, 2014, ISBN 978-619-7105-08-7, Vol. 2, pp. 893-900 (in English)
- Frankovská, J. – Kopecký, M.: Assessment of the Collapsibility of Loess Based on the Results of Field and Laboratory Testing. In: Proceedings of 32nd International Seminar on Field Geotechnical Methods, Ústí nad Labem, Czech Republic, 2014, ISSN 1213-1237, pp. 19-25 (in Slovak)
- Frankovská, J. – Kopecký, M. – Ondrášik, M.: Waste Minimization in the Construction of a Large Diameter Shaft. In: Proceedings of 20th International Conference on Techniques of Environment Protection "TOP 2014", Častá – Papiernička, Slovakia, 2014, ISBN 978-80-227-4174-3, pp. 129-134 (in Slovak)
- Frankovská, J. – Panuška, J. – Dobrodenková, V.: Experimental Research on Soil Properties Treated with Lime. In: Proceedings of 16th Conference on Foundations of Structures, Stará Lesná, Slovakia, 2014, ISBN 978-80-89655-05-5, pp. 43-48 (in Slovak)
- Frankovská, J. – Panuška, J. – Dobrodenková, V.: Experimental Research on Threatened Soils. In: Proceedings of 18th Ivan Poliaček Seminar, Bratislava, Slovakia, 2014, ISBN 978-80-89565-16-0, pp. 38-45 (in Slovak)
- Frankovská, J.: European Standards for Geotechnical Design: the Second Generation. In: Proceedings of 16th Conference on Foundations of Structures, Stará Lesná, Slovakia, 2014, ISBN 978-80-89655-05-5, pp. 13-16 (in Slovak)
- Frankovská, J.: Geotechnical Structures for Remediation of Contaminated Sites. In: Proceedings of Conference on Polluted Areas, Štrbské Pleso, Slovakia, 2014, ISBN 978-80-89503-28-5, pp. 112-113 (in Slovak)
- Galliková, Z.: Numerical Analysis of Subsoil with Three Different Constitutive Models. In: Proceedings of 14th International Multidisciplinary Scientific GeoConference SGEM 2014, Albena, Bulgaria, 2014, ISBN 978-619-7105-08-7, Vol. 2, pp. 673-681 (in English)
- Havčo, J. – Argaláš, B. – Turček, P.: Ensuring the Stability of the Excavation and Foundation of the Holocaust Memorial on the Premises of the Synagogue in Ružomberok. In: Proceedings of 16th Conference on Foundations of Structures, Stará Lesná, Slovakia, 2014, ISBN 978-80-89655-05-5, pp. 23-28 (in Slovak)
- Horváthová, T.: Environmental Geotechnics and Contaminated Sites in Slovakia. In: Proceedings of PhD. Student Conference, Hradec Králové, Czech Republic, 2014, ISBN 978-80-87952-07-8, pp. 3162-3169 (in Slovak)
- Horváthová, T.: Numerical Modelling of the Spreading of Contamination in Porous Media and Its Limitation with a Sealing Wall. In: Proceedings of 24th Annual PhD. Student Conference on Advances in Architectural, Civil and Environmental Engineering, Bratislava, Slovakia, 2014, ISBN 978-80-227-4301-3, pp. 477-484 (in Slovak)
- Horváthová, T.: Geotechnical Model of the Goudron Landfills (Tarponds). In: Proceedings of Seminar on New Knowledge in Geotechnical Engineering, Kočovce, Slovakia, 2014, ISBN 978-80-227-4123-1, pp. 91-100 (in Slovak)
- Hruštinec, L. – Sumeč, J. – Kuzma, J.: Interaction of a Spread Foundation with Subsoil: A Comparison of the Analytical and FEM Solutions. In: Proceedings of 12th International Conference on New Trends in the Statics and Dynamics of Buildings. Bratislava, 2014, ISBN 978-80-227-4259-7, p. 8 (in Slovak)
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- Slávik, I.: Changes in the Volume of Soil as a Secondary Cause of Failures of Retention Reservoirs. In: Proceedings of 32nd International Seminar on Geotechnical Field Methods, Ústí nad Labem, Czech Republic, 2014, ISSN 1213-1237 (in Slovak)
- Slávik, I.: Stability Analysis of the Tailings of Lime Sludge. In: Proceedings of 12th International Conference on New Trends in the Statics and Dynamics of Buildings. Bratislava, 2014, ISBN 978-80-227-4259-7 (in Slovak)
- Stacho, J.: Analysis of Continually Drilled Piles and Drilled Piles Using the Cavity Expansion Theory. In: Proceedings of 24th Annual PhD. Student Conference on Advances in Architectural, Civil and Environmental Engineering, Bratislava, Slovakia, 2014, ISBN 978-80-227-4301-3, pp. 579-588 (in Slovak)
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Turček, P. – Súľovská, M. – Horáčková, S.: Evaluation of Retaining Structures at the SO 204-00 "Kysuca" Bridge at km 37,00 Near the Town of Čadca. In: Proceedings of 42nd International Conference on the Foundations of Structures, Brno, Czech Republic, 2014, ISBN 978-80-87920-01-5, pp. 11-16 (in Slovak)

Turček, P. – Stacho, J. – Havčo, J.: Design and Execution of an Excavation Pit with a High Ground Water Level. In: Proceedings of 16th Conference on Foundations of Structures, Stará Lesná, Slovakia, 2014, ISBN 978-80-89655-05-5, pp. 135-140 (in Slovak)

Turček, P.: Research on Geosynthetic Reinforcements. In: Proceedings of 8th International Conference on Geosynthetics in Construction, Žilina, Slovakia, 2014, ISBN 978-80-227-4317-8, pp. 72-79 (in Slovak)

Turček, P. – Stacho, J.: Undergirding the Excavation Pit in a Hall for a Foundation Using New Technology. In: Proceedings of 19th Conference on Statics of Structures, Piešťany, Slovakia, 2013, ISBN 978-80-89655-03-9 (in Slovak)

Zlatinská, L. – Pollák, P.: Numerical Analysis of Deformations of an Ash Impoundment Using the Finite Element Method. In: Proceedings of Seminar on New Knowledge in Geotechnical Engineering, Kočovce, Slovakia, 2014, ISBN 978-80-227-4123-1, pp. 177-181 (in Slovak)

Zlatinská, L.: Hyperbolic Material Model. In: Proceedings of 24th Annual PhD. Student Conference on Advances in Architectural, Civil and Environmental Engineering, Bratislava, Slovakia, 2014, ISBN 978-80-227-4301-3, pp. 598-603 (in Slovak)

DEPARTMENT OF LAND AND WATER RESOURCES MANAGEMENT

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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

Hydrology of Surface Waters

Hydrology of Sub-Surface Waters

Hydrodynamics of Porous Media

Methods of Field and Laboratory Experiments in Hydrology

Mathematical Modelling of Hydrological and Hydraulic Processes

Simulation Methods, Algorithms and Programming

Evaluation of the Risk of Extreme Hydrological Processes

Geoinformatics

Methods and Models of Hydrological Balance

Methods of Hydrological Forecasting

Deterministic and Stochastic Models of Hydrological Processes

Landscape Planning

Revitalization of Rivers

Soil Water Regime

Hydrochemistry and Hydrobiology

2. THESES

2.1 Bachelor theses

There were 12 works.

2.2 Graduate theses

Batnuur, A.: Proposed Measures to Eliminate Migration Barriers and Improve Flood Protection on the River Bečva in the Municipality of Zubří
Supervisor: Macura, V.

Derzsiová, A.: The Assessment of the Meteorological Elements in Selected Regions of Slovakia.
Supervisor: Danáčková, M.

Dobranský, M.: Proposed Restorative Measures for the Zolná Brook in Lieskovec Near Zvolen.
Supervisor: Škrinár, A.

Doláková, G.: Characteristics of a Drought in Terms of the Hydropedological Conditions in the Záhorská Lowland.
Supervisor: Čistý, M.

Hangoniová, S.: Analysis of Temporal Changes in Floods on Slovak Rivers.
Supervisor: Kohnová, S.

Häusler, F.: River Training Design for the Štiavnička River
Supervisor: Macura, V.

Horváth, M.: Proposed Restorative Measures for the Stankovský Potok Brook in Čierne Near Čadca.
Supervisor: Škrinár, A.

Iszóf, A.: Design of an Irrigation System for Orchards
Supervisor: Bajtek, Z.

Kemény, R.: Proposed Landscale Engineering Measures and Soil Erosion Control for a Selected River Basin.
Supervisor: Hlavčová, K.

Klečková, N.: Changes in a Soil Water Regime Due to Climate Change.
Supervisor: Skalová, J.

Knotek, A.: Analysis of the Water Regime of a Wetland Ecosystem.
Supervisor: Skalová, J.

Lábodiová, D.: Analysis of Irrigation Requirements Using Statistical and Simulation Methods.
Supervisor: Čistý, M.

Látková, T.: Forecasting Changes in the Water Storage of Soils for Different Kinds of Vegetation.
Supervisor: Skalová, J.

Masárová, L.: Analysis of Temporal Changes in the Extreme Runoff Regime of the Vah River Basin.
Supervisor: Kohnová, S.

Piovarči, M.: Analysis of an Irrigation System in Changed Operating Conditions.
Supervisor: Čistý, M.

Vidová, R.: Proposed Landscale Engineering Measures and Soil Erosion Control for a Selected River Basin.
Supervisor: Hlavčová, K.

2.3 Doctoral theses

Karabová, B.: Analysis of the Parameters of the SCS-CN Method in the Conditions of Slovakia
Supervisor: Kohnová, S.

Hamar Zsideková, B.: Analysis of Changes in Hydrological Balance Elements Using Rainfall-Runoff Modelling.
Supervisor: Kohnová, S.

Jariabková, J.: Evaluation of the Quality of Aquatic Habitats Using Bioindications.
Supervisor: Macura, V.

Valent, P.: Rainfall-Runoff Modelling for Frequency Analyses of Discharges.
Supervisor: Szolgay, J.

3. RESEARCH

3.1 Research projects

Hybrid Methods for the Modelling and Evaluation of Hydrological Extremes for a Risk Analysis (2011-2014, HLAVČOVÁ, K.), Research Grant of the Slovak Grant Agency VEGA 1/0908/11

Effect of the Biotic and Abiotic Characteristics of Stream Ecosystems on the Water Regime of Soils (2011-2014, MACURA, V.), Research Grant of the Slovak Grant Agency VEGA 1/0243/11

Evolutionary Algorithms and Data-Driven Methods in the Water Management of a Landscape (2011-2014, ČISTÝ, M.), Research Grant of the Slovak Grant Agency VEGA 1/1044/11

Spatial Interpretation of the Hydrophysical Characteristics of Soil in Relation to Their Hydrological Regime (2011-2014, SKALOVÁ, J.), Research Project of APVV-0139-10

Multivariate Frequency Analysis of Hydrological Extremes for Water Resources Planning and Design (2011-2014, SZOLGAY, J.), Research Project of APVV-0496-10

Development of a Regional System of Climate and Rainfall – Runoff Models for the Prediction of Runoff under a Changed Climate in the Mountainous Regions of Slovakia (2012-2015, HLAVČOVÁ, K.), Research Project of APVV-0303-11

Development of Methods for Determining Climatic and Hydrological Design Characteristics (2012-2015, KOHNOVÁ, S.) (Research project of the European Fund for Regional Development)

Preventing and Remediating Degradation of Soils in Europe through Land Care (RE CARE). (2013-1018, SZOLGAY, J.). Research Project of 7FP No. 603498.

3.2 International cooperation

Cooperating institutions

Department of Hydraulic Engineering, Faculty of Civil Engineering, Czech Technical University, Prague, Czech Republic

Department of Landscape and Water Management, Faculty of Civil Engineering, Technical University, Brno, Czech Republic

Institute of Hydraulics, Hydrology and Water Management, Faculty of Civil Engineering, Vienna University of Technology, Vienna, Austria

Department of Hydraulic Structures, Warsaw Agricultural University, Poland
University of Uppsala, Sweden

Delft Hydraulics, Delft, The Netherlands

Wageningen University, Wageningen, The Netherlands

European Joint Research Centre, ISPRA, Italy

University of Bologna, Italy

Institute of Hydromechanics and Water Resources Management, Swiss Federal Institute of Technology, Zürich, Switzerland
 University of Padova, Department of Land and Agroforest Environments, Italy
 University of Jean Moulin Lyon 3, Lyon, France
 University of Natural Resources and Life Sciences, Institute of Hydrobiology and Aquatic Ecosystem Management, Vienna, Austria

Membership in international professional organizations

Hlavčová, K.: Member of the International Association of Hydrological Sciences
 Hlavčová, K.: Member of the European Geosciences Union
 Kohnová, S.: Member of the European Geosciences Union
 Kohnová, S.: Member of the International Association of Hydrological Sciences
 Szolgay, J.: Member of the Editorial Board of the Journal of River Basin Management
 Szolgay, J.: Member of the Editorial Board of Water Resources Management
 Szolgay, J.: Member of the Editorial Board of the Journal of Hydrology
 Szolgay, J.: Member of the Editorial Board of the Journal of Hydrological Sciences
 Szolgay, J.: National Correspondent of IAHS for Water Management Systems
 Szolgay, J.: National Representative of the International Association for Hydrological Sciences
 Szolgay, J.: Chairman of the Subdivision for Hydrological Forecasting of the Hydrological Division of the EGU
 Szolgay, J.: Member of the Association of Hydrological Sciences

4. PUBLICATIONS

Books

Čistý, M. – Becová, A. – Čelár, L.: *Handling Data in Environmental Engineering*. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 136 pp. ISBN 978-80-227-4293-1 (in Slovak)

Skalová, J. – Juráková, M. – Pásztorová, M.: *Impact of Climate Change on the Water Regime of Wetlands*. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 124 pp. ISBN 978-80-227-4126-2 (in Slovak)

Zsideková, B.: *Analysis of Changes of Water Balance Characteristics Using Rainfall Runoff Modelling*. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 120 pp. ISBN 978-80-227-4310-5 (in Slovak)

Journals

Banasik, K. – Rutkowska, A. – Kohnová, S.: *Retention and Curve Number Variability in a Small Agricultural Catchment: The Probabilistic Approach*. In: *Water*. Vol. 6, No. 5 (2014), pp. 1118-1133. ISSN 2073-4441 (in English)

Čistý, M. – Becová, A. – Čelár, L.: *Contribution to a Multi-Dimensional Analysis of Irrigation Demands*. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 2 (2014), pp. 346-360. ISSN 1335-6291 (in Slovak)

Danáčová, M. – Papinčáková, L. – Szolgay, J.: *Comparison of Changes in Flood Wave Transformations Using a Multilinear Routing Model on the Danube River*. In: *Acta Hydrologica Slovaca*. Vol. 15, (2014), pp. 42-53. ISSN 1335-6291 (in Slovak)

Gaál, L. – Molnár, P. – Szolgay, J.: *Selection of Intense Rainfall Events Based on Intensity Thresholds and Lightning Data in Switzerland*. In: *Hydrology and Earth System Sciences*. Vol. 18, No. 5 (2014), pp. 1561-1573. ISSN 1027-5606 (in English)

Gaál, L. – Beranová, R. – Hlavčová, K. – Kyselý, J.: *Climate Change Scenarios of Precipitation Extremes in the Carpathian Region Based on an Ensemble of Regional Climate Models*. In: *Advances in Meteorology*. 2014, (2014), 14 pp. ISSN 1687-9309 (print) (in English)

Hall, J. W. – Arheimer, B. – Borga, M. – Brázdil, R. – Kiss, A. – Kjeldsen, T. R. – Kriaučiunienė, J. – Kundzewicz, Z. W. – Lang, M. – Llasat, M. C. – Macdonald, N. – Mcintyre, N. – Merz, B. – Merz, R. – Molnar, P. – Montanari, A. – Neuhold, C. – Parajka, J. – Perdigao, R. A P – Plavcová, L. – Rogger, M. – Salinas, J. L. – Sauquet, E. – Schär, C. M. – Szolgay, J. – Viglione, A. – Blöschl, G.: *Understanding Flood Regime Changes in Europe: a State-of-the-Art Assessment*. In: *Hydrology and Earth System Sciences*. Vol. 18, No. 7 (2014), pp. 2735-2772. ISSN 1027-5606 (in English)

Jarabíková, M. – Pásztorová, M. – Minarič, P. – Skalová, J.: *Impact of Climate Change on Evapotranspiration in the Area of Poipile*. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 1 (2014), pp. 3-14. ISSN 1335-6291 (in Slovak)

Jeneiová, K. – Sabo, M. – Kohnová, S.: *Detection of Trends in Long-Term Maximum Annual Discharges in the Catchments of Slovakia*. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 1 (2014), pp. 161-170. ISSN 1335-6291 (in Slovak)

Jeneiová, K. – Kohnová, S. – Sabo, M.: *Detecting Trends in the Annual Maximum Discharges in the Vah River Basin, Slovakia*. In: *Acta Silvatica et Lignaria Hungarica*. Vol. 10, No. 2 (2014), pp. 133-144. ISSN 1787-064X (in English)

Juričeková, K. – Hlavčová, K.: *Evaluation of the Accuracy of MODIS Satellite Images on the Upper Hron River Basin*. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 1 (2014), pp. 143-150. ISSN 1335-6291 (in Slovak)

Karabová, B.: *Testing the Possibility of the Regionalization of the SCS-CN Method Parameters for the Lowland Areas of Slovakia*. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 1 (2014), pp. 194-203. ISSN 1335-6291 (in Slovak)

Kjeldsen, T. R. – Macdonald, N. – Lang, M. – Mediero, L. – Albuquerque, T. – Bogdanowicz, E. – Brázdil, R. – Castellari, A. – David, V. – Fleig, A. K. – Gül, G. O. – Kriaučiunienė, J. – Kohnová, S. – Merz, B. – Nicholson, O. – Roald, L. A. – Salinas, J. L. – Šarauskiene, D. – Šraj, M. – Strupczewski, W. G. – Szolgay, J. – Toumazis, A. D. – Vanneville, W. – Veijalainen, N. – Wilson, D.: *Documentary Evidence of Past Floods in Europe and Their Utility in Flood Frequency Estimation*. In: *Journal of Hydrology*. Vol. 517 (2014), pp. 963-973. ISSN 0022-1694 (in English)

Kotříková, K. – Hlavčová, K. – Fencík, R.: *Changes in Snow Storage in the Upper Hron River Basin (Slovakia)*. In: *Acta Silvatica et Lignaria Hungarica*. Vol. 10, No. 2 (2014), pp. 145-159. ISSN 1787-064X (in English)

- Látková, T. – Skalová, J. – Pásztorová, M.: Assessment of the Impact of Climate Change on Soil Water Storage for Selected Crops in the Area of Poiplie. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 2 (2014), pp. 338-345. ISSN 1335-6291 (in Slovak)
- Molnar, P. – Faticchi, S. – Berger, C. – Ismail, I. – Gaál, L. – Szolgay, J. – Burlando, P.: Little Evidence for Super Clausius–Clapeyron Scaling of Intense Rainstorm Properties with Air Temperature. In: *Hydrology and Earth System Sciences Discussions*. Vol. 11, No. 7 (2014), pp. 8923-8948. ISSN 1812-2108 (in English)
- Rončák, P. – Hlavčová, K. – Štefunková, Z.: Transfer of Parameters in a Distributed Rainfall-Runoff Model. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 1 (2014), pp. 186-196. ISSN 1335-6291 (in Slovak)
- Salinas, J. L. – Castellarin, A. – Kohnová, S. – Kjeldsen, T. R.: Regional Parent Flood Frequency Distributions in Europe – Part 2: Climate and Scale Controls. In: *Hydrology and Earth System Sciences*. Vol. 18, No. 11 (2014), pp. 4391-4401. ISSN 1027-5606 (in English)
- Salinas, J. L. – Castellarin, A. – Viglione, A. – Kohnová, S. – Kjeldsen, T. R.: Regional Parent Flood Frequency Distributions in Europe – Part 1: Is the GEV Model Suitable as a Pan-European Parent? In: *Hydrology and Earth System Sciences*. Vol. 18, No. 11 (2014), pp. 4381-4389. ISSN 1027-5606 (in English)
- Sleziak, P.: Discharge Time Series Analysis of Selected Slovak Rivers by Wavelet Transform. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 1 (2014), pp. 171-177. ISSN 1335-6291 (in Slovak)
- Sleziak, P.: Analysis of Data Using R Statistical Software. In: *Forum Statisticum Slovacum*. Vol. 10, No. 6 (2014), pp. 159-164. ISSN 1336-7420 (in English)
- Sleziak, P. – Sabo, M.: Gender Differences in the Prevalence of Specific Phobias. In: *Forum Statisticum Slovacum*. Vol. 10, No. 6 (2014), pp. 165-170. ISSN 1336-7420 (in English)
- Stankoci, I. – Jariabková, J. – Macura, V.: Evaluation of the Quality of an Aquatic Habitat on the Drietomica River. In: *Slovak Journal of Civil Engineering*. Vol. 22, No. 1 (2014), pp. 43-48. ISSN 1210-3896 (in English)
- Szolgayová, E. – Art, J. – Blöschl, G. – Szolgay, J.: Wavelet Based Deseasonalization for Modelling and Forecasting of Daily Discharge Series Considering Long Range Dependence. In: *Journal of Hydrology and Hydromechanics*. Vol. 62, No. 1 (2014), pp. 24-32. ISSN 0042-790X (in English)
- Štefunková, Z. – Hlavčová, K. – Valent, P.: An Assessment of the Impact of Climate Change on the Upper Hron River Basin Based on the Results of the Simulation of Three Hydrological Models. In: *Acta Hydrologica Slovaca*. Vol. 15, No. 1 (2014), pp. 213-222. ISSN 1335-6291 (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

Hydropower Engineering

Construction of Metallic Hydraulic Structures

Hydraulic Research

Engineering Networks and Water Structures

Automation of Engineering Problems

Special Articles of Hydraulic Structures

Numerical Modelling of Hydraulic Processes

Water and Road Constructions

1.2 Postgraduate courses

Hydropower Systems

Hydraulic Modelling of Hydrodynamic Phenomena

Fluid Mechanics

Advanced Issues of Hydraulic Structures

2. THESES

2.1 Bachelor theses

There were 8 works.

2.2 Graduate theses

Doktor, S.: Design of a SHPP at the Vojany Weir

Supervisor: Dušička, P.

Hajko, M.: The Reconstruction of the Inlet Structure of the Drahovce WS on the Váh River Respecting the Navigational Requirements

Supervisor: Možiešik, L.

Kubačný, M.: Design of a Control Weir on the Váh River at the Stankovany Profile

Supervisor: Gramblička, M.

Molnár, J.: Verification of the Possibilities of the Utilization of a Fish-Pass for Purposes of Recreational Boating

Supervisor: Čubanová, L.

Nagy, A.: Design Variation of the Lock Filling System of the Kolárovo WS

Supervisor: Možiešik, L.

Šipka, M.: Assessment of the Impact of the Proposed Sered' WS on the Madunice HPP

Supervisor: Rumann, J.

Varga, T.: Assessment of the Flood Protection of the Town of Levice and the Design of Interventions on the Podlužianka River

Supervisor: Šoltész, A.

2.3 Doctoral theses

Palinkášová, Z.: Optimization of the Water Regime in the VSN-3 Drainage System.

Supervisor: Šoltész, A.

3. RESEARCH

3.1 Research projects

Possibilities of the Solution of Flood Situations on Rivers by Means of Technical Interference

(2012-2015, Šoltész, A.), VEGA 1/1011/12

Transformation of Flow Waves in Stages without Direct Hydraulic Bonds of Water Management-Energy Systems

(2011-2014, Dušička, P.), APVV-0680-10

Research on the Use of Heuristic Optimization Methods in the Process of Generating Water Management / Energy Plans for the Regulation of Hydropower Plants

(2011-2014, Šulek, P.), VEGA 1/0578/11

EU Danube Strategy – To Increase the Operational Safety and Transport Capacity of Large Ship Locks by Optimizing Hydraulic Filling and Emptying Systems Through Mathematical Modeling. Research and Heuristic Optimization Methods.

(2012-2015, Možiešik, L.), VEGA 1/0660/12

Teaching and Learning Civil Engineering in the European Context

(2005-2016, Šoltész, A.), CEEPUS CIII-BG-0022-08-1213

Research on the Hydraulic Parameters of Slot Fish-Passes

(2013-2014, Kubala, M.)

