

Faculty of Science
University of Ostrava

Annual Report 2008

May 2009

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Annual Report 2008

Faculty of Science University of Ostrava

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2 Introduction



Introductory remarks

In 2008 the activities of the Faculty of Science at Ostrava University in Ostrava were focused on the long-term development plan for the period of 2006 – 2010 including its updating during 2008. This annual report attests to the important contributions made by faculty staff and students towards carrying out the goals contained herein.

In the field of education, our offer of highly structured study programs was further developed. In 2008 applicants were accepted for the first time for the bachelor's study *Geography and Regional Development* in the combined form of study. This program was opened off-campus in Český Těšín and provides direct evidence of the cooperation that exists between the university and the region. The Department of Physics is actively involved in a project of cooperation between Czech and French universities focused on the preparation of joint-study programs.

In 2008 many students continued their studies at the university in 10 modules, further increasing the qualifications of graduates. The Faculty of Science contributed three modules: *Geography and Tourism*, *Basic Informatics* and the new module *Economic Aspects of European Integration*, which was prepared by the Institute of Economics and Management, one of the newest in the faculty.

The faculty has long been an organizer of educational events for the public. In 2008 the Centre for Lifelong Education at the Faculty of Science in cooperation with departments offered a wide range of interesting courses.

In the field of science and research, departmental staff continued with their individual research assignments. The fact that most of the faculty's research assignments rank among the major research being carried out by Ostrava University is another positive development. Staff employees in the Department of Physics and Department of Mathematics received financial support in the framework of the university's agency for providing grants for cutting-edge research. The results from the field of science and research have been included primarily in publications from this field.

Students have long been involved in carrying out research assignments at the faculty, with the best among them participating in the SRC (*Student Research Conference*) competition at the

faculty and doing a good job representing the faculty at similar competitions organized by other universities. The contributions made by faculty employees in several creative and development projects, including projects of the European Social Fund, have been no less important.

Our cooperation with universities abroad has also been expanded. The number of students going abroad to study has increased, as has the number of foreign students coming to our faculty. In addition, many foreign specialists have come to our faculty, particularly as guest lecturers, while our experts have assumed many positions abroad.

We are happy that the employees here at the faculty have long been organizers of conferences, including in 2008 the 18th annual *Vojtěch Jarník International Mathematical Competition*, an international students' mathematics competition attended by 140 students from 30 universities across Europe, and the 9th annual *ICTE conference* (Information and Communication Technology in Education).

In addition, the faculty has hosted many lectures and seminars with the participation of leading experts from home and abroad.

In January 2008 the Department of Chemistry organized the centre round of the Chemistry Olympics. A new chess tournament called Go! was organized by students at the faculty and took place in May 2008.

No major changes were carried out within the organizational structure. We are primarily focused on the quality of our activities, including carrying out management evaluation using the EFQM method. Analyzing the results and offering recommendations will form a part of management responsibilities in 2009. The faculty management was pleased in 2008 to acknowledge the quality of the work performed by students in the form of scholarship, and by instructors in the form of special remuneration.

We are trying more and more to inform the public about the activities of the faculty. Our main information source includes the web pages of the faculty and the electronic information bulletin *Life in nature*. The amount of information about the faculty appearing in print has increased. Cooperation with alumni has also begun to increase, the main activity in this sphere in 2008 being the creation of a portal for graduates to provide a basic information source for the mutual exchange of information.

Staff at the faculty have contributed to many events popularizing natural sciences among students at elementary and high schools, one of them being highly successful: Chemistry at the Castle or Chemistry – It's life.

Every year the activities of the Faculty of Science are evaluated using various criteria. In February 2008 it was ranked first among all Faculties of Science in the Czech Republic.

The Faculty of Science at OU is a modern and dynamic university workplace, attested to by the information given in this annual report. It is clear that the staff and students of the faculty have contributed to its development and the results it has achieved in 2008. I would like to sincerely thank all of them for their contributions.