3.2 International cooperation

Cooperating institutions

Czech Technical University, Prague, Faculty of Civil Engineering, Department of Hydraulic Engineering, Czech Republic

Technical University of Brno, Faculty of Civil Engineering, Institute of Water Structures, Czech Republic

Membership in international professional organizations

Šoltész, A.: 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

4. PUBLICATIONS

Books

Čubánová, L.: Fish Pass Design Guidebook: Data, Methodology, Examples. 1st ed., Saarbrücken, Scholar's Press, 2014. Online, <<https://www.scholarspress.com/catalog/details/store/gb/book/978-3-639-66765-3/fish-pass-design-guidebook>>. ISBN 978-3-639-66765-3, 65 pp. (in English)

Parts of Books

Dušička, P. – Šulek, P.: Renewable Sources of Energy II : Biomass – Sun – Water. 1st ed., Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-89402-68-336, pp. 238 -258 (in Slovak)

Textbooks

Kamenský, J. – Šoltész, A. – Baroková, D.: Groundwater Hydraulics. 1st ed., Slovak University of Technology in Bratislava, Bratislava, 2014. CD ROM, 154 pp. ISBN ISBN 978-80-227-4312-9. (in Slovak)

Journals

Čubánová, L. – Šebestová, Z.: The Use of 1-D Simulations for Assessment of the Design of Small Hydropower Plants. In: Vodohospodársky spravodajca, Vol. 57, Nos. 7-8, 2014, pp. 14-17 (in Slovak)

Možiešik, L. – Orfánus, M. – Šulek, P. – Rumann, J. – Dušička, P.: Preparation of the Kolárovo Water Structure on the Váh River as a Condition for the Canalisation of the River. In: Inžinierske stavby. ISSN 1335-0846, Vol. 62, No. 6, 2014, pp. 12-14 (in Slovak)

Rončák, P. – Hlavčová, K. – Štefunková, Z.: Transfer of Parameters in a Distributed Rainfall-Runoff Model. In: Acta Hydrologica Slovaca, Vol.15, No. 1, 2014, pp. 186-196 (in Slovak)

Šoltész, A.: Water Cooperatives After the Collapse of Austria-Hungarian Monarchy. In: Vodné hospodárstvo na Východoslovenskej nížine. Vol. 17, No. 2, 2014, ISSN 1339-4096, pp. 6-7 (in Slovak)

Štefunková, Z. – Hlavčová, K. – Valent, P.: An Assessment of the Impact of Climate Change on the Upper Hron River Basin Based on the Results of the Simulation of Three Hydrological Models. In: Acta hydrologica Slovaca, Vol.15, No. 1, 2014, pp. 213-222 (in Slovak)

Šulek, P. – Dušička, P.: Operational Control of Hydropower Plants in the Power System of Slovakia. In: Vodohospodársky spravodajca. 2014, Vol. 57, Nos. 3-4, 2014, pp. 4-6 (in Slovak)

Zachoval, Z. – Knéblová, M. – Roušar, L. – Rumann, J. – Šulkc, J.: Discharge Coefficient of a Rectangular Sharp-Edged Broad-Crested Weir. In: Journal of Hydrology and Hydromechanics, Vol. 62, No. 2, 2014, pp. 145-149 (in English)

Conference Proceedings

Andrássy, T.: Numerical Modelling of Groundwater Flow in the Vicinity of Rivers during Flood Situations. In: Proceedings of the 26th Conference of Young Hydrologists. 13th Conference of Young Water Engineers. 15th Conference of Young Meteorologists and Climatologists. Bratislava, SR, 6.11.2014. SHMÚ, Bratislava, 2013, ISBN 978-80-88907-87-9, p. 12 (in Slovak)

Andrássy, T.: Modelling Groundwater Flow in the Vicinity of Water Sources during Flood Situations. In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4301-3, pp. 860-868 (in Slovak)

- Andrássy, T.: Research of Groundwater Flow in Flood Situation at the Sihot' Island. In: Proceedings of the Conference of Young Researchers. ISBN 978-80-227-4077-7, Slovak University of Technology in Bratislava, pp. 1-10 (in English)
- Andrássy, T. – Baroková, D.: Numerical Modelling of Groundwater Flow Close to Water Resources at Flood Events. In: Proceedings of the 10th International Miklós Iványi PhD & DLA Symposium. International Miklós Iványi PhD & DLA Symposium. University of Pécs, 2014, ISBN 978-963-7298-56-1, p. 1 (in English)
- Baroková, D.: Impact Assessment of Proposed Underground Railway Line in Bratislava on Groundwater Regime. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 495-502 (in English)
- Baroková, D. – Šoltész, A.: Impact of Pumping from Snow-up Lakes in Mountain Region on Groundwater Level Regime, In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 413-419 (in English)
- Čubanová, L.: The Utilization of a Fish-Pass for Recreational Boating. In: Proceedings of the 26th Conference of Young Hydrologists. 13th Conference of Young Water Engineers. 15th Conference of Young Meteorologists and Climatologists. Bratislava, SR, 6.11.2014. SHMÚ, Bratislava, 2013, ISBN 978-80-88907-87-9, p. 7 (in Slovak)
- Čubanová, L.: Fish Pass and Slide for Recreational Boats in One Multipurpose Structure. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 295-302 (in English)
- Dušíčka, M.: Possibilities of Additional Energy Use of Existing Water Structures In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4301-3, pp. 876-880 (in Slovak)
- Dušíčka, M. – Rumann, J.: The Additional Use of Existing Water Structures. In: Proceedings of Colloquium on Landscape Management 2014, International PdD Students Conference, 1st ed., Brno, Mendel University in Brno, 2014, pp. 63-68. ISBN 978-80-7509-177-2 (in English)
- Dušíčka, P. – Hodák, T. – Šulek, P.: Historical Examples of Water Energy Use in Slovakia. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 337-344 (in English)
- Dušíčka, P. – Květon, R. – Šulek, P.: Terrain Measurements and Calibration of Hydro Dynamical Model of the Water Work Drahovce – Madunice. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 699-706 (in English)
- Kelčík, S. – Pindjaková, T. – Šoltész, A.: Design of Flood Protection Measures in Lowland Regions of Slovakia. In: Proceedings of the 10th International Miklós Iványi PhD & DLA Symposium. International Miklós Iványi PhD & DLA Symposium. University of Pécs, 2014, ISBN 978-963-7298-56-1, p. 1 (in English)
- Kelčík, S. – Pindjaková, T.: Design and Assessment of Flood Protection Interventions at the Town of Levice. In: Proceedings of the 26th Conference of Young Hydrologists. 13th Conference of Young Water Engineers. 15th Conference of Young Meteorologists and Climatologists. Bratislava, SR, 6.11.2014. SHMÚ, Bratislava, 2013, ISBN 978-80-88907-87-9, p. 16 (in Slovak)
- Kinczer, T.: Optimization of Operations of Regulatory Hydropower Plants Using Heuristic Methods. In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4301-3, pp. 898-903 (in Slovak)
- Kinczer, T. – Šulek, P.: Optimization of Operation of Regulatory Hydropower Plants Using Heuristic Methods. In: Proceedings of Colloquium on Landscape Management 2014, International PdD Students Conference, 1st ed., Brno, Mendel University in Brno, 2014, pp. 16-21. ISBN 978-80-7509-177-2 (in English)
- Kubala, M.: Design Parameters and Dispositional Solutions of the Fish Passes Entrance. In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4301-3, pp. 904-909 (in Slovak)
- Kubala, M. – Rumann, J.: Fish-passes Entrance and Their Hydraulic and Locating Design Recommendations. In: Proceedings of Colloquium on Landscape Management 2014, International PdD Students Conference, 1st ed., Brno, Mendel University in Brno, 2014, pp. 74-79, ISBN 978-80-7509-177-2 (in English)
- Možiešik, L. – Šulek, P. – Orfánus, M.: Kolárovo Water Structure – Preparation of the Research and Design Proposals. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 447-454 (in English)

- Možiešik, L. – Dušička, P. – Šulek, P. – Rumann, J. – Orfánus, M.: The Kolárovo Water Structure on the Váh River – 1st Stage of the Research. In: Adolf Patera Seminar 2014. Prague, ČVUT, 2014, ISBN 978-80-02-02574-0, pp. 105-112 (in Slovak)
- Palkovičová, A.: Modelling the Hydraulic Parameters of a Flow for an Assessment of Navigational Conditions: Application to a Selected Water Structure. In: Proceedings of the 26th Conference of Young Hydrologists. 13th Conference of Young Water Engineers. 15th Conference of Young Meteorologists and Climatologists. Bratislava, SR, 6.11.2014. SHMÚ, Bratislava, 2013, ISBN 978-80-88907-87-9, p. 9 (in Slovak)
- Palkovičová, A.: Modelling Flow in Critical Areas of Water Structures According to Aspects of Navigational Safety. In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4301-3, pp. 932-938 (in Slovak)
- Palkovičová, A. – Možiešik, L.: Simulation of Flow Regime at the Area of Lock Cuts In: Proceedings of Colloquium on Landscape Management 2014, International PdD Students Conference, 1st ed., Brno, Mendel University in Brno, 2014, pp. 4-10, ISBN 978-80-7509-177-2 (in English)
- Pindjaková, T. – Kelčík, S.: Flood Protection of the District of Levice. In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4301-3, pp. 945-950 (in Slovak)
- Pindjaková, T. – Kelčík, S. – Šoltész, A.: Numerical Modelling of Flood Progress on the Gidra River. In: Proceedings of the 10th International Miklós Iványi PhD & DLA Symposium. International Miklós Iványi PhD & DLA Symposium. University of Pécs, 2014, ISBN 978-963-7298-56-1, p. 1 (in English)
- Rumann, J.: Confrontation of the Research on the Dobrohošť SHPP and its Operation after its Construction. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 183-190 (in English)
- Šoltész, A.: The Activity of Water Cooperatives After the Collapse of Austria-Hungarian Monarchy. In: Proceedings of 18th District Water Days. 1st ed., ÚH SAV Bratislava, Michalovce, 2014, pp. 16-20, ISBN 978-80-89139-32-3. (in Slovak)
- Šoltész, A. – Baroková, D.: Analysis of Surface and Ground Water Interaction in the Danube River Branch System. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 51-58 (in English)
- Šoltész, A. – Orfánus, M.: Hybrid Modelling in Flood Risk Management. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 345-352 (in English)
- Šulek, P. – Orfánus, M. – Dušička, P.: Optimizing Hydro Power Reservoir System Using Hybrid Optimization Approach. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 511-518 (in English)
- Šulek, P. – Dušička, P. – Šebestová, Z.: The Use of the Muskingum-Cunge Method for the Simulation of Artificial Flow Waves from Peaking Hydropower Operation (a Case Study on the Danube, Downstream the Gabčíkovo Hydropower). In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 791-798 (in English)
- Tóthová, B. – Možiešik, L.: Hydraulic Factors Influencing the River Bed That are Caused by River Navigation. In: Proceedings of the SGEM 2014, International Multidisciplinary Scientific Geoconference. GeoConference on Water Resources, Forest, Marine and Ocean Ecosystems. ISSN 1314-2704, ISBN 978-619-7105-13-1, Sofia, STEF 92, 2014, pp. 353-359 (in English)
- Tvrdoň, M.: Coarse Screenings with Self-cleaning Ability. In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1st ed. Bratislava, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4301-3, pp. 972 – 977 (in Slovak)
- Tvrdoň, M. – Rumann, J.: Coarse Screenings with Self-cleaning Ability for Small Hydropower Plants. In: Proceedings of Colloquium on Landscape Management 2014, International PdD Students Conference, 1st ed., Brno, Mendel University in Brno, 2014, pp. 69 – 73, ISBN 978-80-7509-177-2 (in English)

DEPARTMENT OF BUILDING CONSTRUCTION

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Building Acoustics and Illumination

Building and Energy

Building Constructions 1

Building Constructions 2

Building Constructions 3

Building Constructions 4

Building Constructions 5

Building Constructions V

Building Energy and Environmental Simulation

Building Energy and Indoor Environment Simulation

Building Pathology

Building Physics (in English)

Constructions in Architecture 1 (in English)

Constructions in Architecture 2 (in English)

Constructions in Architecture 3 (in English)

Design Basics

Design of Architectural Constructions

Design Studio

Design Studio 3

Design Studio 4

Ecological Architecture

Excursion

Final Thesis

Fire Engineering of Buildings

Fire Safety of Buildings

Master's Seminar

Master's Thesis

Methodology of Scientific Experiments

Modelling of Climatic Processes

Physics of Indoor Environments

Practical Training

Professional Practice

Project 1 – Low-Energy Buildings

Reconstruction of Buildings and Preservation of Monuments 1

Renovation of Buildings

Selected Problems of Building Constructions

Special Architectural Structures

Special Building Constructions

Studio of Building Design I

Studio of Building Design II

Studio of Building Design III

Technical Drawing

Thermal Performance of Buildings

Obligatory elective subjects

Acoustics in Architecture

Advanced Building Materials and Constructions

Aerodynamics and Hydrodynamics of Buildings

Facade Techniques of Intelligent Buildings

Solar Technology and Illumination of Buildings

Thermal Protection of Buildings

Optional subjects

Building-Physical Construction

Computer Graphics

Computer Graphics and Visualization

Computer Graphics and Visualization I

Information Technologies

Building Design

1.2 Postgraduate courses

Aerodynamics and Hydrodynamics of Buildings

Buildings and Energy

Buildings and Urban Acoustics

Building Climatology

Building Constructions – Selected Essays

Building Simulations
 Fire Safety Engineering
 Renewal and Protection of Historic Buildings
 Selected Essays from Building Constructions
 Thermal Performance of Buildings

Rosinčin, P.: Church
 Supervisor: Tomašovič, P.

Suchý, L.: Television Building
 Supervisor: Pernišová, A.

Svinčiak, S.: Student Accommodations
 Supervisor: Rabenseifer, R.

Šipkovská, I.: A School Building
 Supervisor: Chmúrny, I.

Urda, P.: Tax Office Building
 Supervisor: Vargová, A.

Valach, J.: Mountain Service Center
 Supervisor: Jakeš, E.

Vínek, M.: Ultra-Low Energy Standard Apartment Building
 Supervisor: Mendán, R.

Zelem, L.: Office Building
 Supervisor: Hraška, J.

Zlocha, M.: Office Building with Increased Requirements for Energy Efficiency
 Supervisor: Palko, M.

2. THESES

2.1 Bachelor theses

There were 191 works.

2.2 Graduate theses

Bestro, G.: Guest House
 Supervisor: Minarovičová, K.

Bretzová, V.: Sports Hall
 Supervisor: Dlhý, D.

Brix, M.: Library
 Supervisor: Oláh, J.

Dunaj, J.: Renovation of a Pool
 Supervisor: Puškár, A.

Gúdor, J.: Senior Residence
 Supervisor: Gieciová, M.

Jakubec, M.: Office Building
 Supervisor: Vavrovič, B.

Kostroš, J.: Family Farm 3 – Sheep Farming
 Supervisor: Mikolaj, I.

Košťal, J.: Retirement Home in Trenčín
 Supervisor: Žilinský, J.

Lampel, M.: Integrated Fire and Rescue Station in Žilina
 Supervisor: Olbřímek, J.

Lišková, Z.: Cultural Center
 Supervisor: Jamnický, M.

Moravčíková, M.: Hotel
 Supervisor: Držka, M.

Nagyová, D.: Mountain Hotel
 Supervisor: Buday, P.

Rešutík, L.: Art Gallery in the Gap in Bratislava
 Supervisor: Miklósiová, T.

2.3 Doctoral theses

Juráš, P.: Passive Cooling of Residential Buildings: Real Possibilities and Limits of the Climatic Conditions of the SR
 Supervisor: Hraška, J.

Juráš, P.: Analysis of the Influence of Wind-Driven Rain on a Building Envelope and Its Coatings
 Supervisor: Žilinský, J.

Lobotka, P. Modelling of Natural Wind and Its Quantification in a Wind Tunnel
 Supervisor: Žilinský, J.

Majsniar, V.: Natural Controlled Ventilation of Buildings with Ventilation Units Integrated into a Building Facade
 Supervisor: Bielek, B.

3. RESEARCH

3.1 Research projects

Symbiosis of the Interaction of Renewable Energy Sources and the Link of the Building-Climate-Energy System in the Ecology of Low-Energy, Green and Sustainable Architecture
 (2011-2014, Bielek, M.), APVV-0624-10

Research on an Indoor Lighting Environment Based on Chronobiology and Circadian Photometry
(2011-2014, Hraška, J.) APVV-0150-10

Thermal Protection for Passive and Low-Energy Buildings
(2012-2014, Chmúrny, I.) VEGA 1/0281/12

Learning Sustainable Building Principles
(2013-2014, Rabenseifer, R.) Erasmus Mundus joint programmes

Analysis of Sound Propagation in Double Skin Facades from the Point of View of Airborne Sound Insulation. Design, Measurement Methodology, Assessment and Criteria
(2013-2015, Tomašovič, P.) VEGA 1/0358/13

Contribution to the Solution of Selected Problems of Building Roofs
(2013-2016, Oláh, J.) VEGA 1/0710/13

3.2 International cooperation

Cooperating institutions

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 Kharcow, Ukraine

University of Strathclyde, United Kingdom

Chungnam National University, Daejeon, Korea

Membership in international professional organizations

Chmelík, V.: YAN – Young Acoustician Network – representative of the Slovak Republic

Chmúrny, I.: ISO TC 163 Thermal Insulation, CEN TC 89 Thermal Performance of Buildings – representative of the Slovak Republic (SÚTN BA)

Rabenseifer, R., Hraška, J.: IBPSA – International Building Performance Simulation Association

Rychtáriková, M., Chmelík, V.: EAA – European Acoustic Association

4. PUBLICATIONS

Books

Bartko, M.: Wind Resistance of Mechanically Fastened Roofing Systems: Systems with AAC Panel Substrates. 1. ed. [s.l.]: LAP LAMBERT Academic Publishing GmbH & Co. KG, 2014, 112 pp. ISBN 978-3-659-40369-9 (in English)

Bielek, B. – Bielek, M. – Vranay, F. – Lukášik, D. – Vranayová, Z. – Vilčeková, S. – Ehrenwald, P. – Híreš, J. – Majsniar, V. – Mikušová, M.: Low-Energy, Green, Sustainable Building – Climate – Energy. 1.ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 602 pp. ISBN 978-80-227-4185-9 (in Slovak)

Chmúrny, I. Thermal Performance of Buildings: Basics of the Thermal Protection of Buildings. 1.ed. Bratislava: Slovak University of Technology in Bratislava 2014. 303 pp. ISBN 978-80-227-4147-7 (in Slovak)

Novotný, M. – Misar, I. – Štuliak, S.: Waterproof Membranes of Flat Roofs. 1. ed. Prague: Grada Publishing, 2014. 224 pp. ISBN 978-80-247-5002-6. (in Czech)

Oláh, J. – Binek, K. – Budiak, P.: A Manual for the Design and Realisation of Vegetation Roofs. 1. ed. Bratislava: Cech strechárov Slovenska, 2014. 177 pp. ISBN 978-80-227-4135-4 (in Slovak)

Palko, M.: Scaffolds, Formworks and Supports. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 69 pp. ISBN 978-80-227-4168-2 (in Slovak)

Palko, M. – Oláh, J.: The Roof from the Viewpoint of Energy. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 98 pp. ISBN 978-80-227-4167-5 (in Slovak)

Tomašovič, P. – Dlhý, D. – Buday, P. – Bobik, M.: Building Acoustics II. : Laboratory Sound Insulation of Building Structures and Elements. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 180 pp. ISBN 978-80-227-4145-3 (in Slovak)

Parts of books

Medved', J. – Chmelík, V. – Vargová, A.: Chapter 23. Slovakia. In: Building Acoustics Throughout Europe. Vol. 2 [electronic source]: Housing and Construction Types, Country by Country. Madrid: DiScript Preimpresion, S. L., 2014. ISBN 978-84-697-0159-1 (<http://www.cost.eu/media/publications/Building-acoustics-throughout-Europe-Volume-2-Housing-and-construction-types-country-by-country>). pp. 388-414 (in English)

Textbooks

Mend'án, R.: Renewal of Buildings and Protection of Architectural Monuments 1: Renewal of Residential Panel Buildings. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 195 pp. ISBN 978-80-227-4188-0 (in Slovak)

Vavrovič, B. – Mend'án, R.: *Renewal of Buildings and Protection of Architectural Monuments 2: Renewal of Residential Panel Buildings*. 1. ed. Bratislava: Slovak University of Technology in Bratislava, 2014. 234 pp. ISBN 978-80-227-4189-7 (in Slovak)

Journals

Bielek, B.: *New Classification of Renewable Energy Sources in the Development of Technology in Architecture for a Sustainable Society*. In: *Czasopismo techniczne = Technical transactions: Budownictwo = Civil engineering*. Vol. 111, No. 3-B (8) (2014), pp. 41-47. ISSN 0011-4561 (in English)

Bielek, B. – Szabó, D.: *New Facade Ventilation Units of Under Pressure Controlled Ventilation System*. In: *Advanced Materials Research*. Vol. 1057 (2014), pp. 113-120. ISSN 1022-6680(P) (in English)

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Žilinský, J. – Franek, M.: Correct Modeling in the Boundary Layer Wind Tunnel. In: *ATF 2014: e-book of reviewed papers. 3rd Conference on Building Physics and Applied Technology in Architecture and Building Structures*, Vienna, Austria, 6.-7.5.2014, 1. ed. Vienna: TGM – Federal Institute of Technology, 2014, CD ROM, pp. 86-92. ISBN 978-3-200-03644-4 (in English)

DEPARTMENT OF STEEL AND TIMBER STRUCTURES

Head of Department

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Load-Bearing Metal Elements

Load-Bearing Steel Systems

Timber Elements and Structures

Load-Bearing Metal and Timber Elements

Load-Bearing Steel and Timber Systems

Structural Metal Design

Metal and Timber Structures

Steel, Timber and Glass in Architecture

Steel Structures and Bridges

Special Problems of Steel Structures

Metal Bridges

Metal and Timber in Civil Engineering

High-Rise and Long-Span Structures

Bridge Design

Composite Structures

Stability and Plasticity of Steel and Timber Structures

Experimental Verification

Obligatory elective subjects

Timber Structures

High-Rise and Long-Span Structures

Metal and Timber Structures and Bridges

Repair of Metal and Timber Structures

Metal and Timber Structures II

Steel, Timber and Glass in Architecture

Metal and Timber Structures

Structures of Environmental Steel and Timber Buildings

Repair and Recycling of Steel Buildings

Load-Bearing Steel and Timber Systems

Steel Structures of Water Works

2. THESES

2.1 Bachelor theses

There were 6 works.

2.2 Graduate theses

Brečka, E.: Airport Terminal at the M.R. Štefánik Airport in Bratislava
Supervisor: Slivanský, M.

Chmelová, H.: Reconstruction of the Old Bridge in Trenčín
Supervisor: Živner, T.

Chudá, R.: Bridge No. 206 over the River Váh on Highway D1 in the Dubná Skala – Turany Section
Supervisor: Živner, T.

Farkašová, A.: Curling Hall in Bratislava
Supervisor: Sógel, K.

Harmady, D.: Footbridge over the River Váh in Vrútky
Supervisor: Sandanus, J.

Horváth, L.: Steel-Concrete Composite Bridge on Highway D1 in the Jablonov – Studenec Section
Supervisor: Živner, T.

Kamenická, Z.: Hotel in Bratislava
Supervisor: Sógel, K.

Kereškéni, M.: Sports Hall in Ružomberok
Supervisor: Sandanus, J.

Kočíš, M.: Footbridge over Highway D1 in the Hubová – Ivachnová Section
Supervisor: Živner, T.

Kopilcová, A.: Diagnostics and Structural Analysis of Load-Bearing Structure of Timber Church in Leštiny
Supervisor: Slivanský, M.

Kročka, A.: Footbridge for Pedestrians and Cyclists over the River Turiec in Martin
Supervisor: Slivanský, M.

Kvoriaková, L.: Multifunctional Sport Hall in Senica
Supervisor: Slivanský, M.

Liebscherová, L.: Sazka Arena, Prague
Supervisor: Magura, M.

Matejíčka, L.: Design of Road Bridge over the River Torysa in Prešov
Supervisor: Ároch, R.

Matejková, J.: The Load-Bearing Structure of the Bus Station in Bratislava
Supervisor: Slivanský, M.

Matušák, L.: Parking Garage Building – National Football Stadium Bratislava
Supervisor: Magura, M.

Miškovčík, A.: Highway Viaduct with Composite Superstructure Constructed by Launching
Supervisor: Ároch, R.

Novyzedlák, J.: Football Stadium in Bratislava
Supervisor: Brodniansky, J.

Ogureková, M.: Hotel by Orava Lake
Supervisor: Sógel, K.

Ondrejková, E.: Football Stadium in Trnava
Supervisor: Brodniansky, J.

Samaras, K.: Resistance of Cross-Section of Aluminium Plate Girder
Supervisor: Baláž, I.

Sidarchuk, A.: Resistance of Cross-Section of Steel Plate Girders
Supervisor: Baláž, I.

Suchoň, B.: Design of Road Bridge over Railyard
Supervisor: Ároch, R.

Viček, M.: Aircraft Hangar in the M.R. Štefánik Airport in Bratislava
Supervisor: Slivanský, M.

Vrana, A.: Gallery
Supervisor: Sógel, K.

2.3 Doctoral theses

Novyzedlák, P.: Theoretical and Structural Problems of Modern Lightweight Structural Systems Made of Steel, Cables and Membranes.
Supervisor: Brodniansky, J.

3. RESEARCH

3.1 Research projects

Strength and Stability of Metal Bars, Bar Systems and Arches.
(2012-2014, Baláž, I.), VEGA 1/1101/12

Design and Analysis of Hybrid Load-Bearing Steel Systems for Buildings and Transmission Line Systems.
(2012-2014, Brodniansky, J.), VEGA 1/0929/12

Operational Analysis of Timber Truss Constructions during Short-Term and Long-Term Loading; Spatial Interaction with Reinforcements.
(2012-2014, Sandanus, J.) VEGA 1/0947/12

Unique Equivalent Global and Local Initial Imperfection Method for Assessment of Members and Frames Consisting of 4th Class Cross-Sections.
(2014, Brodniansky, J.) Fund of STU BA: Program for the Support of Young Researchers

Steel and Glass Structure Systems of Facades and Roofs.
(2014, Balcierák, L.) Fund of STU BA: Program for the Support of Young Researchers

3.2 International cooperation

Cooperating institutions

Brno University of Technology, Czech Republic
Czech Technical University in Prague, Czech Republic
Technical University of Ostrava, Czech Republic
Vienna University of Technology, Austria
Budapest University of Technology and Economics, Hungary
Graz University of Technology, Austria
Brandenburg University of Technology, Cottbus, Germany

Membership in international professional organizations

Ároch, R.: ECCS (European Convention for Constructional Steelwork), TC 7 Thin-Walled Structures
Ároch, R.: ECCS (European Convention for Constructional Steelwork), TC 10 Structural Connections
Baláž, I.: Member of Eurocode National Correspondents Working Group
Baláž, I.: Member of CEN TC 250 SC3 Subcommittee SC3 Design of Steel Structures
Baláž, I.: Member of CEN TC 250 SC9 Subcommittee SC9 Design of Aluminium Structures
Baláž, I.: Member of SC3 Evolution Group for EN 1993-1-1 Design of Buildings
Baláž, I.: Member of SC3 Evolution Group for EN 1993-1-3 Design of Cold-Formed Members and Sheeting
Baláž, I.: Member of SC3 Evolution Group for EN 1993-1-5 Design of Plated Structural Elements
Baláž, I.: Member of SC3 Evolution Group for EN 1993-2 Design of Steel Bridges
Baláž, I.: Member of SC9 Evolution Group for EN 1999-1-1 Design of Aluminium Structures
Baláž, I.: Member of TC 7, TWG 7.5, ECCS (European Convention for Constructional Steelwork), Technical Committee 7: Thin-Walled, Cold-Formed Sheet Steel in a Building. TC 7.5: Practical Improvement of Design Procedures: European Recommendations for the Application of Metal Sheeting Acting as a Diaphragm

Baláž, I.: Member of IABSE (International Association for Bridge and Structural Engineers)

Baláž, I.: P.E., M.ASCE, Member of ASCE (American Society of Civil Engineering) since 1997

Brodniansky, J.: IASS (International Association for Shell and Spatial Structures)

Magura, M.: IASS (International Association for Shell and Spatial Structures)

Slivanský, M.: IASS (International Association for Shell and Spatial Structures)

Sandanus, J.: IASS (International Association for Shell and Spatial Structures)

Csölleová, ZS.: EMT (Hungarian Technical Scientific Society of Transylvania)

Sógel, K.: EMT (Hungarian Technical Scientific Society of Transylvania)

4. PUBLICATIONS

Part of books

Baláž, I.: Bridge Engineering in the Slovak Republic. In: Handbook of International Bridge Engineering. 1. Edition. Taylor & Francis Group, 2014, ISBN 978-1-4398-1030-9, pp. 747-821 (in English)

Journals

Antalová, J.: Composite Timber Structures and Their Practical Use. In: Stavební partner. E-magazine, Vol. 3, No. 4 (2014), unpag. (in Slovak)

Antalová, J. – Sandanus, J.: Composite Timber Structures and Their Practical Use. In: Eurostav. Vol. 20, Nos. 7-8 (2014), pp. 50-51 (in Slovak)

Baláž, I.: Extradosed Bridges – Part 1. In: Eurostav. Vol. 20, No. 4 (2014), pp. 54-55 (in Slovak)

Baláž, I.: Extradosed Bridges – Part 2. In: Eurostav. Vol. 20, No. 5 (2014), pp. 54-55 (in Slovak)

Baláž, I.: Extradosed Bridges – Part 3. In: Eurostav. Vol. 20, Nos. 7-8 (2014), pp. 44-45 (in Slovak)

Baláž, I.: Chinese Roofed Timber Bridges – Part 1. In: Eurostav. Vol. 20, Nos. 1-2 (2014), pp. 54-55 (in Slovak)

Baláž, I.: Chinese Roofed Timber Bridges – Part 2. In: Eurostav. Vol. 20, No. 3 (2014), pp. 54-55 (in Slovak)

Baláž, I.: Masonry, Concrete and Reinforced Concrete Arch Bridges by French Engineers. In: Konstrukce. Vol. 13, No. 2 (2014), pp. 59-62 (in Slovak)

Baláž, I.: Record Bridge Spans of Several Structural Systems. In: Eurostav. Vol. 20, Nos. 7-8 (2014), pp. 24-27 (in Slovak)

Baláž, I.: Pre-Stressed Concrete Bridges with OTS. In: Eurostav. Vol. 20, No. 9 (2014), pp. 70-71 (in Slovak)

Baláž, I.: Cable Panel Bridges and Finback Bridges. In: Eurostav. Vol. 20, No. 10 (2014), pp. 56-57 (in Slovak)

Baláž, I.: Pre-Stressed Concrete Bridges. In: Eurostav. Vol. 20, No. 11 (2014), pp. 54-55 (in Slovak)

Baláž, I. – Koleková, Y.: Critical Buckling Strength of Patch Loading. In: Engineering Mechanics. Vol. 21, No. 2 (2014), pp. 83-89 (in English)

Brodniansky, J. – Magura, M. – Recký, J.: Laboratory Experimentation of Pipelines with Local Deformations and Tests of Tubular Flange Connections. In: Konstrukce. Vol. 13, No. 1 (2014), pp. 66-69 (in Slovak)

Figuli, L. – Magura, M. – Kavický, V. – Jangl, Š.: Application of Recyclable Materials for an Increase in Buildings' Safety Against the Explosion of an Improvised Explosive Device. In: Advanced Materials Research. Vol. 1001 (2014), pp. 447-452 (in English)

Gramblička, Š. – Živner, T.: Renovation of Steel Load-Bearing Structure of a Hall Harmed by Chemical Effects. In: Stavebné materiály. Vol. 10, No. 5 (2014), pp. 28-31 (in Slovak)

Gramblička, Š. – Živner, T.: Strengthening the Steel Load-Bearing Structure of a Hall in a Chemical Production Facility. In: Stavebné materiály. Vol. 10, No. 6 (2014), pp. 28-30 (in Slovak)

Gramblička, Š. – Živner, T.: Load-Bearing Structure of a Hall in a Chemical Production Facility. In: Stavebníctví. Vol. 8, Nos. 11-12 (2014), pp. 51-56 (in Slovak)

Magura, M.: Storage Bunkers: Design, Damage and Reconstruction. In: Eurostav. Vol. 20, No. 11 (2014), pp. 20-22 (in Slovak)

Sandanus, J. – Katona, O.: Design of Load-Bearing Structures Made of Cross – Laminated Timber. In: Eurostav. Vol. 20, No. 3 (2014), pp. 52-53 (in Slovak)

Sandanus, J. – Lužica, F.: Stadium with Atypical Architecture. In: Eurostav. Vol. 20, Nos. 1-2 (2014), pp. 52-53 (in Slovak)

Sandanus, J. – Katona, O.: Cross – Laminated Timber: The Material for Load-Bearing Structures of Multistorey Buildings. In: Stavební partner. E-magazine, Vol. 3, No. 1 (2014), unpag. (in Slovak)

Sandanus, J.: Munich Builds with Timber. In: Eurostav. Vol. 20, No. 9 (2014), pp. 68-69 (in Slovak)

Sandanus, J. – Sógel, K.: Refurbishment of Significant Timber Structures in Slovakia. In: Journal of Civil Engineering and Architecture. Vol. 8, No. 8 (2014), pp. 1009-1016 (in English)

Sandanus, J. – Surovec, L.: Load-Bearing System of 9-Storey Buildings. Via Cenni. In: Stavební partner. E-magazine, Vol. 3, No. 4 (2014), unpag. (in Slovak)

Sandanus, J. – Plandorová, L.: External Cladding of a University Building in Sweden. In: Eurostav. Vol. 20, No. 11 (2014), pp. 50-51 (in Slovak)

Slivanský, M.: Screws in the Joints of Timber Structures. In: Eurostav. Vol. 20, No. 5 (2014), pp. 52-53 (in Slovak)

Sógel, K.: Experience of Designer and Contractor with House Made of Cross – Laminated Timber. In: Stavební partner. E-magazine, Vol. 3, No. 2 (2014), unpag. (in Slovak)

Surovec, L. – Sandanus, J.: Interaction of Fasteners with Timber in Composite Timber-Concrete Structures. In: Stavební partner. E-magazine, Vol. 3, No. 3 (2014), unpag. (in Slovak)

Conference Proceedings

Antalová, J.: Gluing of Timber Members. In: Advances in Architectural, Civil and Environmental Engineering. 1st Edition. Slovak University of Technology in Bratislava, 2014, pp. 391-396 (in Slovak)

Baláž, I. – Koleková, Y.: Interaction between Bending Moment and Shear Force in Steel Plated Structural Elements. In: Engineering Mechanics 2014. Proceedings of 20th International Conference. Svatka, Czech Republic, May 12-15, 2014. Brno University of Technology, 2014, ISBN 978-80-214-4872-8, unpag. (in English)

Baláž, I.: Bridges with Steel Corrugated Webs. Slovak University of Technology in Bratislava, 2014. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)

Baláž, I. – Koleková, Y.: Effective Area of Internal Element under Compression Stress Lower than the Yield Strength. In: New Trends in the Statics and Dynamics of Buildings. Proceedings of 12th International Conference, Bratislava, 16.-17.10.2014, Slovak University of Technology in Bratislava, 2014, unpag. (in English)

Baláž, I. – Koleková, Y.: Resistance of Metal Cross-Section under Bending-Shear Interaction. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)

Baláž, I.: Strengthening the SNP Bridge. In: Statika stavieb 2014. Proceedings of 19th Conference. Piešťany, Slovak Republic, Mar. 13-14, 2014. Association of Structural Engineers of Slovakia, Bratislava, 2014, ISBN 978-80-89655-03-8, pp. 93-100 (in Slovak)

Baláž, I.: – Koleková, Y.: LTB Resistance of Beams. Critical Moment. In: Eurosteel 2014. 7th European Conference on Steel and Composite Structures. Abstracts book + Proceedings (USB), Naples, Italy, 10.-12.9.2014. Brussels: ECCS, 2014, ISBN 978-92-9147-121-8, unpag. (in English)

Balcierák, L.: Comparison of Transparent Railings from Laminated Tempered Glass with Different Types of Anchorages. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Edition. Magnanimitas, Hradec Králové, 2014, pp. 3738-3745 (in English)

Balcierák, L.: Assessment of a Railing Made from Laminated Glass. In: Advances in Architectural, Civil and Environmental Engineering. 1st Edition. Slovak University of Technology in Bratislava, 2014, pp. 405-412 (in Slovak)

Botló, M.: Problems of Designing Steel High Voltage Towers. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)

Botló, M.: Methodology of an Analysis of the Anchoring Structure of a Conic Steel Tower. In: Advances in Architectural, Civil and Environmental Engineering. 1st Edition. Slovak University of Technology in Bratislava, 2014, pp. 419-424 (in Slovak)

Brodniansky, J. – Ároch, R. – Belica, A.: Unique Global and Local Initial Imperfection in the Shape of the Elastic Buckling Mode. Application for Frames with Class 4 Cross-Sections. In: Eurosteel 2014. 7th European Conference on Steel and Composite Structures. Abstracts book + Proceedings (USB), Naples, Italy, 10.-12.9.2014. Brussels: ECCS, 2014, ISBN 978-92-9147-121-8, unpag. (in English)

Brodniansky, J. – Brodniansky, J. – Ároch, R.: Unique Global and Local Initial Imperfection in the Shape of the Elastic Buckling Mode (Application of "UGLI" Imperfection Method for Frames with Class 4 Cross-Sections). In: Proceedings of IASS – SLTE 2014: 6th Latin-American Symposium on Tension Structures. Shells, Membranes and Spatial Structures. 15.-19.9.2014, Brasilia. Footprints, Brasilia, unpag. (in English)

Brodniansky, J. – Kováč, M.: Application of EUGLI Imperfection for Assessment of Members and Frames with 4th Class Cross-Sections. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Ed. Magnanimitas, Hradec Králové, 2014, pp. 3728-3737 (in English)

Duchoň, V.: Modeling of Timber Joints with Glued-In Rods. In: Juniorstav 2014. Proceedings of 16th Scientific PhD Conference. Brno, 30.1.2014. Brno University of Technology, 2014, unpag. (in Slovak)

Duchoň, V. – Sógel, K.: Connecting of Timber Elements by Glued-in Rods. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Edition. Magnanimitas, Hradec Králové, 2014, pp. 3824-3863 (in English)

Grančičová, I. – Brodniansky, J.: Shape-Finding and Optimization of Grid Shell Structures by Dynamic Relaxation Method. In: Proceedings of IASS – SLTE 2014: 6th Latin-American Symposium on Tension Structures. Shells, Membranes and Spatial Structures. 15.-19.9.2014, Brasilia. Footprints, Brasilia, unpag. (in English)

Grančičová, I.: Influence of Grid Shell Mesh Type on Process of Form Finding. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)

Grančičová, I. – Slivanský, M.: Influence of External Loading of Final Shape of Grid Shell Structure Obtained by Dynamic Relaxation Method. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Ed. Magnanimitas, Hradec Králové, 2014, pp. 3760-3765 (in English)

- Grančičová, I.: Impact of Material Parameters on Final Shape Obtained by Dynamic Relaxation Method. In: Abstract Book of 10th International Miklós Iványi PhD & DLA Symposium. University of Pécs, Hungary, p. 43 (in English)
- Ilanovský, V.: Stress Analysis of Girders with Corrugated Webs. In: Juniorstav 2014. Proceedings of 16th Scientific PhD Conference. Brno, 30.1.2014. Brno University of Technology, 2014, unpag. (in Slovak)
- Ilanovský, V.: Critical Moment of Girders with Corrugated Webs. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)
- Ilanovský, V.: Assessment of Bending Moment Resistance of Girders with Corrugated Web. In: Abstract Book of 10th International Miklós Iványi PhD & DLA Symposium. University of Pécs, Hungary, p. 55 (in English)
- Katona, O.: Comparison of Methods for Designing CLT Slab Members. In: Dřevostavby 2014. Proceedings of Professional Seminar with international participation. Volyně, Czech Republic, 16.-17.4.2014. Higher Professional School and Secondary Technical School Volyně, 2014, ISBN 978-80-86837-57-4, pp. 55-60 (in Slovak)
- Katona, O. – Sógel, K.: Investigation of CLT Deep Beams. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Ed. Magnanimitas, Hradec Králové, 2014, pp. 3746-3753 (in English)
- Koleková, Y. – Baláž, I.: Interaction between Bending Moment and Shear Force in Aluminum Plated Structural Elements. In: Engineering Mechanics 2014. Proceedings of 20th International Conference. Svatka, Czech Republic, May 12-15, 2014. Brno University of Technology, 2014, ISBN 978-80-214-4872-8, unpag. (in English)
- Koleková, Y. – Baláž, I.: Effective Area of Outstand Element under Compression Stress Lower than the Yield Strength. In: New Trends in the Statics and Dynamics of Buildings. Proceedings of 12th International Conference, Bratislava, 16.-17.10.2014, Slovak University of Technology in Bratislava, 2014, unpag. (in English)
- Kováč, M.: Critical Force of the Spatial Buckling of Slender-Web Members with a Cross-Section with a Single Symmetrical Axis. Verification of Approximate Method. In: New Trends in the Statics and Dynamics of Buildings. Proceedings of 12th International Conference, Bratislava, 16.-17.10.2014. Slovak University of Technology in Bratislava, 2014, unpag. (in Slovak)
- Magura, M. – Klas, T.: In-situ Experimental Measurement of Steel Structure. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)
- Magura, M. – Vaník, Zs.: Development of Lightweight Structures. In: CzechSTAV 2014. Building Industry Changeovers. 1st Edition. Magnanimitas, Hradec Králové, 2014, pp. 56-63 (in English)
- Magura, M.: Theoretical and Experimental Research of Buried Pipelines. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Edition. Magnanimitas, Hradec Králové, 2014, pp. 3708-3717 (in English)
- Nittmannová, L.: Verification of the Characteristics of Reinforced Elastomeric Bearings. In: Juniorstav 2014. Proceedings of 16th Scientific PhD Conference. Brno, 30.1.2014. Brno University of Technology, 2014, unpag. (in Slovak)
- Nittmannová, L.: Reinforcement Effect in Elastomeric Bearings under a Compressive Load. In: Advances in Architectural, Civil and Environmental Engineering. 1st Ed. Slovak University of Technology in Bratislava, 2014, pp. 405-412 (in Slovak)
- Nittmannová, L. – Magura, M.: Reinforcement Effect in Elastomeric Bearings under Compressive Load. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Edition. Magnanimitas, Hradec Králové, 2014, pp. 3754-3759 (in English)
- Sandanus, J. – Sógel, K. – Slivanský, M.: Rheological Tests of Timber Beams. In: Dřevostavby 2014. Proceedings of Professional Seminar with international participation. Volyně, Czech Republic, 16.-17.4.2014. Higher Professional School and Secondary Technical School Volyně, 2014, ISBN 978-80-86837-57-4, pp. 27-32 (in Slovak)
- Sandanus, J. – Slivanský, M. – Sógel, K.: Long-Term Test on Timber Trusses. In: Proceedings of IASS – SLTE 2014: 6th Latin-American Symposium on Tension Structures. Shells, Membranes and Spatial Structures. 15.-19.9.2014, Brasilia. Footprints, Brasilia, unpag. (in English)
- Slivanský, M.: Theoretical Stress Analysis of Diagonal Screws in the Joints of Timber Structures. In: Statika stavieb 2014. Proceedings of 19th Conference. Piešťany, Slovak Republic, Mar. 13-14, 2014. Association of Structural Engineers of Slovakia, Bratislava, 2014, ISBN 978-80-89655-03-8, pp. 93-100 (in Slovak)
- Slivanský, M. – Brodniansky, J.: Protective Glass Barrier in Bratislava – Slovakia. In: Proceedings of IASS – SLTE 2014: 6th Latin-American Symposium on Tension Structures. Shells, Membranes and Spatial Structures. 15.-19.9.2014, Brasilia. Footprints, Brasilia, unpag. (in English)
- Slivanský, M.: Frameless Structural Concept of Glass Barrier. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)
- Sógel, K.: Pilot CLT Project in Slovakia. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in Slovak)
- Sokol, M. – Venglár, M. – Ároch, R. – Živner, T. – Fábry, M.: System Identification of Simple Bridge Model. In: New Trends in the Statics and Dynamics of Buildings. Proceedings of 12th International Conference, Bratislava, 16.-17.10.2014, Slovak University of Technology in Bratislava, 2014, unpag. (in English)

Surovec, L.: Design of a Composite Timber-Concrete Structure in Accordance with the Eurocode. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in Slovak)

Štujberová, M.: Means of Achieving Short Fire-Resistance of Steel Beams. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in Slovak)

Vaník, Zs.: Analytical Method for Calculation of Internal Forces on a Triangular Tensegrity Prism. In: New Trends in the Statics and Dynamics of Buildings. Proceedings of 12th International Conference, Bratislava, 16.-17.10.2014, Slovak University of Technology in Bratislava, 2014, unpag. (in Slovak)

Vaník, Zs.: Analytical Method for Internal Forces Calculation of Tensegrity Prisms. In: International Masaryk Conference for PhD. Students and Young Researchers. 1st Edition. Magnanimitas, Hradec Králové, 2014, pp. 3718-3727 (in English)

Živner, T. – Fábry, M.: Lateral-Torsional Buckling of Continuous Composite Beams. In: Steel, Timber, Concrete, Glass and Their Combinations in Modern Structures. Proceedings of 39th Meeting of Experts on Steel Structures. Topoľčianky, Slovak Republic, 16.-17.10.2014, Slovak University of Technology, 2014, unpag. (in English)

DEPARTMENT OF MAPPING AND LAND CONSOLIDATION

Head of Department

Ing. Róbert Fencík, PhD.

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Cartographic Techniques and Norms

Cadastral Mapping

Topography

Field Practice in the Cadastre of Real Estate and Cadastral Mapping

Cartographic Creation and Reproduction

Land Consolidation 1

Land Consolidation 2

Land Surveying, Cartography and Cadastre of Real Estate

Mathematical Cartography

Specialised Field Practice

Spatial Modelling in GIS

Obligatory elective subjects

Environmental Modelling and Evaluations of Landscapes

Cartometry and Data Analysis of the Cadastre of Real Estate

Optional subjects

Information Technology Applications in the Cadastre of Real Estate and Land Consolidation

2. THESES

2.1 Bachelor theses

There were 4 works.

2.2 Graduate theses

Blašková, S.: Analysis of Local Shifts in Measurements for a Land Consolidation Project
Supervisor: Hudecová, L.

Bučo, M.: Using UAV for DEM Creation
Supervisor: Čížmár, J.

Dombiová, K.: Comparison of the Imaging Catalogs Used in the Slovak Republic
Supervisor: Fencík, R.

Dubová, L.: Functionality of a Village Map in the Informatization of Public Administration
Supervisor: Fencík, R.

Forgách, G.: Optimization of Processing of the Written Part of a Register of Renewed Land Evidence
Supervisor: Hudecová, L.

Franc, M.: Spatial Model of a Village in a Digital Environment
Supervisor: Fencík, R.

Huray, M.: Property Rights Settlement of the "Nový cintorín" (New Cemetery) in Stupava
Supervisor: Geisse, R.

Kosmeľová, J.: Use of UAV for Mapping Land
Supervisor: Fencík, R.

Křehnáčová, L.: Dynamic Labeling of Maps
Supervisor: Fencík, R.

Olekšáková, Z.: Creation of Adopted Measurement Files
Supervisor: Geisse, R.

Šelerová, M.: Road Measures in a Land Consolidation Project
Supervisor: Geisse, R.

Víček, S.: Measurement of Changes in the Numeric Vector Cadastral Map
Supervisor: Hudecová, L.