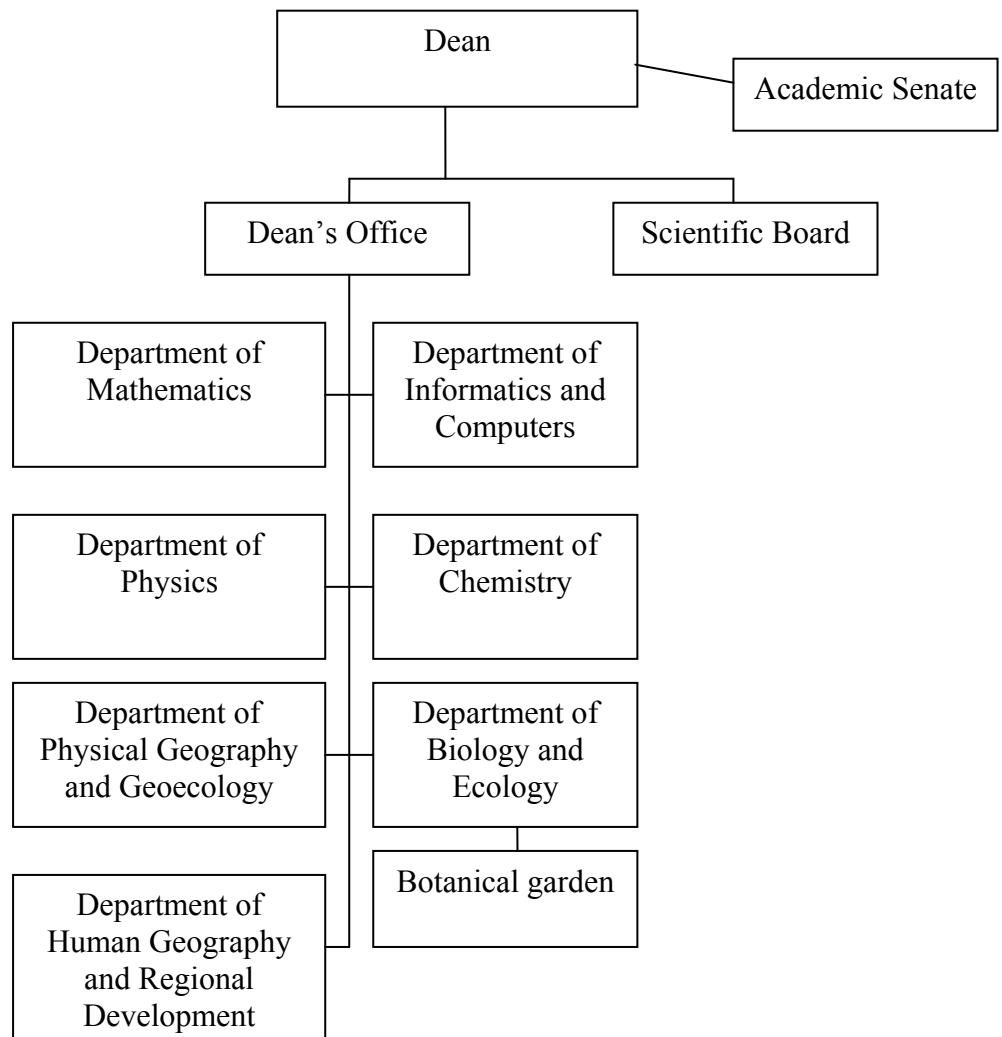
Dana Křičfaluši
Dean

3 Faculty Management Bodies

According to the University Code, academic management bodies of a faculty are the following:

- the Academic Senate of the faculty
- the Dean
- the Scientific Board of the faculty
- the Disciplinary Commission of the faculty

3.1 Organization Chart



3.2 Academic Senate of the Faculty

The Academic Senate of a faculty is a representative body of the faculty. It is divided into the employee part and the student part and is elected every three years by members of the academic community. Tenure of contemporary Senate begun in February 2006 and it will end in February 2009.

Members of the Academic Senate in 2008

Presidium of the Academic Senate

Monika Šumberová (since September 2008)
Chair

David Bartl, PhD. (since September 2008)
Chair of the employee part

Libor Pučok (since October 2008)
Chair of the student part

Members of the employee part of the Academic Senate

Šárka Cimalová
Aleš Dolný, PhD.
Radek Dušek, PhD.
Rostislav Fojtík, PhD.
Hashim Habiballa, PhD.
Jan Hradecký, PhD.
Ivan Janeček, PhD.
Jiří Kalina, Assoc. Professor (resigned in October 2008)
Roman Maršílek, PhD.
Renáta Popelková
Václav Slovák, Assoc. Professor
Eliška Treterová
Tomáš Drobík (since October 2008 – replacement for Jiří Kalina)