3. RESEARCH

3.2 International cooperation

Cooperating institutions

Department of Geoinformation and Cartography, Vienna University of Technology, Vienna, Austria

Department of Geoinformatics, Palacký University of Olomouc, Olomouc, Czech Republic

Department of Mathematics, University of West Bohemia, Pilsen, Czech Republic

4. PUBLICATIONS

Journals

Kotříková, K. – Hlavčová, K. – Fencik, R.: Changes in Snow Storage in the Upper Hron River Basin (Slovakia). In: *Acta Silvatica et Lignaria Hungarica*, ISSN 1787-064X. – Vol. 10, No. 2 (2014), pp. 145-159 (in English)

Kliment, T. – Gálová, L. – Ďuračiová, R. Fencik, R. Kliment, M.: Geospatial Information Relevant to the Flood Protection Available on The Mainstream Web. In: *Slovak Journal of Civil Engineering*, ISSN 1210-3896. – Vol. 22, No. 1 (2014), pp. 9-18 (in English)

Hudecová, L. – Forgách, G.: The Register of Renewed Land Evidence – A Method to Arrange Land Ownership, In: *Almanach znalca*, ISSN 1336-3174. – Vol.13, Nos. 3-4 (2014), pp. 16-21 (in Slovak)

Hudecová, L.: Reliability of a Parcel Area, In: *Almanach znalca*, ISSN 1336-3174. – Vol.14, Nos. 3-4 (2014), pp. 5-9 (in Slovak)

Conference Proceedings

Nemcová, P.: The State Map Series in the Slovak Republic and the Czech Republic. In: *Juniorstav 2014: 16th International Conference of Postgraduate Students*, Brno, Czech Republic, 30.1.2014. [electronic source]. – Brno : Brno University of Technology, 2014, – ISBN 978-80-214-4851-3. – p. 6 (in Slovak)

Straka, J.: Generalization of the Hydrographic Network in the Creation of a State Map Series. In: *Juniorstav 2014: 16th International Conference of Postgraduate Students*, Brno, Czech Republic, 30.1.2014. [electronic source]. – Brno : Brno University of Technology, 2014. – ISBN 978-80-214-4851-3. – p. 6 (in Slovak)

Fencik, R. – Franc, M. – Ištvánffy, I. – Uhrík, M.: Spatial Model of the Village to Support the Management of Public administration. In: *Proceedings of 14th International Multidisciplinary Scientific GeoConference SGEM 2014*. Sofia (Bulgaria): STEF92 Technology Ltd., 2014. – ISBN 978-619-7105-10-0. – pp. 801-808 (in English)

Nemcová, P.: A New Look at the State Map Series on a Large Scale. In: *Advances in Architectural, Civil and Environmental Engineering*, Bratislava, 30.10.2014. [electronic source]. – Bratislava : Slovak University of Technology in Bratislava, 2014. – ISBN 978-80-227-4301-3. – pp. 205-211 (in Slovak)

Straka, J.: Dynamic Labeling of the Objects of ZB GIS® for Their Publication on Web Services. In: *Advances in Architectural, Civil and Environmental Engineering*, Bratislava, 30.10.2014. [electronic source]. – Bratislava : Slovak University of Technology in Bratislava, 2014. – ISBN 978-80-227-4301-3. – pp. 219-227 (in Slovak)

Hudecová, L.: Development of Land Tenure on the Territory Slovakia. In: *Land Communities – History and Present: Proceedings of specialized seminar*, Bratislava, SR, 5.2.2014. – Bratislava: Slovak Society of Surveyors and Cartographers, 2014, – ISBN 978-80-89626-02-1. – pp. 7-15 (in Slovak)

Geisse, R. – Očenáš, M.: Methods of Capturing Data for the Thematic Mapping of Altimetry in Land Consolidation Projects. In: *Technologies of Spatial Modeling of Land and Objects – Approaches and Applications: Proceedings of specialized seminar*, Bratislava, SR, 16.6.2014. – Bratislava : Slovak University of Technology in Bratislava, 2014, – ISBN 978-80-227-4158-3. – p. 11 (in Slovak)

Raškovič, V. – Hudecová, L.: Survey Sketch Documentation as a Relational Database in Terms of Electronic Processing, Storage and Control, In: *11th International Conference on the Cadastre of Real Estate: Proceedings. Časť - Papiernička*, SR, 15.-16.5.2014. – Bratislava : Slovak Society of Surveyors and Cartographers, 2014, – ISBN 978-80-89626-03-8. – pp. 83-99 (in Slovak)

Nemcová, P.: Draft Concept for the Creation of a State Map Series for Large-Scale Maps, In: *Proceeding of 20th International Polish-Czech-Slovak Geodesy Days*, Berlin, Germany, 6.-8.10.2014. – Warsaw : Stowarzyszenie Geodetów Polskich, 2014. – ISBN 978-83-61576-29-7. – p. 34 (in Slovak)

Straka, J. – Moravčíková, K. – Křehnáčová, L. – Fencik, R.: Dynamic Labeling of ZBGIS® Objects. In: *Proceedings of Conference on Activities in Cartography 2014 dedicated to Ján Pravda*, – Bratislava : Cartographic Society of the Slovak Republic and Institute of Geography, SAS, 2014. – ISBN 978-80-89060-23-8. – pp. 91-102 (in Slovak)

Lieskovský, T. – Drápela, T. – Straka, J. – Peschl, R.: Continuación del Mapeo del sitio Ch'anal/Manantial, In: *Excavaciones En El Peten Noreste III*. [electronic source] : Ch'anal y Tz'ibatnah. Temporadas 2013 y 2014. – Bratislava : Slovak Archeological and Historical Institute, 2014. – ISBN 978-80-89704-02-6. – pp. 195-204 (in Spanish)

DEPARTMENT OF MATHEMATICS AND DESCRIPTIVE GEOMETRY

Head of Department

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Descriptive Geometry

Mathematics I

Mathematics II

Mathematics III

Mathematics IV

Informatics

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

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)

Applied Statistics

Projection Methods

Applied Mathematics

Optional subjects

Architectural Mathematics

Foundations of Mathematics

Informatics and Statistics

Mathematical Statistics

Numerical and Stochastic Methods

Recommended subjects

Computer Graphics

Fuzzy Management

1.2 Postgraduate courses

Aggregation Functions

Decision Theory

Discrete Mathematics

Dynamic and Stochastic Optimisation

Graph Theory

Linear Models of Time Series

Mathematical Basis of the Finite Element Method I

Mathematical Basis of the Finite Element Method II

Mathematical Methods in Fluid Flow, Diffusion and Heat Transfer

Mathematical Models of Fluid Dynamics

Mathematics

Multicriteria Decision Support

Multidimensional Statistics

Nonlinear Models of Time Series

Numerical Methods in Fluid Flow, Diffusion and Heat Transfer

Probability and Statistical Estimation

Proposed Experiment in Optimization

Statistical Methods in Geodesy

Stochastic Processes I

Time Series Analysis in Civil Engineering

2. THESES

2.1 Bachelor theses

There were 4 works.

2.2 Graduate theses

Boudová, K.: Solving Geodetic Boundary Value Problems by the Finite Element Method.

Supervisor: Minarechová, Z.

Brazdilova, V.: Dynamic Programming and Multicriteria Optimization in the Design of Construction Elements

Supervisor: Šipošová, A.

Frolkovič, R.: Numerical Methods for Solving Image Processing Problems of Spectrograms

Supervisor: Handlovičová, A.

Hulalová, L.: Effective Goodness of Fit Test

Supervisor: Bacigál, T.

Húska, M.: Lagrangian Numerical Algorithms for Surface Evolutions with Topological Changes

Supervisor: Remešíková, M.

Juhász, D.: Homotopic Types of the Independence Complexes of Some Graphs,

Supervisor: Jenča, G.

Kollár, M.: Creating a Digital Terrain Model Using the Mean-Curvature Evolution of a Surface

Supervisor: Minarechová, Z.

Kleinová, V.: Velocity Field Extraction from Image Sequences

Supervisor: Sarkoci, P.

Kmeřo, T.: Semi-Implicit Numerical Methods for the Solution of Advection Equations

Supervisor: Frolkovič, P.

Kuricová, V.: Dynamic Programming and Multicriteria Optimization in the Design of Construction Elements

Supervisor: Šipošová, A.

Mendľa, M.: Building of Optimal Logically Rectangular Grids in 2D and 3D Domains Above the Earth's Topography

Supervisor: Mikula, K.

Miklášová, M.: Image Processing of Handwritten Texts

Supervisor: Smíšek, M., Mikula, K.

Petkaničová, J.: Copula Parameter Estimations

Supervisor: Bacigál, T.

Rentka, F.: Missing Data in Statistical Analyses

Supervisor: Kalická, J.

Tješšová, M.: Geometric Model of the Human Lumbar Spine and Its Mechanical Response

Supervisor: Minárová, M.

Trubač, M.: Adaptive Algorithms Based on the Finite Volume Method Applied to an Analysis of a Multichannel Image

Supervisor: Krivá, Z.

Zboranová, M.: Finite Volume Method for Solving Some Models in Financial Mathematics

Supervisor: Handlovičová, A.

Žeňuchová, L.: Modeling of Hygric Stages in an Enclosure

Supervisor: Minárová, M.

2.3 Doctoral theses

Kotorová, D.: Numerical Methods for Non-Linear Parabolic Differential Equations

Supervisor: Handlovičová, A.

Macák, M.: Numerical Methods in Geodesy

Supervisor: Mikula, K.

Sabo, M.: Multivariate Statistical Methods with Applications: Clustering

Supervisor: Nanasiová, O.

3. RESEARCH

3.1 Research projects

Aggregation Functions and Their Applications
(2012-2014, Mesiar, R.), VEGA 1/0171/12

Aggregation Functions as a Tool for Information Processing
(2011-2014, Mesiar, R.), APVV-0073-10

Algebraic, Topological and Combinatorial Methods in Discrete Structures
(2011-2014, Širáň, J.), APVV-0223-10

Determination of the Geometric Characteristics of Objects on Images Obtained from Relevant Criminal Records
(2013-2016, Mikula, K.), APVV 0161-12

Efficient Numerical Methods and Parallel Computing in Geodesy
(2011-2014, Čunderlík, R.), VEGA-1/1063/11

Extremal Problems in the Metric Theory of Graphs and Discrete Structures
(2013-2015, Knor, M.), VEGA 1/0065/13

Finite Volume Methods for Partial Differential Equations
(2012-2014, Frolkovič, P.), VEGA 1/1137/12

Geometric Partial Differential Equations – Numerical Analysis and Applications
(2011-2014, Mikula, K.), APVV 0184-10

Geometric Representations and Symmetry of Graphs, Maps and Other Discrete Structures, with Applications in Science
(2011-2014, Širáň, J.), ESF-EC-0009-10

Graphs as Network Models with a High Level of Symmetry
(2013-2017, Širáň, J.), APVV 0136-12

Mathematical Models of Quantum Structures and Uncertainty
(2012-2014, Kalina, M. – Jenča, G. – Sarkoci, P.), VEGA 2/0059/12

Multiregimes and Multidimensional Time Series: Models and Application
(2011-2014, Komorníková, M.), VEGA 1/0143/11

Numerical Modeling in Geodesy
(2012-2015, Mikula, K.), APVV 0072-11

Symmetric Maps
(2014-2016, Širáň, J.), VEGA 1/0007/14

Uncertainty from the Point of View of Probability Theory, Algebra, Self-Adjoint Operators and Quantum Structures
(2012-2015, Jenča, G.), APVV-0178-11

3.2 International cooperation

Cooperating institutions

Beijing Institute of Technology, China

CINECA – Supercomputing Centre, Bologna, Italy

CNRS, Paris, France

Communication University of China, Beijing, China

Complutense University, Madrid, Spain

CTU Prague, Czech Republic

Czech Academy of Sciences, Czech Republic

Faculty of Information Studies, Novo Mesto, Slovenia

Goethe Scientific Computing Centre, University of Frankfurt, Germany

Goethe University, Frankfurt, Germany

Charles University in Prague, Czech Republic

ICS, Paris, France

La Sapienza University, Rome, Italy

Open UNI London, Great Britain

Pohang University of Science and Technology, South Korea

The Open University, Milton Keynes, United Kingdom

TU Budapest, Hungary

TU Cracow, Poland

Universita Autonoma, Mexico City, Queretaro, Mexico

Universidad Nacional Autónoma de México, Mexico City, Distrito Federal, Mexico

Universitat Polytechnica e Catalunya in Barcelona, Spain

University of Auckland, New Zealand

University of Bologna, Italy

University of Bremen, Germany

University of Catania, Italy

University of Dortmund, Germany

University of Freiburg, Germany

University of Ghent, Belgium

University of Groningen, The Netherlands

University of Haifa, Israel

University of Heidelberg, Germany

University of Latvia, Latvia

University of Lleida, Spain

University of Liberec, Czech Republic

University of Linz, Austria

University of Ljubljana, Slovenia

University of Newcastle, Australia

University of Novi Sad, Serbia

University of Ostrava, Czech Republic

University of Pamplona, Spain

University of Sannio, Benevento, Italy

University of the Balearic Islands, Palma de Mallorca, Spain

University of Waterloo, Canada

WB University, Plzeň, Czech Republic

Weierstrass Institute for Applied Analysis and Stochastics, Berlin, Germany

Western Australia University, Perth, Australia

Western Washington University, Bellingham, WA, USA

Membership in international professional organizations

Mikula, K. – Čunderlík, R.: Joint Study Group 0.7: Computational Methods for High-Resolution Gravity

Field Modelling and Nonlinear Diffusion Filtering (within the Inter-Commission on Theory (ICCT) of the International Association of Geodesy (IAG)

Minarechová, Z.: European Geosciences Union Member.

Minarechová, Z.: Member of JSG 0.7: Computational Methods for High-Resolution Gravity Field Modelling and Nonlinear Diffusion Filtering

Mesiar, R.: European Society for Fuzzy Logic and Technology (EUSFLAT)

Jenča, G.: International Quantum Structures Association (IQSA)

Kalina, M.: International Quantum Structures Association (IQSA)

Komorníková, M.: SEFI Mathematics Working Group

Mikula, K.: European Research Council (ERC)

4. PUBLICATIONS

Books

Pekárová, M.: Construction of Copulas with Pre-Determined Properties, Bratislava: STU Publisher, 2014 (Series of Scientific Papers, Paper No. 124), ISBN 978-80-227-4053-1, 67 pp. (in English)

Textbooks

Kollár, J.: Mathematics I. Problems for Exercises [Electronic Source]. – 1st Ed. – Bratislava: Slovak University of Technology, 2014, ISBN 978-80-227-4244-3, 163 pp. (in Slovak)

Kyselová, D. – Mészáros K. – Minárová, M. – Pelikánová, Š. – Bašová, H.: Descriptive Geometry: Exercise Guide. – 3rd Ed. – Bratislava: STU Publisher, 2014, ISBN 978-80-227-4131-6, 261 pp. (in Slovak)

Mészáros K. – Rückschlossová, T. – Tereňová, Z.: Descriptive Geometry II. [Electronic Source]: First Part – Rotary and Spiral Surfaces. – 1st Ed. – Bratislava: Slovak University of Technology, 2014, ISBN 978-80-227-4275-7, 503 pp. (in Slovak)

Stupňanová, A. – Šipošová, A.: Mathematics 1. Fundamentals of Differential Calculus. Exercise Guide for VSVH and STOP Studies, STU Publisher Bratislava, 2014, ISBN 978-80-227-4294-8, 189 pp. (in Slovak)

Stupňanová, A. – Šipošová, A.: Mathematics 1. Linear Algebra and Analytic Geometry. Exercise Guide for VSVH and STOP Studies, STU Publisher Bratislava, 2014, ISBN 978-80-227-4295-5, 141 pp. (in Slovak)

Valášková, Ľ. – Tereňová, Z. – Vajsáblová, M. – Mészáros K.: Introduction to the Subject of Descriptive Geometry. – 1st Ed. – Bratislava: STU Publisher, 2014, ISBN 978-80-227-4160-6, 148 pp. (in Slovak)

Journals

Agahi, H. – Mesiar, R. – Ouyang, Y. – Pap, E. – Štrboja, M.: On Stolarsky Inequality for Sugeno and Choquet Integrals. In: Information Sciences, ISSN 0020-0255. – Vol. 266 (2014), pp. 134-139 (in English)

Archdeacon, D. – Bonnington, P. – Širáň, J.: Regular Pinched Maps. In: Australas. J. Combin. 58 (2014), pp. 16–26 (in English)

Archdeacon, M. – Conder, M. – Širáň, J.: Trinity Symmetry and Kaleidoscopic Regular Maps, Trans. Amer. Math. Soc. 366, No. 8 (2014), pp.4491-4512 (in English)

Bacigál, T. – V. Najjari – H. Bal: An Archimedean Copula Family with Hyperbolic Cotangent Generator. In: International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, ISSN 0218-4885. – Vol. 22, No. 5 (2014) (in English)

Borkotokey, S. – Mesiar, R.: The Shapley Value of Cooperative Games Under Fuzzy Settings: a Survey. In: International Journal of General Systems, ISSN 0308-1079. – Vol. 43, No. 1 (2014), pp. 75-95 (in English)

Čunderlík, R. – Tenzer, R. – Mikula, K.: Realization of WHS Based on Gravity Field Models Free of Dependencies on Local Vertical Datums. In: IAG Symposia. – ISBN: 978-3-642-37221-6.-Vol. 139, pp. 551-559 (in English)

Čunderlík, R. – Minarechová, Z. – Mikula, K.: Realization of WHS Based on the Static Gravity Field Observed by GOCE. In: Proceedings of the International Symposium on Gravity, Geoid and Height Systems, IAG Symposia. – ISBN 978-3-319-10836-0. – Vol. 141 (2014), pp. 211-220 (in English)

Forbes, A. D. – Griggs, T. S. – Psomas, C. – Širáň, J. Biembeddings of Steiner Triple Systems in Orientable Pseudosurfaces with One Pinch Point. In: Glasg. Math. J. 56 (2014), No. 2, pp. 251–260 (in English)

Gagolewski, M. – Mesiar, R.: Monotone Measures and Universal Integrals in a Uniform Framework for the Scientific Impact Assessment Problem. In: Information Sciences, ISSN 0020-0255. – Vol. 263 (2014), pp. 166-174 (in English)

Ghiselli Ricci, R. – Mesiar, R. – Mesiarová, A.: Lipschitz Continuity of Triangular Subnorms. In: Fuzzy Sets and Systems, ISSN 0165-0114. – Vol. 240 (2014), pp. 51-65 (in English)

Greco, S. – Mesiar, R. – Rindone, F.: Discrete Bipolar Universal Integrals. In: Fuzzy Sets and Systems, ISSN 0165-0114. – Vol. 252 (2014), pp. 55-65 (in English)

Greco, S. – Mesiar, R. – Rindone, F.: Two New Characterizations of Universal Integrals on the Scale $(0,1)$. In: Information Sciences, ISSN 0020-0255. – Vol. 267 (2014), pp. 217-224 (in English)

Hamzeh, A. – Mesiar, R.: On an Exponential Inequality and Strong Law of Large Numbers for Monotone Measure. In: Kybernetika. – ISSN 0023-5954. – Vol. 50, No. 5 (2014) pp. 804-813 (in English)

Hlíňená, D. – Kalina, M. – Král, P.: A Class of Implications Related to Yager's f -Implications. In: Information Sciences, 260 (2014) pp. 171–184 (in English)

Janák, J. – Pitoňák, M. – Minarechová, Z.: Regional Quasigeoid from GOCE and Terrestrial Measurements. In: Studia Geophysica et Geodaetica, Vol. 58, No. – Ed.: Ivan Pšenčík; ISSN: 0039-3169, pp. 626-649 (in English)

Jenča, G. – Sarkoci, P.: Linear Extensions and Order-Preserving Poset Partitions. In: Journal of Combinatorial Theory. Series A, ISSN 0097-3165. – Vol. 122 (2014), pp. 28-38 (in English)

Jeneiová, K. – Kohnová, S. – Sabo, M.: Detecting Trends in the Annual Maximum Discharges in the Vah River Basin, Slovakia. In: Acta Silvatica et Lignaria Hungarica. – ISSN 1787-064X. – Vol. 10, No. 2 (2014), pp. 133-144. (in English)

Jeneiová, K. – Sabo, M. – Kohnová, S.: Detecting a Trend in the Long-Term Time Series of Maximum Annual Flow Rates in the Slovak Republic. In: Acta Hydrologica Slovaca. – ISSN 1335-6291. – Vol.15, No. 1 (2014), pp. 161-170 (in Slovak)

- Kolesárová, A. – Mesiar, R. – Rückšlossová, T.: Power Stable Aggregation Functions. In: *Fuzzy Sets and Systems*, ISSN 0165-0114. – Vol. 240 (2014), pp. 39-50 (in English)
- Knor, M. – Potočník, P. – Škrekovski, R.: Relationship Between the Edge-Wiener Index and the Gutman Index of a Graph. In: *Discrete Applied Mathematics* 167 (2014), pp. 197-201 (in English)
- Knor, M. – Mačaj, M. – Potočník, P. – Škrekovski, R.: Complete Solution of Equation $W(L_3(T))=W(T)$ for the Wiener Index of Iterated Line Graphs of Trees. In: *Discrete Applied Mathematics* 171 (2014), pp. 91-103 (in English)
- Knor, M. – Širáň, J.: Smallest Vertex-Transitive Graphs of Given Degree and Diameter. In: *Journal of Graph Theory* 75 (2014), pp. 137-149 (in English)
- Knor, M. – Hriňáková, K. – Škrekovski, R. – Tepeh, A.: A Congruence Relation for the Wiener Index of Graphs with a Tree-Like Structure. In: *MATCH Commun. Math. Comput. Chem.* Vol. 72 (2014), pp. 791-806 (in English)
- Knor, M.: Smallest Regular Graphs of Given Degree and Diameter. In: *Discussiones Mathematicae Graph Theory* 34 (2014), pp. 187-191 (in English)
- Knor, M. – Grannell, M. J.: Rigid Steiner Triple Systems Obtained from Projective Triple Systems. *Journal of Combinatorial Designs* 22 (2014), pp. 279-290 (in English)
- Knor, M. – Mačaj, M. – Potočník, P. – Škrekovski, R.: Trees T Satisfying $W(L_3(T))=W(T)$. *Filomat.* 28:3 (2014), pp. 551-556 (in English)
- Knor, M. – Škrekovski, R.: Wiener Index of Generalized 4-Stars and of Their Quadratic Line Graphs. In: *Australasian Journal of Combinatorics* 58 (2014), pp. 119-126 (in English)
- Knor, M., – Lužar, B. – Škrekovski, R. – Gutman, I.: On Wiener Index of Common Neighborhood Graphs. *MATCH Commun. Math. Comput. Chem.* 72 (2014), pp. 791-806 (in English)
- Kusá, A. – Hrabáčková, V. – Sabo, M.: Christianity and the Value Orientation of Contemporary People. In: *European Journal of Science and Theology.* – ISSN 1841-1464. – Vol.10, No. 1 (2014), pp. 135-144 (in English)
- Komorník, J. – Komorníková, M. – Kalická, J.: Perturbed Copula and Their Tail Dependencies. In: *Global Journal for Research Analysis, GRJA.* – ISSN 2277-8160. – Vol. 3, No. 12 (2014), pp. 69-70 (in English)
- Kusá, A. – Danechová, Z. – Findra, S. – Sabo, M.: Gender Differences in Purchase Decision -Making Styles. In: *European Journal of Science and Theology*, Vol. 10, No. 5 (2014), pp. 113-123 (in English)
- Li, J. – Mesiar, R. – Pap, K.E.: Atoms of Weakly Null-Additive Monotone Measures and Integrals. In: *Information Sciences*, ISSN 0020-0255. – Vol. 257 (2014), pp. 183-192 (in English)
- Macák, M. – Minarechová, Z. – Mikula, K.: A Novel Scheme for Solving the Oblique Derivative Boundary-Value Problem. In: *Studia Geophysica et Geodaetica*, Vol. 58, No. – Ed.: Ivan Pšenčík; ISSN: 0039-3169 (2014) pp. 556-570 (in English)
- Mesiar, R. – Najjari, V.: New Families of Symmetric/Asymmetric Copulas. In: *Fuzzy Sets and Systems*, ISSN 0165-0114. – Vol. 252 (2014), pp. 99-110 (in English)
- Mikula, K. – Ohlberger, M. – Urbán, J.: Inflow-Implicit/Outflow Explicit Finite Volume Methods for Solving Advection Equations. In: *Applied Numerical Mathematics*, ISSN 0168-9274. – Vol. 85 (2014), pp. 16-37 (in English)
- Mikula, K. – Remešíková, M. – Sarkoci, P. – Ševčovič, D.: Manifold Evolution with Tangential Redistribution of Points. In: *SIAM Journal on Scientific Computing*, ISSN 1064-8275. – Vol. 36, No. 4 (2014), pp. 1384-1414 (in English)
- Mikula, K. – Urbán, J.: A New Tangentially Stabilized 3D Curve Evolution Algorithm and Its Application in Virtual Colonoscopy. In: *Advances in Computational Mathematics.* – ISSN 1019-7168. – Vol. 40, No. 4 (2014), pp. 819-837 (in English)
- Minárová, M.: Transient Heat Equation with Natural Boundary Conditions – Finite Element Analysis. In: *Annals of Civil Engineering, Roczniki Inżynierii Budowlanej* 13/2013. – ISSN 1505-8425 (2014) (in English)
- Minárová, M.: Simulation of Indoor Humidity. In: *Acta Universitatis Palackianae Olomucensis, Facultas Rerum Naturalium, Mathematica.* – ISSN 0231-9721. – Vol. 53, No. 2 (2014) pp. 101-113 (in English)
- Molina, C. L. – De Baets, B. – Bustince, H. – Induráin, E. – Stupňanová, A. – Mesiar, R.: Bimigrativity of Binary Aggregation Functions. In: *Information Sciences.* – ISSN 0020-0255. – Vol. 274 (2014), pp. 225-235 (in English)
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- Šipošová, A.: Pareto Optimality in Multicriteria Optimization Applied to Truss Design. In: ZAMAT 2014 [Electronic Source] : Proceedings of Applied Mathematics and Informatics. – Bratislava: STU in Bratislava FCHPT, 2014. – ISBN 978-80-89597-17-8. – pp. 43-49 (in English)
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- Špir, R. – Mikula, K.: Tracking of Cells in Zebrafish Embryogenesis in 4D Biomedical Images Using Nonlinear PDE's. 2nd Slovak-Japanese Conference on Applied Mathematics SJCAM 2014 Abstracts, p. 32 (in English)
- Špir, R. – Mikula, K.: Tracking of Cells in Aebrafish Embryogenesis by Finding Centered Paths Inside 4D Segmentations. In: SIAM Conference on IMAGING SCIENCE : Program and Abstracts. Hong Kong, 12.-14.5.2014. Hong Kong: Hong Kong Baptist University, 2014 (in English)