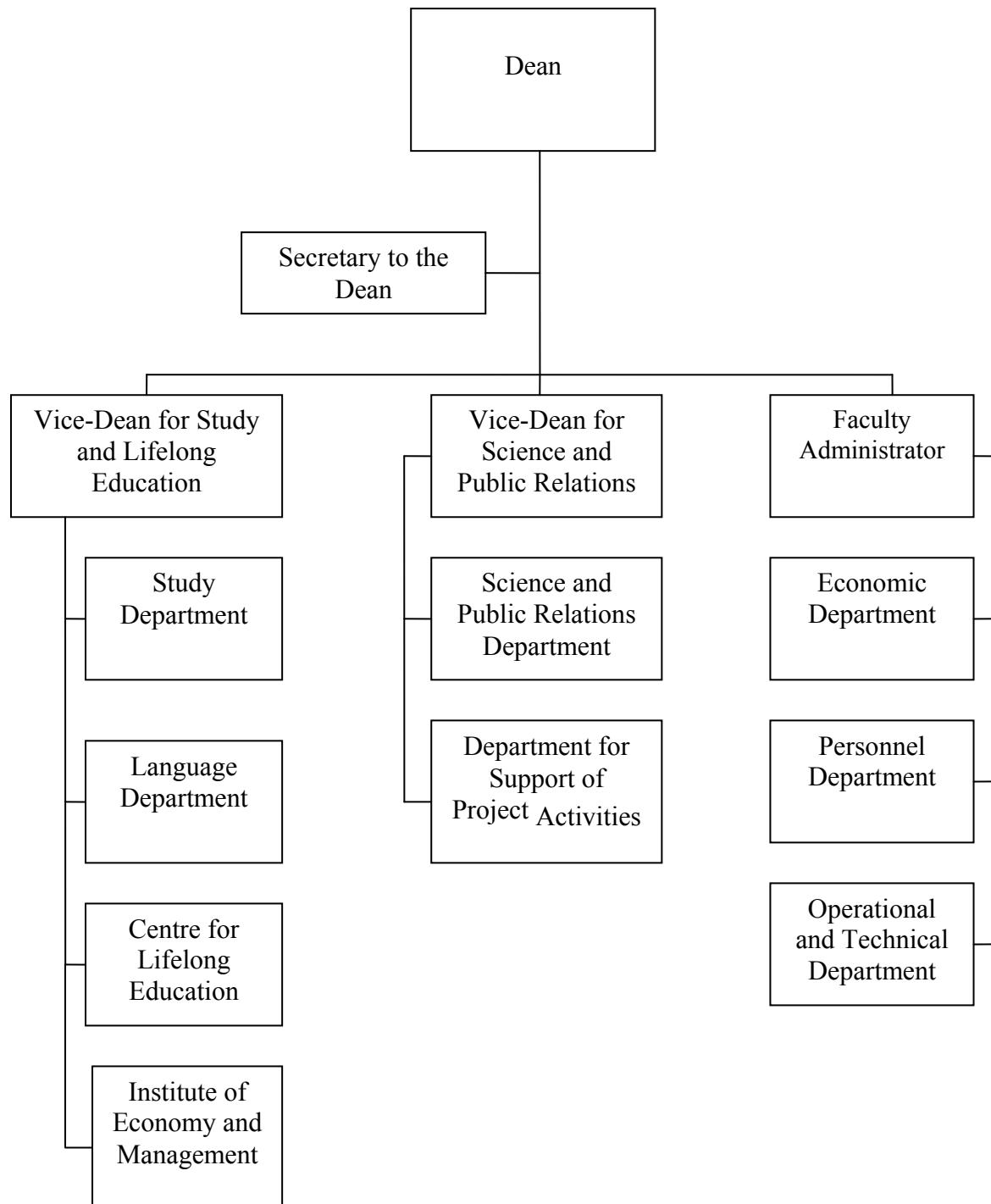
Members of the student part of the Academic Senate

Daniel Antal
Darja Bardoňová
Patrik Molitor
Aleš Ottmár
Lukáš Straňák
Marek Vajgl