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Tomek, L. – Remešíková, M. – Mikula, K.: New Finite Volume Method for Mean Curvature Flow of Surfaces. In: Advances in Architectural, Civil and Environmental Engineering [Electronic Source]: 23rd Annual PhD Student Conference. Bratislava, Slovak Republic, STU Publisher, 2014. – ISBN 978-80-227-4102-6. – pp. 68-76 (in English)

Václavíková, Š.: Quick View of Education in Descriptive Geometry in Recent Years with an Emphasis on the Faculty of Civil Engineering. Descriptive Geometry at Slovak Universities: Yesterday and Today. Proceedings. University of Žilina, 29.5.2014. – ISBN 978-80-554-0968-9. – pp. 66-74 (in Slovak)

Vajsáblová, M.: Great Personalities in the History of Mathematics and Mathematical Cartography. In: Historie matematiky: 35th International Conference. Velké Meziříčí, Czech Republic, 22.-26.8.2014. – Prague: Matfyzpress, 2014. – ISBN 978-80-7378-265-8. – pp. 47-66 (in Slovak)

Vajsáblová, M.: Teaching Geometric Objects at the Faculty of Civil Engineering STU in Bratislava. Descriptive Geometry at Slovak Universities: Yesterday and Today. Proceedings. University of Žilina, 29.5.2014. – ISBN 978-80-554-0968-9. – pp.75-85 (in Slovak)

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

1.2 Postgraduate courses

Physical Principles of Measurements

Special Aspects of Physics

Modeling Transport Phenomena

Physical Fields, Waves

Heat and Moisture Transport in Building Materials

2. RESEARCH

2.1 Research projects

Determination of the Physical Characteristics of Infiltration and Contaminant Transport with Adsorption in Porous Media (2010-2014), APVV-0743-10

Hygic Deformation of Building Materials (2013-2015), VEGA 1/0689/13

2.2 International cooperation

Cooperating institutions

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

Institute of Theoretical and Applied Mechanics of the ASCR, Prague, CR

Cracow University of Technology, Poland

Military University of Technology, Warsaw, Poland

Katholieke Universiteit Leuven, Belgium

Membership in international professional organizations

Baník, I. – Lukovičová, J.: European Physical Society

Lukovičová, J.: European Society for the Study of Science and Technology

Lukovičová, J.: International Council for Research and Innovation in Building and Construction – W 40

3. PUBLICATIONS

Books

Horňák, F. – Šujanová, J. – Cagáňová, D. – Pavlendová, G.: Management of Universities. 1st ed. Trnava : Totem s.r.o., 2014. 59 pp. ISBN 978-80-89708-00-0 (in Slovak)

Parts of Books

Pavlendová, G.: Electro Osmosis in Civil Engineering. In Country Constructions in European Regions II: Almanac of Referenced Scientific Works. Architecture – Constructions – Technologies – Safety – Logistics. 1st ed. Nitra : Slovak University of Agriculture, 2014, CD ROM, pp. 35-40. ISBN 978-80-552-1242-5 (in English)

Textbooks

Pavlendová, G.: Physics for Civil Engineering, Slovak University of Technology in Bratislava, 2014, ISBN 978-80-227-4148-4, 199 pp. (in English)

Horňák, F. – Šujanová, Jana – C., Dagmar – Pavlendová, Gabriela. Management of Universities. Course module. Exercise book. Trnava : Totem s.r.o., 2014. CD ROM, 66 pp. ISBN 978-80-89708-01-7 (in Slovak)

Journals

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Štubňa, I. – Šín, P. – Trník, A. – Viljus, M.: The Effect of the Firing Temperature on the Hardness of Alumina Porcelain. In: Materials and Technology. Vol. 48, Vol. 3 (2014), pp. 331-336. ISSN 1580-2949 (in English)

Štubňa, I. – Šín, P. – Trník, A. – Podoba, R. – Vozár, L.: Development of Young's Modulus of the Green Alumina Porcelain Raw Mixture. In: Journal of the Australian Ceramic Society. Vol. 50, No. 2 (2014), pp. 36-42. ISSN 0004-881X (in English)

Conference Proceedings

Baník, I. – Lukovičová, J. – Pavlendová, G.: Self-Diffusion on Pd(111) from the Point of View of the Band Model of Diffusion. In: Defect and Diffusion Forum : 9th International Conference on Diffusion in Solids and Liquids Mass Transfer – Heat Transfer – Microstructure and Properties – Nanodiffusion and Nanostructured Materials, DSL 2013, Madrid, Spain, 24.-28.06.2013. Vol. 353 (2014), pp. 292-297. ISSN 1012-0386 (E) (in English)

Baník, I. – Lukovičová, J. – Sarkar, B. K. – Šín, P.: Barrier-Cluster-Heating Model and Photoinduced Phenomena in Chalcogenide Glasses. In: AIP Conference Proceedings : TIM 2013. Timisoara, Romania, 21.-24. 11. 2013. Vol. 1634, (2014), pp. 100-106. ISSN 0094-243X (in English)

BANÍK, I. – PAVLEDOVÁ, G.: Barrier-Cluster-Heating Model and Photoluminescence Quenching in Disordered Semiconductors. In: Thermophysics 2014 : Conference Proceedings. 19th International Meeting of Thermophysical Society. 1. ed. Brno : Brno University of Technology, 2014, pp. 16-24. ISBN 978-80-214-5034-9 (in English)

KOSTKA, P. – KUBLIHA, M. – LABAŠ, V. – TRNOVCOVÁ, V. – BOŠÁK, O. – POULAIN, M. – ZAVADIL, J.: Influence of Composition on Optical, Dielectric and Electrical Properties of Lead-Antimony-Tellurium Oxychloride Glasses. In: ISNOG 2014 : 19th International Symposium on Non-Oxide and New Optical Glasses. Aug. 24-28, 2014, Jeju, South Korea. 1. ed. [b.m.]: [b.v.], 2014, p. 270 (in English)

Kubliha, M. – Gregářová, R.: Measuring the Thermal Conductivity of Materials by Hot-Ball Sensors. In: 27th DIDMATTECH 2014 : Olomouc, ČR, 19.-20.6.2014. 1. ed. Olomouc : Gevak, 2014, CD ROM, pp. 55-58. ISBN 978-80-86768-88-5 (in Slovak)

Lukovičová, J. – Pavlendová, G. – Baník, I. – Podoba, R.: Determination of Poroelastic Parameters of Porous Building Materials. In: Defect and Diffusion Forum : 9th International Conference on Diffusion in Solids and Liquids Mass Transfer – Heat Transfer – Microstructure and Properties – Nanodiffusion and Nanostructured Materials, DSL 2013, Madrid, Spain, 24.-28.06.2013. Vol. 353 (2014), pp. 189-192. ISSN 1012-0386 (E) (in English)

Pavlendová, G. – Podoba, R. – Baník, I.: Accelerated Ageing in Testing Bricks Used in the Conservation of Historic Buildings. In: AIP Conference Proceedings : TIM 2013. Timisoara, Romania, 21.-24.11.2013. Vol. 1634, (2014), pp. 125-130. ISSN 0094-243X (in English)

Sarkar, B. K. – Pavlendová, G. – Baník, I. – Deviprasadh, P.S.: Thermal and Optical Properties of Cd_{1-x}Zn_xSe Semiconductor from Photoacoustic Measurement. In: Thermophysics 2014 : Conference Proceedings. 19th International Meeting of Thermophysical Society. 1. ed. Brno : Brno University of Technology, 2014, pp. 105-111. ISBN 978-80-214-5034-9 (in English)

Seliga, E. – Minárik, S. – Bošák, O. – Labaš, V. – Kubliha, M. – Hronkovič, J.: Determination of Adverse Effects on Rubber Compounds Based on SBR/NR by Measurements of Rheological Properties. In: IDS 2014. International Doctoral Seminar 2014 : Proceedings of the 9th International Doctoral Seminar (IDS 2014), Zielona Góra, Poland, May 19-21, 2014. 1. ed. Zielona

Góra : University of Zielona Góra, 2014, DVD, pp. 200-205. ISBN 978-80-8096-195-4 (in English)

Šín, P. – Sergejev, F. – Štubňa, I.: Fracture Toughness of Kaolin Fired at Different Temperatures. In: Engineering Mechanics 2014 : 20th International conference. Book of full texts. Svatka, ČR, 12.-15.05.2014. 1st ed. Brno : University of Technology, 2014, pp. 636-639. ISBN 978-80-214-4871-1 (in English)

Šín, P. – Trník, A. – Podoba, R. – Štubňa, I.: Mechanical Properties of Alumina Porcelain after Firing. In: Thermophysics 2014 : Conference Proceedings. 19th International Meeting of Thermophysical Society. 1st ed. Brno : Brno University of Technology, 2014, pp. 112-119. ISBN 978-80-214-5034-9 (in English)

Šín, P. – Podoba, R. – Štubňa, I. – Trník, A.: Mechanical Properties of Alumina Porcelain during Heating. In: AIP Conference Proceedings : TIM 2013. Timisoara, Romania, 21.-24.11.2013. Vol. 1634, (2014), pp. 76-80. ISSN 0094-243X (in English)

Unčík, S. – Matulová, K. – Pavlendová, G.: Effect of Shrinkage Reducing Admixtures on the Properties of Concrete. In: Concrete Days 2014 and 5th Post Congress Coloquium SNK fib : Book of Lectures. 1st ed. Bratislava : Slovak University of Technology in Bratislava, 2014, pp. 201-206. ISBN 978-80-8076-114-1 (in Slovak)

Baník, I. – Popescu, M.: Photoluminescence Quenching in Disordered Semiconductors from Point of View of the Barrier-Cluster-Heating Model. In: Journal of Optoelectronics and Advanced Materials – Vol. 16, Nos. 11-12, (2014), pp. 310-319 (in English)

Lukovičová, J. – Pavlendová, G.: Using Inverse Problem for Determining Temperature and Moisture-Dependent Thermal Properties of Porous Material. In: Machines, Technologies Materials – Vol. 205, Year IX, No. 2/2015, ISSN 1313-0226 (in English)

Abstracts from international conferences

Baník, I. – Kubliha, M. – Labaš, V. – Lukovičová, J.: Optical Properties of Chalcogenide Glasses From the Point of View of the Barrier-Cluster-Heating Model. In: ISNOG 2014: 19th International Symposium on Non-Oxide and New Optical Glasses. Jeju, South Korea, 24.-28.08.2014 – Jeju, 2014. – p. 270 (in English)

Labaš, V. – Legouera, M. – Kostka, P. – Kubliha, M. – Trnovcová, V. – Le Coq, D.: Electrical, Dielectric and Optical Properties of Sb₂O₃-Li₂O-MoO₃ Glasses. In: ISNOG 2014: 19th International Symposium on Non-Oxide and New Optical Glasses. Jeju, South Korea, 24.-28.08.2014 – Jeju, 2014. – p. 270 (in English)

Kostka, P. – Kubliha, M. – Křučka, M. – Labaš, V. – Trnovcová, V. – Le Coq, D.: Electrical Conductivity, Dielectric Relaxation, and Optical Properties of PbCl₂-TeO₂-WO₃ Glasses. In: ISNOG 2014: 19th International Symposium on Non-Oxide and New Optical Glasses. Jeju, South Korea, 24.-28.08.2014 – Jeju, 2014. – p. 270 (in English)

Lukovičová, J. – Pavlendová, G.: Using Inverse Problem for Determining Temperature and Moisture Dependent Thermal Properties of Porous Material. In: Machines, Technologies, Materials 2014 – 11th International Congress. Varna, Bulgaria 17.-20.09.2014. ISSN 1310-3946 (in English)

Pavlendová, G. – Lukovičová, J.: Electro Osmosis: the Past and the Future in Civil Engineering. In: Physics Conference TIM14 – Physics without Frontiers, Timisoara, Romania, 2014 – Timisoara: West University of Timisoara, 20.-23.11.2014 (in English) <https://easychair.org/conferences/submission.cgi?submission=2037915;a=7610946>

Lukovičová, J. – Pavlendová, G. – Baník, I. – Kubliha, M. – Šín, P.: Experimental Determination of Coupled Moisture and Temperature Caused Deformations of Innovative Plaster. In: Physics Conference TIM14 – Physics without Frontiers, Timisoara, Romania, 2014 – Timisoara: West University of Timisoara, 20.-23.11.2014, p. 1 (in English) <https://easychair.org/conferences/submission.cgi?submission=2037915;a=7610946>

Baník, I. – Kubliha, M. – Pavlendová, G. – Lukovičová, J.: Mid-Gap Phenomena in Chalcogenide Glasses and Barrier-Cluster-Heating Model. In: Physics Conference TIM14 – Physics without Frontiers, Timisoara, Romania, 2014 – Timisoara: West University of Timisoara, 20.-23.11.2014 (in English) <https://easychair.org/conferences/submission.cgi?submission=2037915;a=7610946>

Baník, I.: Photoluminescence in Disordered Semiconductors from the Point of View of the Barrier-Cluster-Heating Model. In: ICL2014 – 17th International Conference on Luminescence and Optical Spectroscopy of Condensed Matter – Wrocław, Poland, 2014 – Wrocław: 13.-18.07.2014 – ISBN 978-83-60043-14-1 (in English)

DEPARTMENT OF STRUCTURAL MECHANICS

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Building Analysis

Plane and Spatial Structures

Special Problems in Dynamics and Statics

Statics

Statics (English)

Structural Analysis

Structural Dynamics

Structural Mechanics

Structural Mechanics (English)

Theory of Elasticity

Theory of Elasticity (English)

Theory of Elasticity and Plasticity

Optional subjects

Aeroelastics

Interaction of Structures and Foundations

Life Span and Reliability of Structures

Modeling Subgrades

Non-Linear Mechanics

Seismic Engineering

Recommended subjects

Automation in Non-Linear Structural Analysis

Automation in Structural Dynamics

Automation in the Statics of Structures

Plasticity Analysis of Structures

Stability of Structures

Structural Modeling Using FEM

Viscoelasticity of Structural Systems

2. THESES

2.1 Bachelor theses

There were 17 works.

2.2 Graduate theses

Baran, M.: Static and Dynamic Analysis of a Multifunctional Building
Supervisor: Ivánková, O.

Brzáčová, M.: Comparison of the Values of Critical Moments: Approximate Formulas vs. Exact Values under Different Boundary Conditions of the Imposition of a Rod
Supervisor: Koleková, Y.

Florek, M.: Static and Dynamic Analysis of a Platform with a Helix-Shaped Midline
Supervisor: Ivánková, O.

Haluza, T.: Static Calculation of an Underground Garage Compound
Supervisor: Jendželovský, N.

Ilavský, D.: Static Calculation of a High-Rise Building
Supervisor: Jendželovský, N.

Kubiš, F.: Seismic Analysis of an Office Building
Supervisor: Jendželovský, N.

Tomašovičová, D.: Alternative Method of Constructing an Office Building Foundation
Supervisor: Jendželovský, N.

Valašík, A.: Static and Dynamic Analysis of a High-Rise Building
Supervisor: Ivánková, O.

Venglár, M.: Measurements and Numerical Analyses for Identification of the System of a Simple Bearing Structure
Supervisor: Sokol, M.

3. RESEARCH

3.1 Research projects

Modeling of the Basic Characteristic Quantities of Natural Wind in the BLWT Wind Tunnel STU
(2013 – 2015, Hubová, O.), VEGA 1/0480/13

Optimal Structural Design in Terms of Failure Analysis with an Emphasis on Aspects of the Reliability and Durability of Structures
(2012 – 2014, Ivánková, O.), VEGA 1/1186/12

Non – Destructive Methods for Identification of the Quality of Engineering Constructions
(2012 – 2014, Jendželovský, N.), VEGA 1/0629/12

Reliability of Structures under the Effects of Accidental Loads. Increase in the Safety of Nuclear Power Plants
(2012 – 2014, Králik, J.), VEGA 1/1039/12

Resistance of Metal Girders with Corrugated Webs, Beams with Non-Uniform Cross-Sections and Resistance of Steel L-Profiles in Compression
(2013 – 2015, KOLEKOVÁ, Y.), VEGA 1/0748/13

Monitoring of Bearing Structures of Bridges by Multiple Dynamic Tests
(2013 – 2015, Sokol, M.), APWV-0236-12

3.2 International cooperation

Cooperating institutions

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 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 Technical Committee CEN 250/ SC 8

Sokol, M.: Member of European Society of Biomechanics

4. PUBLICATIONS

Books

Tvrďá, K.: New Aspects in the Optimal Design of Bearing Structures. Bratislava, STU, 2014. 131 pp. ISBN 978-80-227-4180-4 (in Slovak)

Textbooks

Ravinger, J.: Numerical Methods in Theory of Structures. Bratislava, STU, 2014. 156 pp. ISBN 978-80-227-4234-4 (in English)

Parts of books

Sokol, M.: Spine Modeling Tool. In: Vom Innovationsimpuls zum Marketeintritt. Theorie – Praxis – Methoden. Eine Sammlung theoretischer, praktischer und methodenspezifischer Beiträge im Rahmen des grenzüberschreitenden Forschungsprojekts HITECH Center N00092 ETC Projekt SR-AT. WU Vienna, Facultas Verlags- und Buchhandels AG, 2014. pp. 143-152. ISBN 978-3-7089-1255-4 (in English)

Journals

Hubová, O. – Konečná, L. – Lobotka, P.: Influence of Walls and Ceiling on a Wind Flow in BLWT Tunnel. Applied Mechanics and Materials, Vol. 617 (2014), pp. 257-262. ISSN 1662-7482 (in English)

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- Tvrďá, K.: Optimization of the Thickness of a Foundation Plate at Particular Points. In: New Trends in the Statics and Dynamics of Buildings, Oct. 16-17, 2014, SvF STU Bratislava, 7 pp. ISBN 978-80-227-4259-7 (in Slovak)
- Véghová, I. – Sumeć, J.: Viscoelastic of Solids – Linear State Equations. In: New Trends in the Statics and Dynamics of Buildings, Oct. 16-17, 2014, SvF STU Bratislava, 6 pp. ISBN 978-80-227-4259-7 (in English)

Véghová, I.: Frame Reinforced Concrete Joint Stiffness under Seismic Load. In: New Trends in the Statics and Dynamics of Buildings, Oct. 16-17, 2014, SvF STU Bratislava, 4 pp. ISBN 978-80-227-4259-7 (in English)

Vráblová, K – Jendželovský, N.: Analysis of Concrete Slabs under the Impact Load. In: Dynamics of Civil Engineering and Transport Structures and Wind Engineering DYN-WIND 2014. Donovaly, Slovak Republic, May 26-29, 2014. pp. 337-341. ISBN 978-80-554-0844-6 (in English)

Vráblová, K.: Comparison of Solid Slab and Lightened Slab Models. In: Advances in Architectural, Civil and Environmental Engineering. 24th Annual PhD Student Conference, SvF STU Bratislava, Oct. 30, 2014, pp. 136-140. ISBN 978-80-227-4301-3 (in Slovak)

DEPARTMENT OF MATERIAL ENGINEERING

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

Concrete Technology

Technological Project

Concrete Technology II

Testing

Technology of Repairs

Optional subjects

Ceramics

Binders II

Insulating Materials

1.2 Postgraduate courses

Building Materials

Selected Chapters from Chemistry II

2. THESES

2.1 Graduate theses

Brutenič, L.: Lightweight Concretes Based on Polystyrene Waste

Supervisor: Unčík, S.

Hutník, M.: Influence of Metakaolin on the Properties of Cement Composites

Supervisor: Unčík, S.

Kemenský, T.: Influence of Alkali-Resistant Glass Fibers on the Properties of Cement Composites

Supervisor: Štefunková, Z.

Kocsis, D.: Nanotechnology in the Field of Cement Composites

Supervisor: Ledererová, M.

Kykal, L.: Thermal Insulation Concrete Based on Recycled Polyurethane Foam

Supervisor: Unčík, S.

Pohl, J.: Determination of the Selected Physical and Mechanical Properties of Different Types of Autoclaved Aerated Concrete

Supervisor: Struhárová, A.

Surový, M.: Influence of Moisture Content on Selected Physical-Mechanical Properties of Autoclaved Aerated Concrete

Supervisor: Struhárová, A.

Tamaškovič, O.: Cement Composites with the Addition of Alkali-Resistant Glass Fibers

Supervisor: Štefunková, Z.

Cichý, M.: Modification of Volume Changes in Cement Composites by Aluminate Cement

Supervisor: Unčík, S.

Cichý, M.: Modification of the Shrinkage of Cement Mortars by Additives

Supervisor: Unčík, S.

2.2 Doctoral theses

Sabová, A.: High-Performance Cement Composites

Supervisor: Unčík, S.

Užáková, M.: Study of the Properties of Mortars Based on Lime and Lime-Pozzolan Binders Designated for the Repair Of Historic Buildings

Supervisor: Pavlík, V.