Monika Šumberová

Chair of Academic Senate of the Faculty of Science, University of Ostrava

3.3 Organization Diagram of the Dean's Office



3.4 Dean's Office Board



Dana Kričfaluši, Assoc. Professor
Dean of the Faculty of Science



Petra Konečná, PhD.
Vice-Dean for Study and Lifelong Education



Petr Šaloun, Assoc. Professor
Vice-Dean for Science and External Relations

3.5 Dean's Office

Iveta Nevludová
Faculty Administrator
Monika Javorská
Secretary to the Dean

Academic Affairs Department:

Natálie Šimonková
Head of the Department
David Kožušník
Marie Placková
Věra Jandová
Jana Goralová (till May 4, 2008)

Science and Public Relations Department:

Eva Bouřová
Dana Závorková (till November 30, 2008)
Jana Goralová (till May 4, 2008)

Centre for Lifelong Education:

Eva Burianová, PhD.
Head of the Centre

Simona Polochová
Gabriela Burianová
Centre administrator

Institute of Economy and Management:

Hana Filipczyková, Assoc. Professor
Tibor Paulík, Professor

Project Research and Assistance Department:

Cyril Klimeš, Assoc. Professor
Head of the Department

Lenka Káňová
Lukáš Straňák
Pavla Janoschová

Economic Department:

Lenka Káňová
Pavla Janíková
Pavla Janoschová

Personnel Department:

Šárka Gazdová

Operational and Technical Department:

Jan Kyjovský
Josef Bystroň

Language Department:

Blanka Novotná
Jana Klimánková
Senior assistants

3.6 Scientific Board of the Faculty of Science

Chair of the Scientific Board

Dana Kričfaluši, Assoc. Professor

Members from the Faculty of Science

Vladimír Baar, Assoc. Professor

René Kalus, Assoc. Professor

Cyril Klimeš, Assoc. Professor

Petra Konečná, PhD.

Ivan Křivý, Professor

Vladislav Kříž, Professor

Kateřina Malachová, Assoc. Professor

Erika Mechlová, Professor

Jiří Močkoř, Professor

Monika Mulková, PhD.

Vilém Novák, Professor

Rudolf Peter, PhD.

Petr Rumpel, PhD.

Petr Šaloun, Assoc. Professor

Boleslav Taraba, Professor

External members

Vojtěch Dirner, Professor

Jiří Doškář, Professor

Pavel Drábek, Professor

Dušan Drbohlav, Assoc. Professor

Radim Halaš, Professor

Robert Ištak, Assoc. Professor

Anatol Malijevský, Professor

Michal V. Marek, Professor

Radko Mesiar, Professor

Tomáš Pitner, PhD.

Milan Trizna, Assoc. Professor

Milan Turčáni, Professor

Jan Vymětal, Assoc. Professor

Kamil Wichterle, Professor, dr.h.c.

4 Study

In the academic year 2007/2008 413 students properly completed their studies at the Faculty of Science, University of Ostrava:

- | | |
|---|---------------|
| – in Bachelor's degree programmes | 238 graduates |
| – in Master's degree programmes | 73 graduates |
| – in Follow-up master's degree programmes | 117 graduates |
| – in Doctoral degree programmes | 3 graduates |

The acceptance process for the academic year 2008/2009

Entrance exams (PZ) for Bachelor's degree programmes took place in 2007 on November 24, and three times in 2008 on February 9, March 29, and May 1, (SCIO), entrance exams for Follow-up master's degree programmes took place on May 26 – June 6, 2008 with one makeup term on June 18, 2008.

4.1 Admission Procedure Statistics

Field of study	Number of Applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
Fields of study within single major bachelor's degree programmes					
Biophysics	8	0	8	3	3
Measurement and Computer Presentation of Data	2	0	2	2	2
Information Science and Computer Technology – Applied Information Science	53	0	47	19	19
Computer-based Modelling in Physics	2	0	2	1	1
Applied Information Science (combined study form)	43	0	37	27	27
Applied information Science (distance form of study)	89	0	72	66	65
Applied Mathematics	9	0	9	2	2
Applied Mathematics for Economics	17	0	12	1	0
Mathematical and Computer Methods of Data Processing	1	0	1	0	0
Investment Counselling	26	0	25	14	13
Applied Mathematics (combined study form)	16	0	14	12	11
Applied Mathematics for Economics (combined study form)	11	0	11	8	7
Mathematical and Computer Methods of Data Processing (combined study form)	2	0	0	0	0

Field of study	Number of Applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
Investment Counselling (combined study form)	25	0	23	18	16
Applied Ecology	67	0	65	21	18
Applied Ecology (combined study form)	37	0	29	17	17
Systematic Biology and Ecology	122	0	118	38	35
Experimental Biology	61	0	61	26	24
Landscape Protection and Formation	173	0	165	50	38
Physical Geography and Geoecology	70	0	68	25	17
Cartography and Geoinformatics	40	0	39	17	14
Political and Cultural Geography	163	0	158	68	58
Geography and Regional Development	108	0	106	26	25
Geography and Regional Development (combined study form)	78	0	57	45	45
Chemistry	39	0	35	12	10
Information Science	76	0	66	26	24
Total	1338	0	1233	544	491

Fields of study within double major bachelor's degree programme

Mathematics – English language and literature	3	0	2	0	0
Mathematics – French language and literature	1	0	1	0	0
Mathematics – Geography	14	0	13	1	1
Mathematics – Spanish language and literature	1	0	1	0	0
Mathematics - Russian language and literature	1	0	1	1	1
Mathematics – History	1	0	1	0	0
Mathematics – Basic of Social Sciences	2	0	2	1	0
Geography – English language and literature	17	0	16	3	3
Geography – French language and literature	1	0	1	0	0
Geography – German language and literature	3	0	2	0	0
Geography – Information Science	5	0	5	1	1

Field of study	Number of Applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
Geography – Czech language and literature	5	0	5	2	2
Geography – Basic of Social Sciences	11	0	9	3	3
Geography – History	13	0	13	2	2
Geography – Musical appreciation	1	0	1	0	0
Geography – Art Education	1	0	1	0	0
Geography – Civics	12	0	12	3	3
Geography – Physical Training	24	0	23	7	5
Geography – Spanish language and literature	3	0	3	0	0
Chemistry – English language and literature	2	0	2	0	0
Chemistry – Czech language and literature	2	0	2	1	1
Chemistry – Mathematics	2	0	2	1	1
Chemistry – Geography	1	0	1	1	1
Chemistry – Biology	66	0	61	16	14
Chemistry – Civics	1	0	1	1	0
Chemistry – Physical Training	3	0	3	0	0
Biology – English language and literature	19	0	19	7	7
Biology – Russian language and literature	4	0	4	1	1
Biology – Spanish language and literature	2	0	2	0	0
Biology – Mathematics	10	0	10	1	1
Biology – Geography	40	0	38	17	14
Biology – Information Science	7	0	7	0	0
Biology – Czech language and literature	9	0	9	4	4
Biology – Basic of Social Sciences	13	0	13	5	2
Biology – History	2	0	2	0	0
Biology – Musical appreciation	2	0	2	1	1
Biology – Civics	4	0	3	1	1
Biology – Physical Training	12	0	12	2	2
Biology – Art Education	1	0	1	0	0
Physics - Mathematics	9	0	8	6	5
Physics – Geography	1	0	1	0	0

Field of study	Number of Applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
Physics – Chemistry	2	0	2	1	1
Physics – Biology	3	0	3	1	1
Physics - Information Science	3	0	2	0	0
Physics - Physical Training	1	0	1	1	1
Physics - Basic of Social Sciences	1	0	1	0	0
Physics – Latin language and culture	1	0	1	1	1
Physics - English language and literature	1	0	1	0	0
Information Science – Mathematics	11	0	11	2	2
Information Science – English language and literature	4	0	4	0	0
Information Science – Czech language and literature	2	0	2	1	1
Information Science – History	1	0	1	0	0
Information Science – Basic of Social Sciences	1	0	1	0	0
Information Science – Technology Education	1	0	1	0	0
Information Science – Art Education	1	0	1	0	0
Total	364	0	347	96	84

Fields of study within follow-up master's degree programmes

Biophysics	10	0	10	8	8
Applied Mathematics	8	5	0	5	5
Applied Mathematics for Economics	19	13	0	14	12
Mathematical and Computer Methods of Data Processing	1	1	0	1	1
Systematic Biology and Ecology	50	0	44	24	20
Landscape Protection and Formation	17	0	15	14	14
Physical Geography and Geoecology	39	0	34	22	18
Political and Cultural Geography	44	4	29	21	20
Geography and Regional Development	48	1	37	28	25
Information Systems	42	0	40	19	18