3. RESEARCH

3.1 Research projects

Study of the Hardening Processes of Historical and Current Mortars (2013-2015 Pavlík, V.), VEGA 1/0534/13

3.2 International cooperation

Cooperating institutions

Faculty of Civil Engineering, Brno University of Technology, Czech Republic, Klokner Institute, ČVUT Prague, Czech Republic Faculty of Civil Engineering, VŠB – Technical University of Ostrava, Czech Republic

4. PUBLICATIONS

Journals

Gregorová, V.: Effect of DENKA Expansion Cement on the Shrinkage of Cement Composites. In: *Mladá veda*, ISSN 1339-3189. Vol. 2, No. 2 (2014), pp. 45-53 (in Slovak)

Gregorová, V.: Influence of Recycled Polystyrene Filler on the Physical and Thermophysical Properties of Lightweight Concretes. In: *Mladá veda*, ISSN 1339-3189. Vol. 2, No. 3 (2014), pp. 99-105 (in Slovak)

Kmecová, V. – Štefunková, Z.: Effect of Basalt Powder on Workability and Initial Strength of Cement Mortar. In: *Journal of Civil Engineering and Architecture Research*, ISSN 2333-9128. Vol. 1, No. 4 (2014), pp. 260-267 (in English)

Matulová, K. – Unčík, S.: Effect of Shrinkage Reducing Admixture (SRA) on Selected Properties of Cement Mortars. In: *Journal of Civil Engineering and Architecture Research*, ISSN 2333-9128. Vol. 1, No. 4 (2014), pp. 278-282 (in English)

Matulová, K.: Development of Materials Based on Hydraulic Binders – the Most Used Materials in the World. In: *Mladá veda*, ISSN 1339-3189. Vol. 2, No. 1 (2014), pp. 54-60 (in Slovak)

Matulová, K.: Comparison of the Effects of Selected Additives and Admixtures on the Shrinkage and Other Properties of Cement Mortars. In: *Mladá veda*, ISSN 1339-3189. Vol. 2, No. 3 (2014), pp. 70-79 (in Slovak)

Struhárová, A.: Chemical Grouting Method and Its Effectiveness for Protection of Autoclaved Aerated Concrete Masonry. In: *Advanced Materials Research*, ISSN: 1022-6680, ISSN/ISO: Adv. Mater. Res., Vol. 923 (2014), pp. 112-116 (in English)

Conference Proceedings

Gregorová, V.: The Influence of the Expansion Additive on Shrinkage of Cement Composites. In: ATF 2014 [electronic source]: Proceedings of 3rd Conference on Building Physics and Applied Technology in Architecture and Building Structures. E-Book of reviewed papers. Vienna, Austria, 6.-7.5.2014. Vienna: TGM – Federal Institute of Technology, 2014. ISBN 978-3-200-03644-4. pp. 328-336 (in English)

Gregorová, V.: Application of DENKA Expansion Cement in the Shrinkage Reducing Cement Composites. In: *Construmat 2014*. Proceedings of Conference on Structural Materials. Malenovice, Czech Republic, 11.-13.6.2014. [CD ROM]: Technical University of Ostrava, Faculty of Civil Engineering, 2014. ISBN 978-80-248-3381-1. pp. 176-182 (in Slovak)

Gregorová, V.: Polystyrene Waste as a Filler for Lightweight Concrete. In: *Advances in Architectural, Civil and Environmental Engineering*. Proceedings of 24rd Annual Postgraduate Student Conference. Bratislava, SR, 30.10.2014 [CD ROM]. Bratislava: STU Publishing House, 2014. ISBN 978-80-227-4301-3. pp. 325-331 (in Slovak)

Hurtošová, Z. – Šveda, M.: Effect of the Additive Vuppor on a Brick Body Produced from Loess Sediments. In: *Construction Materials: Proceedings of reviewed scientific papers*. Ostrava. 2014 [CD ROM]: Technical University of Ostrava, 2014. – ISBN 978-80-248-3381-1. pp. 319-325 (in Slovak)

Janík, B. – Šveda, M.: Molasses and Its Application in the Brick Industry. In: *Possibilities and Future of Waste Recycling from Buildings as a Source of Valuable Raw Materials*. Proceedings of 19th conference, Brno, CR, 13.-14.3.2014. Brno University of Technology, 2014. ISBN 978-80-214-4866-7. pp. 104-111 (in English)

Janík, B. – Šveda, M.: Utilization of Waste from the Food Industry in the Manufacture of Brick Products. In: *Proceedings of 18th Conference on the Environment and Mineral Processing, Part I*. Ostrava, CR, 29.-31.5.2014. Ostrava: Technical University of Ostrava, Faculty of Mining and Geology, 2014. ISBN 978-80-248-3426-9. pp. 63-68 (in English)

Janík, B. – Šveda, M.: Chemical Additive Vuppor Used as a Replacement for Sawdust in the Manufacture of Brick Product. In: *Proceedings of the second international conference for PhD Students in Civil Engineering and Architecture*, Cluj-Napoca, Romania, 10-13 December 2014. Technical University of Cluj-Napoca. ISSN 2392-9715. pp. 365-371 (in English)

Kerestúr, M. – Šveda, M.: The Impact of Waste Based on Bentonite and Zeolite on the Frost Resistance of Clay Roofing Tiles. In: *Construction Materials: Proceedings of reviewed scientific papers*. Ostrava. 2014 [CD ROM]: Technical University of Ostrava, 2014. ISBN 978-80-248-3381-1. pp. 309-314 (in Slovak)

Kormaník, M. – Užáková, M. – Pavlík, V.: Resistance of Lime-Based Mortars to Freezing and Thawing. In: *Construmat 2014*. Proceedings of Conference on Structural Materials. Malenovice, Czech Republic, 11.-13.6.2014. [CD ROM]: Technical University of Ostrava, Faculty of Civil Engineering, 2014. ISBN 978-80-248-3381-1. pp. 235-240 (in Slovak)

Ledererová, M.: Recycled Building Materials – State and Possibilities for Further Development. In: *Construmat 2014*. Proceedings of Conference on Structural Materials. Malenovice, Czech Republic, 11.-13.6.2014. [CD ROM]: Technical University of Ostrava, Faculty of Civil Engineering, 2014. ISBN 978-80-248-3381-1. pp. 292-297 (in Slovak)

Ledererová, M.: Use of Mineral-Based Waste Ingredients and Their Influence on the Properties of Cement Composites. In: *RECYCLING 2014: Possibilities and Future of Waste Recycling from Buildings as a Source of Valuable Raw Materials*. Proceedings of 19th conference, Brno, CR, 21.-22.3.2014. Brno University of Technology, 2014. ISBN 978-80-214-4866-7. pp. 114-118 (in Slovak)

Ledererová, M.: Impact of Concrete Recycled Materials on Some Properties of Concrete. In: *enviBUILD 2013, Buildings and the Environment*. Proceedings of 9th international conference Bratislava, SR, 17.10.2013. Bratislava: Faculty of Civil Engineering of the Slovak University of Technology. (published in 2014) ISBN 978-80-227-4070-8. pp. 399 – 402 (in English)

- Ledererová, M.: Nanomaterials, Nanocomposites and Their Potential Uses in Construction. In: Construction Technology and Management CTM 2014, Proceedings of international scientific conference, Bratislava, SR, 9.-11.9.2014. Bratislava: Faculty of Civil Engineering of the Slovak University of Technology. ISBN 978-80-227-4243-6. pp. 309-314 (in English)
- Matulová, K. – Štefunková, Z.: Effect of Selected Admixtures on Properties of Cement Mortar. In: In: Construmat 2014. Proceedings of Conference on Structural Materials. Malenovice, Czech Republic, 11.-13.6.2014. [CD ROM]: Technical University of Ostrava, Faculty of Civil Engineering, 2014. ISBN 978-80-248-3381-1. 189-195 (in Slovak)
- Matulová, K. – Unčík, S.: Effect of Shrinkage-Reducing Admixtures on Self-Compacting Cement Mortars. In: ATF 2014: Proceedings of 3rd Conference on Building Physics and Applied Technology in Architecture and Building Structures. Vienna, Austria, 6.-7.5.2014. TGM – Federal Institute of Technology, Vienna, 2014. ISBN 978-3-200-03644-4. pp. 343-348 (in English)
- Matulová, K.: Effect of Expansion Additives and Shrinkage-Reducing Admixtures on the Properties of Cement Mortars. In: Advances in Architectural, Civil and Environmental Engineering, Proceedings of 24th Annual Postgraduate Student Conference. Bratislava, SR, 30.10.2014. [CD ROM]: STU Publishing House, Bratislava 2014. ISBN 978-80-227-4301-3. pp. 362-367 (in Slovak)
- Matulová, K.: Influencing the Shrinkage of Cement Mortars by Selected Additives and Admixtures. In: Juniorstav 2014, Proceedings of 16th International Conference of Postgraduate Students. Brno, CR, 30.1.2014. [CD ROM]. Brno University of Technology, Faculty of Civil Engineering, Brno 2014. ISBN 978-80-214-4851-3 (in Slovak)
- Pavlík, V. – Užáková, M. – Kormaník, M.: Influence of Fly Ash and Zeolite Dust on the Properties of Lime Mortars. In: Proceedings of 18th Conference on the Environment and Mineral Processing, Part I. Ostrava, ČR, 29.-31.5.2014. Ostrava: Technical University of Ostrava, Faculty of Mining and Geology, Institute of Environmental Engineering 2014. ISBN 978-80-248-3426-9. pp. 143-150 (in English).
- Sokolář, R. – Vodová, L. – Šveda, M.: Use of Limestone Sludge in the Brick Body. In: Advanced Materials Research. 18th Conference of Research Institute for Building Materials Ecology and New Building Materials and Products. ICEBMP 2014, Cerna Hora, CR, 3.-5.6.2014. ISSN 1022-6680. Vol.1000. pp. 158-161 (in English)
- Struhárová, A.: Influence Grouting Method on the Safeguard of Autoclaved Aerated Concrete Masonry, In: Proceeding of "Zkoušení a jakost ve stavebnictví" international conference, Brno University of Technology, Faculty of Civil Engineering, Brno 2014, CR, ISBN 978-80-214-5032-5. pp. 245-251 (in English)
- Struhárová, A.: Effectiveness of Hydrophobization on Wet Autoclaved Aerated Concrete Masonry. In: Construmat 2014. Proceedings of Conference on Structural Materials. Malenovice, Czech Republic, 11.-13.6.2014. [CD ROM]: Technical University of Ostrava, Faculty of Civil Engineering, 2014. ISBN 978-80-248-3381-1. pp. 353-361 (in Slovak)
- Struhárová, A.: Fluidized Fly Ash and Its Effect on the Selected Physical-Mechanical Properties of the Autoclaved Aerated Concrete. In: Proceeding of Construction Technology and Management CTM 2014 international scientific conference, Bratislava 2014, SR, ISBN 978-80-227-4243-6. pp. 433-440 (in English)
- Struhárová, A. – Unčík S. – Balkovic S. – Hlavinková M.: Influence of Fluidized Fly Ash on the Selected Physical-Mechanical Properties of the Autoclaved Aerated Concrete. In: Advanced Materials Research, ISBN 978-3-03835-040-8: Vol. 899 (2014). pp. 409-414 (in English)
- Štefunková, Z.: Corrosion of Cement Composites Caused by Solutions of Ammonium Nitrate. In: Construmat 2014. Proceedings of Conference on Structural Materials. Malenovice, Czech Republic, 11.-13.6.2014. [CD ROM]: Technical University of Ostrava, Faculty of Civil Engineering, 2014. ISBN 978-80-248-3381-1. pp. 183-188 (in English)
- Štefunková, Z. – Kmecová, V.: The Effect of Ammonium Nitrate Solutions on Cement Pastes. In: Rural Buildings in European Regions II. Nitra, 2014 [CD ROM]: Slovak University of Agriculture in Nitra, 2014. ISBN 978-80-552-1245-5. pp. 85-90 (in Slovak)
- Unčík, S. – Matulová, K. – Pavlendová, G.: Effect of a Shrinkage-Reducing Admixture on the Properties of Concrete. In: Concrete Days 2014. Bratislava, SR, 23.-24.10.2014. STU in Bratislava, 2014. ISBN 978-80-8076-114-1. pp. 201-206 (in Slovak)
- Užáková, M.: Properties of Lime-Based Mortars Related on the Type of Used Pozzolan Admixture. In: ATF 2014: E-Book of reviewed papers, 3rd Conference on Building Physics and Applied Technology in Architecture and Building Structures, Vienna, Austria 6.-7.5.2014. TGM – Federal Institute of Technology, Vienna, 2014. ISBN 978-3-200-03644-4. pp. 269-272 (in English)
- Užáková, M. – Pavlík, V. – Kormaník, M. – Ledererová, M.: Properties of Lime-Pozzolan Mortars with Zeolite and Fly Ash Addition. In: Construmat 2014. Proceedings of Conference on Structural Materials. Malenovice, Czech Republic, 11.-13.6.2014. [CD ROM]: Technical University of Ostrava, Faculty of Civil Engineering, 2014. ISBN 978-80-248-3381-1. pp. 221-227 (in English)
- Šveda, M. – Sokolář, R.: Correlation Relationships between Properties of Brick Body and Their Use in Building Practice. In: Advanced Materials Research. EnviBuild, Buildings and the Environment 2013. Bratislava, Slovakia, 17.10.2013. Slovak University of Technology in Bratislava. ISBN 1022-6680 (P). Vol. 899. pp. 393—398 (in English).
- Šveda, M.: Improving the Thermal Insulation Properties of Brick Products Using Chemical Additive Vuppor. In: Advanced Materials Research. EnviBuild, Buildings and the Environment 2013. Bratislava, Slovakia, 17.10.2013. Slovak University of Technology in Bratislava. ISBN 1022-6680(P). Vol. 899. pp. 403-408 (in English)
- Šveda, M. – Janík, B.: The Reduction in the Production Costs of Brickwork Through Using the Additive Vuppor. In: Construction Materials. Proceedings of reviewed scientific papers. Ostrava. 2014 [CD ROM]. Ostrava: Technical University of Ostrava, 2014. ISBN 978-80-248-3381-1. pp. 339-346 (in Slovak)

DEPARTMENT OF BUILDING TECHNOLOGY

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1. EDUCATION

1.1 Graduate study

Mandatory subjects

Building Technology and Management (STOP)
Building Technology (CE)
Technology of Construction Processes I. (TMS)
Technology of Construction Processes II. (TMS)
Professional Training (TMS)
Final Work (TMS)
Construction of Buildings (TMS)
Excursion (TMS)
Construction and Maintenance Management (CE)
Safety and Protection of Health in the Construction Process (TS)
Construction Site Facility (TS)
Professional Training (TS)
Thesis (TS)
Technology of Construction Processes I. (PSA)
Technology of Construction Processes II. (TMS)
Protection of the Environment (TMS)
Costs and Prices in the Building Industry (TMS)
Seminars for the Bachelor Thesis (TMS)
Pre – Construction Design (TS)
Excursion (TS)
Quality Management in Construction (TS)
Historical Building Technologies (PSA)

Mandatory elective subjects

A Manager in the Construction Industry (TMS)
Construction of Buildings (PSA)
Safety and Protection of Health in the Construction Process (TS)
Technology of Finishing Processes (TS)
Technology of Building Renovation II. (TS)
Protection and Creation of the Environment (TS)
Computer-Aided Pre-Construction Design (TS)

Ethics of an Undertaking (TS)
Historical Construction Technologies (TS)
Technology Project II. (TS)
A Manager in the Construction Industry (STOP)
Construction Engineering in Practice (TMS)
Technological Processes in Technical Facilities (TZB)
Technology of Building Renovation I. (TS)
Modelling of Construction Processes (TS)
Pathology of Buildings (TS)
Technology of Maintenance (TS)
Technology Project I. (TS)
Technology Project I. (MI)
Forensic Activities (TS)
Technology of Building Service Renovations (TS)
Non- Destructive Testing (TS)
Civil Engineering in Practice (VSVH)
Costs and Prices (VSVH)

In English

Quality Management in CE (CE)
Financial Management (CE)
Technology of Traditional Buildings (CE)

1.2 Postgraduate Courses

Technology of Construction
Postgraduate Study Project I-VII
Pedagogic Activity
Scientific and Publication Activity
Technology of Concrete (TS)
Steel and Wooden Loadbearing Systems (TS)
Forensic Activity (TS)
Construction Law (TS)
Built-Up Constructions (TS)
Personnel Management (TS)
Ethics of an Undertaking (TS)
Valuation of Estates (TS)

Technology of Historical Buildings (TS)
 Land Law (TS)
 Non-Destructive Testing (TS)
 Space Economics (TS)
 Technology of Water-Related Buildings (TS)
 Financial Management II (TS)
 Technology Project II (TS)
 Technology of Construction Processes 1,2,3 (TMS)
 Professional Practice (TMS)
 Seminars for Bachelor Thesis (TMS)
 Costs and Prices in the Construction Industry (TMS)

Dolák, R.: Multifunctional Object "EcoDesign House", Starý háj st., Petržalka – Bratislava.
 Supervisor: Prokopčáková, K.
 Dömötörövá, Z.: Renewing of the Mansion in Hubice.
 Supervisor: Makýš, O.
 Fillová, J.: Selected Parts of Building Technology Project for the Construction of the Building "Complex of Apartment Houses Karlová Ves".
 Supervisor: Antošová, N.
 Fruniová, D.: Multifunctional Building in Piešťany.
 Supervisor: Somorová, V.
 Galková, G.: New Building of the Multifunctional House "Residence Sobieski".
 Supervisor: Hulínová, Z.

2. THESES

2.1 Bachelor theses

There were 89 works.

2.2 Graduate theses

Abík, M.: Multifunctional Building on Ružinov st. No.44.
 Supervisor: Somorová, V.

Badura, V.: Multifunctional Building on Ružinov st. No.44 in Bratislava.
 Supervisor: Makýš, P.

Bartík, E.: Selected Parts of Building Technology Project for the Construction of the "Apartment House Panorama in Bratislava". Supervisor: Antošová, N.

Bisták, A.: Multifunctional Building "Westend Quadrant, Bratislava".
 Supervisor: Hulínová, Z.

Brtko, M.: Multifunctional Building "Astoriapalace II", Bratislava.
 Supervisor: Ďubek, M.

Bujalka, J.: Apartment Building "On Crossroads", Bratislava – Trnávka.
 Supervisor: Búciová, M.

Cichý, M.: Influencing of Cubature Changes of Cement Composites by Metaaluminate Cement.
 Supervisor: Unčík, S.

Cichý, M.: Influencing of Contraction of Cement Mortars through Additives.
 Supervisor: Unčík, S.

Černaj, J.: Selected Parts of Building Technology Project for the Construction of the Building "Multifunction" in Žiar upon Hron.
 Supervisor: Antošová, N.

Hajtman, O.: Renovation of the "Yellow Mansion" in Dunajská Streda.
 Supervisor: Makýš, O.

Halža, A.: Rovinka – New Centre.
 Supervisor: Petro, M.

Heriban, T.: Renovation of Industrial Heritage – Area of the "Ludivík Pit".
 Supervisor: Makýš, O.

Holub, M.: Renovation of the Mansion in Veselí upon Morava.
 Supervisor: Makýš, O.

Hric, F.: New Dax.
 Supervisor: Petro, M.

Hutník, M.: The Influence of the Metacaolin on the Characteristics of Cement Composites.
 Supervisor: Unčík, S.

Ihradský, T.: Selected Parts of Building Technology Project for the Construction of the "Apartment Building in Bratislava".
 Supervisor: Antošová, N.

Jurkovič, P.: Renovation of the Mansion in Bernolákovo.
 Supervisor: Makýš, O.

Jursová, B.: Multifunctional Building Cubicon, Bratislava.
 Supervisor: Makýš, P.

Juščík, M.: Selected Parts of Building Technology Project for the Construction of the Multifunctional House in Bratislava.
 Supervisor: Juriček, I.

Kaiser, B.: Selected Parts of Building Technology Project for the Construction of the Building "Multifunctional House in Ružinov".
 Supervisor: Antošová, N.

- Kaša, M.: Building Technology Project for the Construction of the “Business Centre Bratislava I Plus”.
Supervisor: Gašparík, J.
- Kemenský, T.: The Influence of Alkali Resisting Glass Fibres on Characteristics of Cement Composites.
Supervisor: Štefunková, Z.
- Kluková, M.: Multifunctional Dwelling “Colorhouse II”.
Supervisor: Tarábková, L.
- Kocsis, D.: Nanotechnologies in the Field of Cement Composites.
Supervisor: Ledererová, M.
- Koller, E.: Selected Parts of Building Technology Project for the Construction of a Shopping Mall.
Supervisor: Briatka, P.
- Kopča, R.: Selected Parts of Building Technology Project for the Construction of a Selected Building.
Supervisor: Chamulová, B.
- Kopča, P.: Administrative House “Reding Tower II”.
Supervisor: Makýš, P.
- Kóša, T.: Multifunctional Building.
Supervisor: Božík, M.
- Kováč, M.: Multifunctional Building “Townhall sq.”.
Supervisor: Petro, M.
- Krajčí, M.: University Library in Ružomberok.
Supervisor: Somorová, V.
- Krazalkovič, V.: Selected Parts of Building Technology Project for the Construction of a Selected Building.
Supervisor: Chamulová, B.
- Kubánik, M.: Apartment Complex “Rača Vineyards” 2nd Phase.
Supervisor: Petro, M.
- Kykal, L.: Thermal Insulating Concretes Based on Recycled PUR Foams,
Supervisor: Unčík, S.
- Laco, V.: Building Technology Project for the Construction of a Multifunctional House on Dunaj st. in Bratislava.
Supervisor: Gašparík, J.
- Leginus, J.: Multifunctional Building “Habovka”.
Supervisor: Jankovichová, E.
- Litomerický, Š.: Selected Parts of Building Technology Project for the Construction of a Selected Building.
Supervisor: Chamulová, B.
- Lukács, M.: Apartment Building on Geological st. Bratislava.
Supervisor: Prokopčáková, K.
- Lukáč, P.: Selected Parts of Building Technology Project for the Construction of a Selected Building.
Supervisor: Orosi, P.
- Madi, T.: River Garden Office II. and III.
Supervisor: Makýš, P.
- Madová, J.: Multifunctional Building in Bratislava.
Supervisor: Szalayová, S.
- Maslenová, S.: Apartment Complex “Small Danube III.”, Podunajské Biskupice, Bratislava.
Supervisor: Hulínová, Z.
- Meliš, M.: Multifunctional Building “Nad lúčkami”.
Supervisor: Somorová, V.
- Mészárosová, Z.: Apartment Dwelling “Domino”, Bratislava.
Supervisor: Ďubek, M.
- Mudrý, J.: Selected Parts of Building Technology Project for the Construction of a Selected Building.
Supervisor: Orosi, P.
- Nagy, G.: Multifunctional Building.
Supervisor: Božík, M.
- Nguyen, T. M.: Multifunctional Building Ružinov st. No.44.
Supervisor: Jankovichová, E.
- Novosedlík, M.: Building Technology Project for the Construction of the “Administrative Building – 2nd Phase”.
Supervisor: Gašparík, J.
- Ondreáš, P.: Apartment House on Plátenik st., Bratislava.
Supervisor: Hulínová, Z.
- Ondruš, M.: Multifunctional Building in Bratislava.
Supervisor: Szalayová, S.
- Országh, T.: South City, Zone C2, 1st Phase, Petržalka South, Bratislava V.
Supervisor: Hulínová, Z.
- Paur, K.: Selected Parts of Building Technology Project for the Construction of a Selected Building.
Supervisor: Orosi, P.
- Petrovič, T.: Wellnes Hotel Vrbové.
Supervisor: Hulínová, Z.
- Pinka, M.: Multifunctional Apartment House in Žiar upon Hron.
Supervisor: Búciová, M.

Pohl, J.: Assignment of Selected Physic-mechanical Characteristics of Various Kinds of Aerated Concrete.

Supervisor: Struhárová, A.

Prochásková, M.: Building Technology Project.

Supervisor: Gašparík, J.

Převrátíl, M.: Sel. Parts of Building Technol. Project for the Construction of a Selected Building.

Supervisor: Chamulová, B.

Rakovan, M.: Selected Parts of Building Technology Project for the Construction of a Selected Building.

Supervisor: Chamulová, B.

Ravas, J.: Selected Parts of Building Technology Project for the Construction of "Multifunctional Complex – Under the Forest – in Bratislava".

Supervisor: Antošová, N.

Sedláček, M.: Selected Parts of Building Technology Project for the Construction of a Selected Building.

Supervisor: Chamulová, B.

Strapec, P.: Multifunctional Complex on Einstein st., Bratislava.

Supervisor: Prokopčáková, K.

Surový, M.: The Influence of Moisture on Selected Physic-mechanical Characteristics of the Aerated Concrete.

Supervisor: Struhárová, A.

Škodová, J.: Multifunctional Building in Pezinok.

Supervisor: Szalayová, S.

Števaneková, A.: Apartment Complex "Villinky".

Supervisor: Tarábková, L.

Švantner, R.: Apartment Complex in Brezno.

Supervisor: Prokopčáková, K.

Tamaškovič, O.: Cement Composites with an Addition of Glass Fibres Resisting to Alkali.

Supervisor: Štefunková, Z.

Trčková, M.: Multifunctional House "Helios", Bratislava.

Supervisor: Prokopčáková, K.

Turičik, M.: Metronom Business Centre.

Supervisor: Makýš, P.

Vašečka, M.: Renovation of the Mansion in Jablonica.

Supervisor: Makýš, O.

Vířazková, E.: Selected Parts of Building Technology Project for the Construction of the "Biogas Station with Cogeneration Unit and Storage Service".

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Supervisor: Makýš, P.

Vrábľová, M.: Building Technology Project: "Industrial Hall Paint Shop" in Námestovo.

Supervisor: Gašparík, J.

Zanovít, L.: Sports Hall.

Supervisor: Božík, M.

Žilík, M.: Multifunctional Complex "Eden Park", Bratislava.

Supervisor: Prokopčáková, K.

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Supervisor: Makýš, P.

Krajčovič, J.: The Design of Effective Integrated Management System in Construction.

Supervisor: Gašparík, J.