Field of study	Number of Applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
Information Systems (combined study form)	47	0	36	27	24
Physical Chemistry of Surfaces	9	1	7	7	6
Teaching for Secondary Schools - Mathematics	4	0	3	3	3
Teaching for Secondary Schools - Geography	7	0	4	3	2
Teaching for Secondary Schools - Chemistry	2	0	1	1	1
Teaching for Secondary School – Biology	6	0	4	1	1
Teaching for Secondary School – Information Science	5	0	0	0	0
Teaching for Primary School – Information Science	2	0	2	1	1
Total	360	25	266	199	179

Fields of study within double major follow-up master's degree programmes

Teaching for Secondary Schools – Geography – Information Science	1	0	0	0	0
Teaching for Secondary Schools – Chemistry - Biology	1	0	1	1	1
Teaching for Secondary Schools – Biology - Mathematics	1	0	1	0	0
Teaching for Secondary Schools – Information Science - Mathematics	1	0	1	0	0
Total	4	0	3	1	1
TOTAL	2066	25	1849	840	755

Annotation:

*) The total number of students accepted including transfers between departments carried out by request.

Entrance exams (PZ) for doctoral degree programme in Applied Mathematics took place on July 1, 2008 with the following results:

Field of study	Number of applications	Admitted without PZ	Took PZ	Passed PZ	Total admitted	Enrolled
Applied Mathematics	1	0	1	1	1	1

Field of study	Number of applications	Admitted without PZ	Took PZ	Passed PZ	Total admitted	Enrolled
Applied Algebra	1	0	1	1	1	0
Fuzzy Modelling	5	0	5	5	5	5

Entrance exams for doctoral degree programme in Geography, Environmental Geography took place on July 21, 2008 and doctoral degree programme in Political and Cultural Geography took place on June 24, 2008 with the following results:

Field of study	Number of applications	Admitted without PZ	Took PZ	Passed PZ	Total admitted	Enrolled
Environmental Geography	8	0	8	8	8	7
Political and Cultural Geography	10	0	9	9	9	9

Entrance exams for doctoral degree programme in Information Science took place on June 25, 2008 with the following results:

Field of study	Number of applications	Admitted without PZ	Took PZ	Passed PZ	Total admitted	Enrolled
Information Systems	11	0	10	9	9	9

Academic year 2008/2009

Number of students enrolled in the Faculty of Science, University of Ostrava in the academic year 2008/2009.

Number of students according to the degree programmes (as of October 31, 2008):

Study programme	Field group code	Degree programme				Total
		Bc.	NMgr.	Mgr.	PhD.	
Mathematics	B1101	13				13
Applied Mathematics	B1103	98				98
Geography	B1301	377				377
Chemistry	B1407	94				94
Biology	B1501	312				312
Ecology and Environmental Protection	B1601	75				75
Physics	B1701	17				17
Applied Physics	B1702	9				9
Information Science	B1801	124				124
Applied Information Science	B1802	199				199
Applied Mathematics	M1103			20		20
Geography	M1301			43		43

Study programme	Field group code	Degree programme				Total
		Bc.	NMgr.	Mgr.	PhD.	
Ecology and Environmental Protection	M1601			1		1
Information Science	M1801			17		17
Teaching for Primary Schools	M7503			13		13
Teaching for Secondary Schools	M7504			41		41
Mathematics	N1101		4			4
Applied Mathematics	N1103		41			41
Geography	N1301		153			153
Chemistry	N1407		17			17
Biology	N1501		55			55
Ecology and Environmental Protection	N1601		22			22
Physics	N1701		3			3
Applied Physics	N1702		12			12
Information Science	N1801		89			89
Teaching for Secondary Schools	N7503		2			2
Applied Mathematics	P1103				25	25
Geography	P1301				43	43
Information Science	P1801				21	21
Specialisation – Pedagogy	P7507				23	23
Total		1 318	398	135	112	1 963

Number of students according to the form of the study (as of October 31, 2008):

Form of the study	Degree programmes				Total
	Bc.	NMgr.	Mgr.	PhD.	
Full-time	997	352	135	36	1 520
Combined	200	46		76	322
Distance	121				121

Number of international students at the Faculty of Science, University of Ostrava:

Type of the degree programme	FS
Bachelor's Degree Programmes	16
Follow-up master's degree programmes	27
Master's Degree Programmes	2
Doctoral degree programmes	5
Total	50

4.2 New Study Programmes and Fields of Study

In 2008 there were no newly accredited study programmes and fields of study.