Strigtáčová, L.: Optimization of Methodology for Evaluating Intelligent Buildings in Terms of Quality of Construction.

Supervisor: Somorová, V.

Šmotlák, M.: Modelling Technological Lags after Wet Processes.

Supervisor: Makýš, P.

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Gašparík, J.: "LLP LdV Transfer of Innovations: Leonardo – BESTILE – Best Practice for Installation of Ceramic, Glass and Stone Tile.

Jankovichová, E.: "Documentation for Quality Assurance of Study Programmes", 517340-TEMPUS-1-2011-1-IT-TEMPUS-SMGR DOQUP.

Makýš, O.: "Days for Monument Technology Conservation", MK-771/2014/1.3.

Makýš, O.: "Editing of Publication: Construction and Repair of Middleage Hill Fortresses", MK-1562/2014/1.3.

3.2 International cooperation

Cooperating institutions

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 a Cultural Heritage, Brno, Czech Republic

ICCROM (International Centre of the Study of the Preservation and Restoration of Cultural Property), Rome, Italy

National Institute for the Preservation of a Cultural Heritage, Prague, Czech Republic

National Institute for the Preservation of a Cultural Heritage, Brno, 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

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

Membership in international professional organizations

ICOMOS (International Council on Monuments and Sites) – Slovak branch, Bratislava, SK

STOP – Society for the Technology of the Protection of Monuments, Prague, CZ

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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

1.2 Postgraduate courses

Hydrochemistry and Hydrobiology

Water Pollution Control

Sanitary Engineering Structures

Water Supply Systems

Water Treatment for Drinking and Industrial Use

Balneology

Horizontal and Vertical Intake Structures

Waste Water Collection

Rehabilitation of Old Waste Disposal Sites

Protection and Utilization of Water Resources

Waste Water Treatment

Solid Waste Treatment

2. THESES

2.1 Bachelor theses

There were 10 works

2.2 Graduate theses

Goliáš, M.: Assessment of the Hydraulic Capacity of the Sewer System of the Town of Bardejov

Supervisor: Stanko, Š.

Greculová, M.: Utilization of the Natural Healing Spring in Oravská Polhora

Supervisor: Božíková, J.

Gregušová, V.: Design of the Sewerage System in the Village of Kvetoslavov
Supervisor: Holubec, M.

Haršány, M.: Design of the Water Supply Network for the Municipalities of Podolie, Pobedim and Očkov
Supervisor: Tóthová, K.

Horská, M.: Removal of Fluoride from Water
Supervisor: Ilavský, J.

Horváth, T.: Hydrotechnics Examination of a Water Network
Supervisor: Božiková, J.

Ivičičová, E.: Membrane Technology in Water Treatment
Supervisor: Ilavský, J.

Kliman, P.: Design of the Water Supply Network for the Municipalities of Križovany nad Dudváhom, Vlčkovce and Opoj
Supervisor: Kriš, J.

Košťál, P.: Pilot Verification of Microfiltration in Water Treatment
Supervisor: Barloková, D.

Krajčovičová, L.: Alternative Design of Vacuum and Gravity Sewerage in the Village of Štvrtok na Ostrove
Supervisor: Stanko, Š.

Mészárosová, M.: Collection Yard of Zlaté Klasy – Proposal for Effective Operation
Supervisor: Škultétyová, I.

Minárik, I.: Separation of Waste Management in Schools
Supervisor: Galbová, K.

Ozaňaková, A.: Municipal Waste Management and Risk Analysis
Supervisor: Škultétyová, I.

Pomothy, B.: Čakany – Design of the Water Supply System
Supervisor: Kriš, J.

Pulen, P.: Assessment of the Hydraulic Capacity of the Sewer System of the Town of Svidník
Supervisor: Galbová, K.

Reissmüller, R. M.: Pilot Scale Verification of Flotation in Water Treatment
Supervisor: Ilavský, J.

Rusnák, D.: Appraisal of Storm Sewer in the Town of Stropkov
Supervisor: Stanko, Š.

Stehlík, M.: Assessment of the Hydraulic Capacity of the Public Sewer Network of the Public Sewers of the Town of Svidník
Supervisor: Holubec, M.

Zemčák, M.: Extension of the Water Supply Network in the Village of Veľká Lomnica
Supervisor: Barloková, D.

2.3 Doctoral theses

Berta, P.: Spreading of Pollution on Surface Waters
Supervisor: Sokáč, M.

Galík, M.: The Impact of Seasonality on the Corrosion Process
Supervisor: Ilavský, J.

Gregušová, V.: Mathematical Simulation of WWTP Structures
Supervisor: Stanko, Š.

Hanusová, A.: Water Filtration in a Multimaterial Filter
Supervisor: Ilavský, J.

Kunštek, M.: Pharmaceuticals in Water and the Possibilities for Their Removal
Supervisor: Ilavský, J.

Hrudka, J.: Dynamic Modelling of WWTP Structures
Supervisor: Stanko, Š.

Molnár, T.: Optimization and Modernization of Technological Processes Used in Water Treatment
Supervisor: Barloková, D.

Molnárová, L.: Optimization of the Operation of a Sewage System
Supervisor: Stanko, Š.

Némeš, P.: Material Impact of a Flow Regime on Losses in Water Networks
Supervisor: Božiková, J.

Rusnák, D.: Significance of Boundary Conditions in the Hydraulic Assessment of a Sewage Network
Supervisor: Stanko, Š.

Kapusta, O.: Optimization of the Filtration Process of a Small Surface Water Treatment Plant to Obtain Safe Drinking Water
Supervisor: Barloková, D.

Štefanec, B.: Effectiveness of the Employment of GIS in the Operation of the Technical Infrastructure of Water Companies
Supervisor: Sokáč, M.

3. RESEARCH

3.1 Research projects

Disposal of Waters from Surface Runoff in Integrated Drainage Systems in Urban Areas
(2012-2014, Stanko, Š.) VEGA 1/1079/12

Quantification of the Simulated Effect of Input Data and Model Parameters on the Accuracy of the Outputs of Dispersion Models for Surface Water
(2011-2015, Sokáč, M.) APVV-0274-10

Natural Materials for the Removal of Harmful Compounds from the Environment

(2012-2014, Barloková, D.) Vega 1/1243/12

Experimental Research on Reducing the Impacts of Sewer Network Floods on Areas. (2013-2017 Stanko, Š.) APVV-0372-12

Increase in Stormwater Runoff Retention and Detention in Urban Catchments (2013-2015, Sokáč, M.) VEGA 1-0691-13

Developing Water Loss Prevention, deWaLoP CBC program Austria Slovakia (2010-2014, Tóthová, K.)

3.2 International cooperation

Cooperating institutions

Technical University, Prague, Czech Republic

Technical University, Brno, Czech Republic

Technical University, Vienna, Austria

Universität für Bodenkultur, Vienna, Austria

Danish Hydraulic Institute, Horsholm, Denmark, and Prague, Czech Republic

National Water Research Institute, Burlington, Canada

Institut Inżynierii Sanitarnej i Ochrony Środowiska, Politechnika Czestochowska, Czestochowa, Poland

University of Pavia, Pavia, Italy

Membership in international professional organizations

Barloková, D.: Member of Czechoslovak Association of Water Experts

Ilavský, J.: Member of Czechoslovak Association of Water Experts

Kriš, J.: Member of International Water Association, London, official member of National Board Committee

Mahříková, I.: Member of International Water Association London, official member of National Board Committee

Mahříková, I.: International Member of Engineering Academy of Armenia

4. PUBLICATIONS

Books

Velísková, Y. – Sokáč, M. – Halaj, P.: Dispersion in Surface Water : Measurement and Modelling. ARDEC, Ltd. Brno, 2014. ISBN 978-80-86020-80-8, 118 pp. (in Slovak)

Textbooks

Božíková, J. – Božík, M. : Water Management Structures [CD], STU in Bratislava, 2014. ISBN 978-80-227-4240-5, 120 pp. (in Slovak)

Journals

Ilavský, J. – Barloková, D. – Hudec, P. – Munka, K.: Iron-based Sorption Materials for the Removal of Antimony from Water. In: Journal of Water Supply: Research and Technology-AQUA, Vol. 63, No. 6 (2014), ISSN 0003-7214, pp. 518-524 (in English)

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Sokáč, M. – Bodík, I.: Status of Sewerage and Wastewater Treatment in Slovakia. In: Gaz, voda i tehnika sanitarna, Vol. 88, No. 4 (2014), pp. 128-131 (in English)

Ilavský, J. – Barloková, D. – Munka, K.: The Utilization of Cerium Dioxide in Water Treatment. In: SOVAK, Vol. 23, Nos. 7-8 (2014), pp. 38-40 (in Slovak)

Halaj, P. – Velísková, Y. – Sokáč, M. – Bárek, V. – Fúška, J.: Modelling of Contaminant Dispersion in Streams – 1D Versus 2D Model Comparison: Case Study on the Ondava River. In: Journal of International Scientific Publications, Vol. 8 (2014), pp. 393-399 (in English)

Velísková, Y. – Sokáč, M. – Halaj, P. – Koczka Bara, M. – Dulovičová, R. – Schügerl, R.: Pollutant Spreading in a Small Stream: A Case Study in Mala Nitra Canal in Slovakia. In: Environmental Processes, Vol. 1, No. 3 (2014), pp. 265-276 (in English)

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Tkáčová, J. – Božíková, J.: Determination of Chlorine Dioxide and Chlorite in Water Supply Systems by Verified Methods. In: Slovak Journal of Civil Engineering, Vol. 22, No. 2 (2014), pp. 21-28 (in English)

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Božíková, J. – Vandrová, G.: Special Waters of the Town of Piešťany. In: Podzemná voda, Vol. 20, No. 1 (2014), pp. 87-102 (in Slovak)

Sokáč, M. – Velísková, Y.: Determination of Longitudinal and Transverse Dispersion Coefficients in a Mountain Stream: A Hron Case Study. In: Acta hydrologica Slovaca, Vol. 15, No. 1 (2014), pp. 94-101 (in Slovak)

Stanko, Š. – Škultétyová, I.: Utilization of Satellite Systems in Water Management. In: Vodné hospodárstvo na Východoslovenskej nížine. Vol. 17, No. 2, ISSN 1339-4096, (2014), pp. 3-4 (in Slovak)

Vrablíková, D. – Porubská, D. – Fendeková, M. – Božíková, J. – Kókaiová, D.: Evaluation of the Aggressiveness of Slovak Mineral Water Sources. In: Slovak Journal of Civil Engineering. Vol. 22, No. 2 (2014), pp. 29-36 (in English)

Conference Proceedings

Barloková, D. – Ilavský, J.: Utilization of Filtralite for the Removal of Iron and Manganese from Water. In: Drinking Water 2014 : Drinking Water from Water Reservoirs : 12th International Conference. Tábor, Czech Republic, 26.-29.5.2014 – ISBN 978-80-905238-1-4 – pp. 139-144 (in Slovak)

Barloková, D. – Ilavský, J. – Sokáč, M.: Comparison of Modified Zeolites from Different Deposits in Ground Water Treatment. In: SGEM 2014. Water Resources, Forest, Marine and Ocean Ecosystem : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-13-1 – pp. 135-142 (in English)

Berta, P. – Sokáč, M.: Utilization and Application of the Results of Model of Pollution Spreading on Surface Waters. In: Waste Water 2014 : 8th Biennial International Conference, Štrbské Pleso, Slovak Republic, 22.-24.10.2014 – ISBN 978-80-970896-7-2 – pp. 97-102 (in Slovak)

Bačová, N. – Božiková, J. – Michalko, J. : Mineral Waters of the Dudince, Santovka and Slatina Courses. In: 17th Slovak Hydrogeological Conference: New Challenges in the Area of Water Protection, Piešťany, Slovak Republic, 14.-17.10.2014 – ISBN 978-80-971126-5-3 – pp. 79-86 (in Slovak)

Božiková, J.: Exploitation of Peculiar Waters. In: 46th Conference of Water Managers in Industry. Liptovský Ján, Slovak Republic, 11.2014 – ISBN 978-80-971819-0-1 – pp. 25-34 (in Slovak)

Galbová, K. – Škultétyová, I. – Stanko, Š. – Molnárová, L. – Holubec, M. – Hrudka, J.: Water Management of Landfills: A Case Study of MSW Landfill in Zohor. In: SGEM 2014. Water Resources, Forest, Marine and Ocean Ecosystem : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-18-6 – pp. 839-846 (in English)

Galbová, K.: Water Management of Landfills and the Problems of Flood Protection. In: Topical Water Management Problems : International Conference, Staré Těchanovice, Czech Republic, 8.-10.9.2014 – ISBN 978-80-248-3541-9 – pp. 107-111 (in English)

Gregušová, V. – Stanko, Š.: Comparison of the Designs of the Sewerage System in the Village of Kvetoslavov. In: Topical Water Management Problems : International Conference, Staré Těchanovice, Czech Republic, 8.-10.9.2014 – ISBN 978-80-248-3541-9 – pp. 112-115 (in English)

Hanusová, A.: Utilization of the ASIM Program for the Simulation of Biological Steps in WWTP. In: Innovations in Informatic – Communication Technologies in Water Management. Smolenice, Slovak Republic, 2014 – ISBN 978-80-89535-16 – pp. 151-160 (in Slovak)

Holubec, M.: Settling Tank: Influence of Perpendicular Inflow. In: Urban Water 2014 : International Conference, Velké Bílovice, Czech Republic, 2.-3.10.2014 – ISBN 978-80-86020-79-2 – pp. 295-300 (in English)

Holubec, M. – Stanko, Š. – Hrudka, J. – Škultétyová, I. – Galbová, K. – Molnárová, L.: CFD Analysis of a Perpendicular Inflow Inlet Zone in a Waste Water Settling Tank. In: SGEM 2014. Water Resources, Forest, Marine and

Ocean Ecosystems : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-18-6. – pp. 123-130 (in English)

Hrudka, J. – Stanko, Š. – Holubec, M. – Škultétyová, I. – Galbová, K. – Molnárová, L.: Experimental Method of Designing Storm Water Tanks. In: SGEM 2014. Water Resources, Forest, Marine and Ocean Ecosystem : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-18-6 – pp. 281-286 (in English)

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Kriš, J. – Galík, M.: Monitoring and Protection of Surface Water Quality in the Slovak Republic. In: Zaopatrzenie w wodę, jakość i ochrona wód : Toruń, Poland, 22.-25.6.2014 – ISBN 978-83-89696-93-2 – pp. 297-310 (in English)

Mahříková, I.: Surface Runoff from Urbanized Catchment: Retention and Reduction. In: Topical Water Management Problems : International Conference, Staré Těchanovice, Czech Republic, 8.-10.9.2014 – ISBN 978-80-248-3541-9 – pp. 144-147 (in Slovak)

Mahříková, I.: Operation and Experience with Water Supply and Sewer Systems in Industry. In: 46th Conference of Water Managers in Industry. Liptovský Ján, Slovak Republic, 11.2014 – ISBN 978-80-971819-0-1 – pp. 35-40 (in Slovak)

Molnárová, L. – Stanko, Š. – Škultétyová, I. – Galbová, K. – Holubec, M. – Hrudka, J.: Aspects for Effective Design Sewerage Network. In: SGEM 2014. Water Resources, Forest, Marine and Ocean Ecosystems : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-18-6 – pp. 47-52 (in English)

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Stanko, Š. – Škultétyová, I. – Holubec, M. – Galbová, K. – Hrudka, J. – Molnárová, L.: Integrated System for Sewer System Design and Evaluation : SEWACAD. In: SGEM 2014. Water Resources, Forest, Marine and Ocean

Ecosystems : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-13-1 – pp. 421-428 (in English)

Stanko, Š.: CSO Structures Evaluation and Impacts on Receiving Water Quality in Slovakia. In: Topical Water Management Problems : International Conference, Staré Těchanovice, Czech Republic, 8.-10.9.2014 – ISBN 978-80-248-3541-9 – pp. 175-182 (in English)

Sokáč, M. – Velísková, Y. – Halaj, P.: Values of Dispersion Coefficients in Streams with Different Flow Character – a Case Study. In: SGEM 2014. Water Resources, Forest, Marine and Ocean Ecosystem : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-13-1 – pp. 829-836 (in English)

Sokáč, M. – Berta, P.: Dispersion Coefficients in Streams with Diverse Flow Types. In: Topical Water Management Problems : International Conference, Staré Těchanovice, Czech Republic, 8.-10.9.2014 – ISBN 978-80-248-3541-9 – pp. 161-167 (in English)

Škultétyová, I. – Stanko, Š. – Galbová, K. – Holubec, M. – Hrudka, J. – Molnárová, L.: Waste Disposal by Risk Analyses in Zohor Location. In: SGEM 2014. Water Resources, Forest, Marine and Ocean Ecosystem : 14th GeoConference. Vol. I. Conference proceedings. Albena, Bulgaria, 17.-26.6.2014 – ISBN 978-619-7105-18-6 – pp. 831-838 (in English)

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DEPARTMENT OF BUILDING SERVICES

Head of Department

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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

Measurement and Control I

Measurement and Control II

Energy Supply of Buildings

Excursions

Building Control Systems

Special Seminar

Heating Systems

Industrial Installations

Renewable Energy in the 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. THESES

2.1 Graduate theses

Klimová, T.: Alternative Designs of Electronic Systems Based on Solar Energy in a Social Services Building
Supervisor: Lulkovičová, O.

Országhová, K.: Analysis of the Energy Systems for a Building with Active Thermal Protection
Supervisor: Daniel Kalús

Psárska, Z.: Analysis of Heating Systems Using Renewable Energy Sources in a Low-Energy House
Supervisor: Kalús, D.

- Krenčan, T.: Partial Air Conditioning Used in a Family Dwelling with the Application of a Regenerative Power Supply Unit
Supervisor: Kovářová, Z.
- Mikolajčíková, K.: Energy and Economic Assessment of a House Using Renewable Energy Sources
Supervisor: Petráš, D.
- Šteffek, R.: Assessment of the Fire Ventilation of an Existing Residential Building
Supervisor: Kovářová, Z.
- Kordoš, O.: Evaluation of the Indoor Environmental Quality in Selected Areas of the Faculty of Civil Engineering of the Slovak University of Technology in Bratislava
Supervisor: Krajčík, M.
- Tóthová, L.: Conceptual Design of an Energy System for a Primary School
Supervisor: Koudelková, D.
- Klenovičová, E.: Conceptual Design of a Heating System Using Electricity in a Residential Building
Supervisor: Koudelková, D.
- Krepaský, T.: Conceptual Design of a Heating System in a Passive House with a Fireplace
Supervisor: Koudelková, D.
- Kozák, T.: Design of the Energy System of a School Building with Heat Pump
Supervisor: Füre, B.
- Šimončík, J.: Calculation of the Energy Balance of a Building by a Dynamic Computer Simulation
Supervisor: Krajčík, M.
- Kukumberg, T.: Biomass Heat Source for Senior Housing in Stupava
Supervisor: Takács, J.
- Némethová, E.: Application of Active Thermal Protection in an Energy-Efficient Building
Supervisor: Kalús, D.
- Pribyl, P.: Central Ventilation and Local Exhaustion in a Carpentry Workshop
Supervisor: Kovářová, Z.
- Beňo, L.: Combined Current and Thermal Energy Production Reference Used for Heating a Building
Supervisor: Kalús, D.
- Sabáková, M.: Energy Certification of a Residential Building Dupplied with Heat from District Heating and Using Geothermal Energy
Supervisor: Takács, J.
- Jakubec, P.: Energy Audit and Hydraulic Balance of a Residential Building
Supervisor: Petráš, D.
- Cseri, K.: Hydraulic Balance of a Heating System in a Residential Building
Supervisor: Petráš, D.
- Huňady, M.: Design of a Central Ventilation System With Heat Recovery
Supervisor: Füre, B.
- Leščák, T.: Design of Central Ventilation System Using Heat Recovery in an Office Building
Supervisor: Füre, B.
- Horňáková, P.: Design of Electric Floor Heating for a Hotel
Supervisor: Koudelková, D.
- Haluza, T.: Combined Heating and Cooling Design for a Multifunctional Building
Supervisor: Koudelková, D.
- Pišťánek, M.: Design of a Combined Heat Source Using Solar Energy for Residential Building
Supervisor: Lulkovičová, O.
- Baník, T.: Design of a Low-Pressure Boiler Room
Supervisor: Koudelková, D.
- Gašparík, M.: Design of a Solar Energy System Available All Year Round for a Kindergarten with an Art School
Supervisor: Lulkovičová, O.
- Bulková, B.: Design of a Biomass Heat Source for a Residential Building
Supervisor: Lulkovičová, O.
- Melichár, J.: Design of a Heat Source for an Office Building
Supervisor: Lulkovičová, O.
- Babinec, D.: Design of a Heat Source with Condensation Technology for a Residential Building
Supervisor: Lulkovičová, O.
- Perželová, M.: Design of a Heat Source with a Condensation Technology for a Shopping Center
Supervisor: Lulkovičová, O.
- Reháček, A.: Low Temperature Heating and High Temperature Cooling of an Office Building with a Heat Pump
Supervisor: Petráš, D.
- Janota, I.: Low Temperature Heating and High Temperature Cooling in a Low Energy Building
Supervisor: Kalús, D.
- Paukovček, R.: Low Temperature Heating with a Heat Pump as a Heat Source for a Hotel Building.
Supervisor: Petráš, D.
- Pozsonyiová, K.: Optimization of the Operation of a District Heating System using of Geothermal Energy
Supervisor: Takács, J.

Patakyová, Z.: Design and Calculation of a Low Temperature and Large-Area Heating System

Supervisor: Takács, J.

Šimončík, J.: Calculation of the Energy Balance of a Building Using a Dynamic Computer Simulation

Supervisor: Krajčík, M.

Törökóvá, Z.: Application of Photovoltaics to Support the Heating/Cooling of an Office Building with a Heat Pump

Supervisor: Kalús, D.

Bogár, L.: Wood Chips Based Heat Source for an Elementary School

Supervisor: Takács, J.

Brezina, Z.: Wood Chips based Heat Source for Primary Schools in Galanta

Supervisor: Takács, J.

Valach, T.: Alternative Solutions to the Infiltration of Rainwater on a Property

Supervisor: Peráčková, J.

Pantáková, M.: Alternative Designs for the Water Supply in an Apartment Building

Supervisor: Peráčková, J.

Homola, R.: Design of a Gas Pipeline in an Apartment Building with a Comparison of the Different Materials Used

Supervisor: Peráčková, J.

Kosmel, M.: Design for the Gasification of the Boiler Room in an Office Building

Supervisor: Peráčková, J.

Valacsai, T.: Proposal for Rainwater Infiltration Facilities in the Administrative Building Sector

Supervisor: Peráčková, J.

Voros, P.: Project for the Realization of the Sewerage in Senior Housing

Supervisor: Peráčková, J.

Tomajka, J.: Project for the Realization of the Water Supply and Sewerage in the Gallery Apartment Building

Supervisor: Peráčková, J.

Álló, L.: Project for the Realization of Selected Parts of the Pipeworks of Sanitary Installations in a Building with a Relaxation Center

Supervisor: Peráčková, J.

3. RESEARCH

3.1 Research projects

CEEPUS II – Education without Borders (Lulkovicova)

KEGA – Preparation of Teaching Materials for Building Service Specializations (Lulkovičová) (Project No.: 3/4105/06)

VEGA – Determination of the Energy Balance of Building Services Using Renewable Energy as a Basis for an Energy Audit, Certificate, and Monitoring (Petráš) (Project No.:1/0730/08)

VEGA – Analysis of Energy and Environmental Measures During the Operation of Sanitary Installations and Ventilation Systems in Low Energy Buildings (Peráčková) (Project No.:1/0730/08)

3.2 International cooperation

Visits 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

Deutsche Institute fur Bautechnik, Berlin, Germany, Valášek J.

Czech Association of Civil Engineers, Prague, Czech Republic; Valášek, J., Petráš, D.

ASHRAE, Winter Meeting, New York, USA; Petráš, D.

REHVA, Brussels, Belgium; Petráš, D.

Fachhochschule, Pinkafeld, Austria, Petráš, D.

The Danish Technical University – International Center for the Indoor Environment and Energy, Lyngby, Denmark; Petráš, D.

B4 – UNI meeting, Vienna, Austria, Petráš, D.

Membership in international professional organizations

ASHRAE – USA, Petráš, D.

REHVA – Brussels, Belgium, Petráš, D

4. PUBLICATIONS

Books

Bielek, B. – Bielek, M. – Vranay, F. – Lukášik, D. – Vranayová, Z. – Vilčeková, S. – Ehrenwald, P. – Híreš, J. – Majsniar, V. – Mikušová, M.: Low-energy, green, sustainable building – climate – energy. 1.ed. Bratislava : Slovenská technická univerzita v Bratislave, 2014. 602 p. ISBN 978-80-227-4185-9. (in Slovak)

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Kováčová, D. – Lulkovičová, O.: Modeling the intensity of solar radiation on the basis of the weather data in the simulation program TRNSYS. In: Teoretická a experimentálna analýza sústav techniky prostredia v súvislosti s ich mikrobiologickým znečistením pri efektívnom využití obnoviteľných zdrojov : nekonferenčný zborník vedeckých prác – VEGA 1/0748/11. 1. ed. Košice : Technická univerzita v Košiciach, 2014, pp. 47-54. ISBN 978-80-553-1873-8. (in Slovak)

Miček, I. – Takács, J.: A new look at geothermal energy in balneology facilities. In: Teoretická a experimentálna analýza sústav techniky prostredia v súvislosti s ich mikrobiologickým znečistením pri efektívnom využití obnoviteľných zdrojov : nekonferenčný zborník vedeckých prác – VEGA 1/0748/11. 1. ed. Košice : Technická univerzita v Košiciach, 2014, pp. 55-63. ISBN 978-80-553-1873-8. (in Slovak)

Podobeková, V. – Peráčková, J.: Energy from wastewater. In: Teoretická a experimentálna analýza sústav techniky prostredia v súvislosti s ich mikrobiologickým znečistením pri efektívnom využití obnoviteľných zdrojov : nekonferenčný zborník vedeckých prác – VEGA 1/0748/11. 1. ed. Košice : Technická univerzita v Košiciach, 2014, S. 79-84. ISBN 978-80-553-1873-8. (in English)

Takács, J. – Jurka, P.: Concept of utilization of geothermal water in geothermal energy system from energetic aspect. In: Teoretická a experimentálna analýza sústav techniky prostredia v súvislosti s ich mikrobiologickým znečistením pri efektívnom využití obnoviteľných zdrojov : nekonferenčný zborník vedeckých prác – VEGA 1/0748/11. 1. ed. Košice : Technická univerzita v Košiciach, 2014, pp. 64-71. ISBN 978-80-553-1873-8. (in English)

Tóthová, V. – Takács, J. – Miček, I.: Utilization of geothermal energy for greenhouse management in Topoľníky. In: Teoretická a experimentálna analýza sústav techniky prostredia v súvislosti s ich mikrobiologickým znečistením pri efektívnom využití obnoviteľných zdrojov : nekonferenčný zborník vedeckých prác – VEGA 1/0748/11. 1. ed. Košice : Technická univerzita v Košiciach, 2014, pp. 72-78. ISBN 978-80-553-1873-8. (in English)

Živner, L.: Evaluation of heating systems with heat pumps. In: Teoretická a experimentálna analýza sústav techniky prostredia v súvislosti s ich mikrobiologickým znečistením pri efektívnom využití obnoviteľných zdrojov : nekonferenčný zborník vedeckých prác – VEGA 1/0748/11. 1. ed. Košice : Technická univerzita v Košiciach, 2014, pp. 85-90. ISBN 978-80-553-1873-8. (in Slovak)

Textbooks

Füri, B. – Kurčová, M.: Thermodynamics : Exercises. 1.ed. Bratislava : Nakladateľstvo STU, 2014. 350 p. ISBN 978-80-227-4132-3. (in Slovak)

Koudelková, D.: Measurement and control in HVAC : Part 1 – Heating. 1. ed. Bratislava : Slovenská technická univerzita v Bratislave, 2014. 182 p. ISBN 978-80-227-4291-7. (in Slovak)

Journals

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Borisová, L.: Cost-optimal evaluation of the energy performance of buildings. In: TzB Haustechnik. Vol. 22, Iss. 5 (2014), pp. 16-18. ISSN 1210-356X. (in Slovak)

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Bugaň, J.: Experimental assessment of the energy performance of low-temperature heating / high temperature cooling using a renewable energy source. In: TzB Haustechnik. Vol.22, Iss. 2 (2014), pp. 24-27. ISSN 1210-356X. (in Slovak)

Bukoviansky, M. – Jurka, P. – Takács, J.: Analysis of the geothermal energy system in Galanta. In: Magyar energetika. Vol. 21, No. 2 (2014), pp. 34-35. ISSN 1216-8599. (in Hungarian)

Földváry, V. – Petráš, D.: Ensuring the quality of air and ventilation standards in residential buildings. In: Eurostav. Vol. 20, Iss. 9 (2014), pp. 34-37. ISSN 1335-1249. (in Slovak)

Földváry, V. – Petráš, D.: Renovation on Indoor Air Quality. In: TzB Haustechnik. Vol. 22, Iss. 5 (2014), pp. 52-54. ISSN 1210-356X. (in Slovak)

Hargaš, M. – Takács, J.: Micro-cogeneration from solid biomass. In: TzB Haustechnik. Vol. 22, Iss. 4 (2014), pp. 22-24. ISSN 1210-356X. (in Slovak)

Hurtíková, D. – Petráš, D.: The impact of indoor air quality in buildings on a proposal ventilation systems. In: OKNOviny. Iss. 2 (2014), p. 3. ISSN 1337-8791. (in Slovak)

Jurka, P. – Takács, J. – Tóthová, V.: Improving the Efficiency of Exploitation of Geothermal Energy. In: Instalatorul. Vol. 22, No. 1 (2014), pp. 26-29. ISSN 1223-7418. (in English)

Kmeřková, J. – Petráš, D.: Economic evaluation of renovation variants of a residential building in a life cycle. In: Eurostav. Vol.20, Iss.9 (2014), pp. 22-25. ISSN 1335-1249. (in Slovak)

Koudelková, D.: temperature control of hot water. In: iDB Journal. Vol. 4, Iss. 2 (2014), pp. 22-23. ISSN 1338-3337. (in Slovak)

Koudelková, D.: Power control underfloor heating. In: TzB Haustechnik. Vol. 22, Iss. 2 (2014), p. 36-39. ISSN 1210-356X. (in Slovak)

Kováčová, D. – Lulkovičová, O.: Hybrid photovoltaic-thermal solar collectors. In: TzB Haustechnik. Vol. 22, Iss. 5 (2014), pp. 10-13. ISSN 1210-356X. (in Slovak)

Kovářová, Z.: The Combination of Suspendable Radiant Panels with Hygienic Ventilation. In: Magyar Épületgépészet. Vol. 63, No. 5 (2014), pp. 13-16. ISSN 1215-9913. (in English)

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- Krajčík, M. – Petráš, D.: System for monitoring and control of the indoor environment for energy consumption optimisation. In: *Transfer*. Vol. 6, Iss. 1 (2014), pp. 13-15. ISSN 1337-9747. (in Slovak)
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- Krippelová, Z. – Peráčková, J.: Measurement of hot water consumption in apartment building. In: *Budownictwo o zoptymalizowanym potencjale energetycznym*. No. 1(13) (2014), pp. 49-54. ISSN 2299-8535. (in English)
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- Šimko, M.: Electric radiator resistance cables versus warm water underfloor heating. In: *iDB Journal*. Vol. 4, Iss. 2 (2014), pp. 28-29. ISSN 1338-3337. (in Slovak)
- Šimko, M.: Classically insulation system of active thermal protection for panel residential buildings? In: *iDB Journal*. Vol. 4, Iss. 6 (2014), pp. 21-23. ISSN 1338-3337. (in Slovak)
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- Vaškaninová, M. – Peráčková, J.: Ventilation of rooms with gas appliances. In: *TechCON*. Vol. 10, Iss. 2 (2014), pp. 4-6. ISSN 1337-3013. (in Slovak)
- Vaškaninová, M. – Peráčková, J.: Operation of Gas Appliances according to the Legislation. In: *TechCON*. Vol. 10, Iss. 1 (2014), pp. 4-7. ISSN 1337-3013. (in Slovak)

Conference Proceedings

Barna, L. – Takács, J.: The effects of weather influences on the formation of CO. In: *Sanhyga 2014 : zborník prednášok z 19. vedecko-technickej konferencie s medzinárodnou účasťou*. Piešťany, SR, 23.-24.10.2014. 1. ed. Bratislava : SSTP, 2014, pp. 165-170. ISBN 978-80-89216-66-6. (in Slovak)

Borisová, L.: Cost optimum methodology for dwelling house. In: *Vykurovanie 2014 : zborník prednášok z 22. medzinárodnej vedecko-odbornej konferencie na tému „Energetické, environmentálne a ekonomické hodnotenie vykurovacích systémov“*. Stará Ľubovňa, SR, 3.-7.3.2014. 1. ed. Bratislava : SSTP, 2014, pp. 425-428. ISBN 978-80-89216-61-1. (in Slovak)

Borisová, L.: The cost optimal methodology of dwelling house in Slovak republic. (Determination of optimal heat transfer coefficients for dwelling house). In: *INDOOR AIR 2014 : proceedings of the 13th International Conference on Indoor Air Quality and Climate*, Hong Kong, China, 7.-12.7.2014. 1. ed. Pokfulam : The University of Hong Kong, 2014, pp. 899-903. ISBN 978-962-85138-6-4. (in Slovak)

- Borisová, L.: Cost optimum method for residential building in Bratislava. In: Facility management 2014 : zborník prednášok z 12. vedecko-odbornej konferencie so zahraničnou účasťou, Štrbské Pleso, SR, 30.9.-1.10.2014. 1. ed. Bratislava : Slovenská spoločnosť pre techniku prostredia ZSVTS, 2014, CD ROM, pp. 93-96. ISBN 978-80-89216-65-9. (in Slovak)
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Turza, R.: Design of HVAC according to VDI 2089. In: Vetrание a klimatizácia 2014. Optimalizované návrhy systémov vetrania a klimatizácie : zborník prednášok zo 16. vedecko-odbornej konferencie. Štrbské Pleso, SR, 17.-18.6.2014. Bratislava : SSTP, 2014, CD ROM, pp. 137-143. ISBN 978-80-89216-63-5. (in Slovak)

Turza, R.: Measurements of indoor swimming pool's microclimate during summer season. In: Advances in architectural, civil and environmental engineering : 24rd Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1. ed. Bratislava : Slovenská technická univerzita v Bratislave, 2014, CD ROM, pp. 840-845. ISBN 978-80-227-4301-3. (in Slovak)

Valášek, J. – Januška, J.: Design and implementation of plumbing within the housing renovation of advanced materials. In: Sanhyga 2014 : zborník prednášok z 19. vedecko-technickej konferencie s medzinárodnou účasťou. Piešťany, SR, 23.-24.10.2014. 1. ed. Bratislava : SSTP, 2014, pp. 117-127. ISBN 978-80-89216-66-6. (in Slovak)

Vaškaninová, M. – Peráčková, J.: Safe operation of gas appliances under current legislation. In: Sanhyga 2014 : zborník prednášok z 19. vedecko-technickej konferencie s medzinárodnou účasťou. Piešťany, SR, 23.-24.10.2014. 1. ed. Bratislava : SSTP, 2014, pp. 177-185. ISBN 978-80-89216-66-6. (in Slovak)

Vaškaninová, M. – Peráčková, J.: Safe Operation of Gas Installations in Residential Buildings. In: Komplexná obnova bytových domov 2014 : zborník prednášok z VIII. medzinárodnej vedecko-odbornej konferencie. Od energetickej efektívnosti po trvalú udržateľnosť. 1. ed. Martin : Združenie pre podporu obnovy bytových domov, 2014, pp. 149-152. ISBN 978-80-227-4272-6. (in Slovak)

Vaškaninová, M.: Gas explosive and causes of accidents gas equipment. In: Advances in architectural, civil and environmental engineering : 24rd Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental

Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1. ed. Bratislava : Slovenská technická univerzita v Bratislave, 2014, CD ROM, pp. 846-852. ISBN 978-80-227-4301-3. (in Slovak)

Živner, L.: Design and comparison of applications of heat pumps in a family house. In: Vykurovanie 2014 : zborník prednášok z 22. medzinárodnej vedecko-odbornej konferencie na tému „Energetické, environmentálne a ekonomické hodnotenie vykurovacích systémov". Stará Ľubovňa, SR, 3.-7.3.2014. 1. ed. Bratislava : SSTP, 2014, pp. 247-250. ISBN 978-80-89216-61-1. (in Slovak)

Živner, L.: Experimental measurements on heating systems with heat pumps. In: Nízokoteplotné vykurovanie 2014 : zborník prednášok zo 14. vedecko-odbornej konferencie so zahraničnou účasťou. Štrbské Pleso, SR, 20.-21.5.2014. 1. ed. Bratislava : SSTP, 2014, pp. 131-134. ISBN 978-80-89216-62-8. (in Slovak)

Živner, L.: Heat Pump as Part of a Complex Renovation the Apartment Building. In: Advances in architectural, civil and environmental engineering : 24rd Annual PhD Student Conference on Architecture and Construction Engineering, Building Materials, Structural Engineering, Water and Environmental Engineering, Transportation Engineering, Surveying, Geodesy, and Applied Mathematics. 1. ed. Bratislava : Slovenská technická univerzita v Bratislave, 2014, CD ROM, pp. 953-958. ISBN 978-80-227-4301-3. (in Slovak)

DEPARTMENT OF ARCHITECTURE

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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

Drawing and Composition

Design Studio 1

History of Architecture and Art 2

Design Studio 2

Composition and Colour in Architecture

Typology 2

Typology 3

Bachelor's Work

Urbanism

Renovation of Buildings and Preservation of Monuments 1

Typology 5

Design Studio 4

Urbanism 2

Design Studio 5

History of Architecture and Art 3

Restoration and Preservation of Monuments 2

Design Studio 6

Urbanism 3

Interior Design 1

Design Studio 7

Design Studio 8

Design Studio 9

Special Seminar

Thesis

Design Studio 10

Internship

Obligatory elective subjects

Drawing and Modelling

Typology 4

Philosophical, Aesthetic and Compositional Principles in Architectural Design

History of Urban and Rural Settlements

History of Drawing and Sketching

Optional subjects

Interior Design 2

Landscape Design

Humanization and Revitalization of the Built Environment

1.2 Postgraduate courses

Doctoral Degree Study: Theory and Construction of Building Structures

2. THESES

2.1 Bachelor theses

There were 24 works.

2.2 Graduate theses

Hasák, M.: Residential Complex in Modra

Supervisor: Mudrončík, M.

Spolník, M.: Renovation of Hurbans' Casern, Bratislava

Supervisor: Mudrončík, M.

Šimon, M.: Ice-Hockey Stadium in Kežmarok

Supervisor: Gürtler, I.

Svítok, T.: Ice-Hockey Stadium in Kežmarok

Supervisor: Gürtler, I.

Drobenová, M.: M.R.Štefanik Museum

Supervisor: Nádaská, Z.

Hikaniková, Z.: Mountain Hut in Javorník

Supervisor: Nádaská, Z.

Mešár, A.: Primary School, Turkey
Supervisor: Kuráň, J.

Makay, F.: High-Rise Building
Supervisor: Kuráň, J.

Hriciga, T.: Office Building
Supervisor: Kuráň, J.

Behulová, S.: Wellness Hotel, Čunovo
Supervisor: Kuráň, J.

Molnárová, G.: Gallery near the Danube River
Supervisor: Kuráň, J.

Jánoš, J.: Multifunctional Building, Budatínska Street, Bratislava
Supervisor: Paňák, P.

Pilař, P.: Conversion of Sugar Refinery
Supervisor: Paňák, P.

Špániková, M.: Therapeutic Center in Modra-Harmónia
Supervisor: Paňák, P.

Smolková, M.: Forest School – XELLA
Supervisor: Paňák, P.

Hlatký, L.: Revitalisation of Beckov Castle
Supervisor: Paňák, P.

Luštková, M.: Community Center – Veľké Teriakovce
Supervisor: Bauer, P.

Sedlák, I.: Sport Center in Piešťany
Supervisor: Bauer, P.

Brindzová, A.: Wellness Center in Dudince
Supervisor: Bauer, P.

Bagin, A.: Sport Center in Komárno
Supervisor: Bauer, P.

Pekárová, M.: Mountain Resort
Supervisor: Bauer, P.

Oravec, B.: Recreational Center – Margita Ilona
Supervisor: Borecká, E.

Výboštok, L.: Sebechleby Winery – Staré Hory
Supervisor: Borecká, E.

Ivanko, M.: Winery Recreation Resort in Modra
Supervisor: Borecká, E.

Strieženeč, J.: Crematorium
Supervisor: Šimkovičová, V.

Varga, D.: Gallery
Supervisor: Šimkovičová, V.

Němcová, V.: Railway Station
Supervisor: Šimkovičová, V.

2.3 Doctoral theses

Ondrejka, M.: Contribution to the Design of Touristic Centres in Rural Areas
Supervisor: Dohňanská, E.

Prešínský, M.: Redistribution Impact of Daylight by the Application of an Anidolic System
Supervisor: Dohňanská, E.

Šimko, P.: Optimization Requirements for a First Home for Young People
Supervisor: Dohňanská, E.

Vargová, K.: Fragment of Typological and Spatial Concept Common to Humans and Animals
Supervisor: Húsenicová, J.

Wirthová, P.: Analysis and Evaluation of the Technical Equipment of Rest Areas on Cycling Routes
Supervisor: Húsenicová, J.

3. RESEARCH

3.2 International cooperation

Cooperating institutions

VŠB-TU Ostrava, Faculty of Civil Engineering, Czech Republic

ČVUT-Czech Technical University in Prague, Faculty of Civil Engineering, Czech Republic

4. PUBLICATIONS

Journals

Borecká E.: Contemporary Winery in STU Students' Projects. *Víno a vinič*, ISSN 1335-7514 EV3781/09 Vol.,XIV, April 2014, pp.126-127, (in Slovak)

Borecká E.: Loft in an Apartment House from the Year 1942 designed by A. Szony, *Projekt*, ISSN 1335-2180, Vol. LVI, Mar.-April 2014., pp. 86-89 (in Slovak)

Conference Proceedings

Mešina, M.: Senior Cohousing and Possibilities of Its Foundation in Slovakia. In: *Advances in Architectural, Civil and Environmental Engineering 2014* [electronic source] : Conference of Doctoral Studies. Slovak University of Technology in Bratislava, Bratislava, 29.10.2014. – ISBN 978-80-227-4301-3 (in Slovak)

Mešina, M.: Senior Cohousing and Possibilities of Its Application in the Slovak Republic. In: International Masaryk Conference for Ph.D. Students and Young Researchers 2014 [electronic source] : 5th Conference of Doctoral Studies and Young Researchers. University of Hradec Králové, Hradec Králové, 8.12.2014. – ISBN 978-80-87952-07-8 (in Slovak)

5. ACTIVITY IN THE FIELD OF ART

Mellner, D.: Exhibition Nová doba nový svet, (Modern architecture in Slovakia), Slovak National Museum, Bratislava, Oct.-Dec. 2014, Curator and Spatial Concept

Pribiš, M.: Graphic Realisation of a Logo for FHV ŽU, Žilina

Pribiš, M.: Graphic Realisation of a Logo for FBI ŽU, Žilina

Pribiš, M.: Participation in Exhibition XXIII. Salón SVU 2014, Gumelka – Gallery SVÚ Bratislava, Jan. 2014

Řehák, I.: Silver Collector's Coin: 150th Anniversary of the Birth of Jozef Murgaš, realisation

Řehák, I.: Medal, St. Vitus Cathedral, Prague, realisation, Prague Mint, 2014

Řehák, I.: Medal, Charles Bridge, Prague, realisation, Prague Mint, 2014

Řehák, I.: Medal, Galileo Galilei, realisation, Prague Mint, 2014

Řehák, I.: Medal, Arthur Conan Doyle, realisation, Prague Mint, 2014

INSTITUTE OF FORENSIC ENGINEERING

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1. EDUCATION

1.1 Graduate study

Optional subjects

Bases of Legal Expertise

Real Estate Valuation

1.2 Postgraduate courses

Specialized courses for experts in the Building Industry field

Specialized courses on "Improvement of Experts"

3. RESEARCH

3.2 International cooperation

Cooperating institutions

VUT Brno, Czech Republic

VŠB – TU of Ostrava, Czech Republic

4. PUBLICATIONS

Journals

Karel, J. – Majdúch, D.: Fragments of Property Valuation. In: Almanach znalca. Vol. 14, Nos. 3-4 (2014), CD ROM, pp. 10-15. ISSN 1336-3174 (in Slovak)

Nič, M.: Proportion of the Institute of Forensic Engineering, Faculty of Civil Engineering, Slovak University of Technology in Bratislava, for Education of Experts. In: Almanach znalca. Vol. 14, Nos. 1-2 (2014), CD ROM, pp. 33-35. ISSN 1336-3174 (in Slovak)

Conference Proceedings

Nič, M.: The Influence of Mandatory Insurance of Buildings on Their Quality. In: Strojiteľstvo i neďvížnosť. Ekspertiza i ocenka : Materialy 11-oj meždunarodnoj konferencii. 1. ed. Moskva : Akademstrojnauka, 2014, pp. 47-54. ISBN 978-5-9903774-1-7 (in English)

Nič, M. – Karel, J.: Inspection of Buildings in Forensic Engineering. In: Collection of Contributions of International Scientific Conference 2014 Held on the Occasion of the 15th Anniversary of the Institute for Forensic Experts, 20.-21. June 2014. ed. Bratislava : MABAG, 2014, CD ROM, [9] p. ISBN 978-80-971579-1-3 (in Slovak)

Nič, M.: 15th Anniversary of the Institute of Forensic Engineering. In: Collection of Contributions of International Scientific Conference 2014 Held on the Occasion of the 15th Anniversary of the Institute for Forensic Experts, 20.-21. June 2014. ed. Bratislava : MABAG, 2014, CD ROM, [5] p. ISBN 978-80-971579-1-3 (in Slovak)

Nič, M.: Determining the General Value of Flats Using a Comparative Method Based on List Prices. In: ExFoS 2014. Expert Forensic Science: Collection of Contributions of International Scientific Conference of the Institute of Forensic Experts, Brno University of Technology, Brno 2014, CD ROM, pp. 77-85. ISBN 978-80-214-4852-0 (in Slovak)

DEPARTMENT OF LANGUAGES

Head of Department

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1. EDUCATION

1.1 Graduate study

English

German

1.2 Postgraduate courses

Ph.D. courses in Advanced English

2. RESEARCH

2.1 International cooperation

British Council, Bratislava, Slovakia

Institute of Technology, Tralee, Ireland

2.2 Educational project

Lifelong Learning Programme

Vocationally Oriented Culture and Language in the Medical Emergency Sector
2014 – 2016

(Špildová, D.), VOCAL – Medical LLP/LdV/TOI/2013/IRL-506

Supporting Programme for Young Scientists

Motivation of Students at Faculty of Civil Engineering in the Teaching of
Foreign Languages (German Language) and Effectiveness of Teaching

(Hoboth Kralina, K.)

3. PUBLICATIONS

Books

Pálová, A.: Civil Engineering – Theory and Practice in German Terminology,
Part 5. Slovak University of Technology in Bratislava, 2014, ISBN 978-80-
227-4205-4, 102 pp. (in German)

Journals

Hoboth Kralina, K.: Hungarian Technical Language Usage and Teaching It
in Slovakia. In: Fórum Társadalomtudományi Szemle. ISSN 1335-4361. –
Vol.16, No.3 (2014), pp. 23-32 (in Hungarian)

Hoboth Kralina, K.: Factors Affecting the Comprehension of Texts in
Textbooks. In: Katedra. ISSN 1335-6445. – Vol. 21, No. 8 (2014), pp. 15-16
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Reviewing

Gambrill, D.: Annual Report 2013

Gambrill, D.: Journal of Civil Engineering, Volume XXII, 2014/1, 2014/2, 2014/3 2014/4

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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

Cardiovascular fitness

2. RESEARCH

Cooperation

The Faculty of Physical Education and Sports, Comenius University,
Bratislava, Slovakia .

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1. EDUCATION

1.1 Graduate study

Obligatory subjects

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

Sociology

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

Textbooks

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Conference Proceedings

Gajniak, J. F.: Contractual Relationships in Construction. In: Social Science Aspects of a Knowledge Society. Bratislava, SR, 26.6.2014, 1. ed. Bratislava : STU, 2014, CD ROM, pp. 36-42. ISBN 978-80-227-4191-0 (in Slovak)

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