4.3 Student Research Conferences and Competitions

No.	Conference	Venue	Date	Number of Participants
1.	18 th Vojtěch Jarník International Mathematical Competition	Ostrava	Mar. 31- Apr.3	139
2.	Student's scientific competition – section Mathematics: A, P, Z9, B, C	Ostrava	Jan. 15 Jan. 22 Jan. 29 Mar. 25	38, 14, 49, 31, 71
3.	Environmental Changes and Biological Assessment IV	Ostrava	Apr. 10-11	110
4.	Student Research Conference – FS SRC 2008	Ostrava	May 7	20

In 2008, FS OU and its departments organised or co-organised several events oriented to exhibition of students' research work.. Above all, it was the Faculty of Science Student Research Conference – FS SRC 2008 which was held on May 7, 2008. It attracted 20 student papers. The conference was organized in 6 sections: Mathematics, Physics, Informatics, Chemistry, Geography and Geoecology, and Human Geography. The results in the sections are given in the table:

Place	Student	Section/Title	Supervisor
Mathematics			
1 st	Bc. Petra Hodáková	Rationalization of Integrals and Elliptic Integrals	Martin Swaczyna, PhD.
2 nd	Bc. Michaela Wrublová	Algebra in Graph Theory	Petra Konečná, PhD.
Physics			
1 st	Jakub Nezval	The methods for modification of analysis photosynthetic pigments and other selected compounds from assimilation apparatus	Jiří Kalina, Assoc. Prof.
2 nd	Petra Teslová	Creation of methodology for determination of sugars content in plant tissues of higher plants	Jiří Kalina, Assoc. Prof.
3 rd	Jiří Heller	Determination of coenzyme Q ₁₀ by microorganisms strains	Josef Satke, PhD., Jiří Kalina, Assoc. Prof.
Informatics			
1 st	Dominik Maximilián Ramík	Face Recognition System Based on Modular Neural Networks with Filtering of Similar Faces	Eva Volná, PhD.
2 nd	Tomasz Michnik	Web data acquisition and processing	Petr Šaloun, Assoc. Prof.
3 rd	Bc. Martin Řehula	WebCam as a 3D graphical input device	Alexej Kolcun, PhD.

Place	Student	Section/Title	Supervisor
Chemistry			
1 st	Martin Mucha	Computional 3D models of chemical objects	Václav Slovák, Assoc. Prof.
2 nd	Petra Taurková	Monitoring of selected quality indicators of the Vsetínská Bečva river and the Medůvka creek	Roman Maršálek, PhD.
3 rd	Lucie Kuzněcovová, Lucie Ruppenthalová	The using of coal as a sorbent form removing of heavy metals from waste waters	Roman Maršálek, PhD.
Geography and Geoecology			
1 st	Jan Miklín	Multitemporal analysis of the evolution of the forest and non-forest vegetation in the Natural Reserve Děvín-Kotel-Soutěska	Jiří Kmet (Správa CHKO Pálava)
2 nd	Jan Lenart	Investigation of the Ice cave on the Lukšinec ridge	
3 rd	Tomáš Kosačík	Geomorphological analysis of an active landslide Hluboče – Bílé Karpaty Mountains	Tomáš Pánek, PhD.
Social geography			
1 st	Petra Volkmerová	Housing and residential preferences of the engineering students at the Faculty of Electrical Engineering and Computer Science VŠB - Technical University of Ostrava	Pavel Bednář
2 nd	Marcela Pobořilová	Characterful democracy of African continent	Martin Kovář

5 ERASMUS

In 2008, 20 incoming Erasmus students visited FS OU. In 2008, 56 students of our faculty were approved for Erasmus-mobility abroad for various destinations and 39 teachers visited our partners' universities and reversely 9 incoming teachers visited our faculty in Erasmus-mobility programme.

5.1 Teacher's Mobility under the ERASMUS Programme

Name	Country	University	Days
Bartl, D.	Greece	Heraklion	12
Dolný, A.	Slovakia	Bratislava	5
Dolný, A.	Slovakia	Bratislava	7
Drobík, T.	UK	London, Manchester	12
Ďuriš, Z.	Poland	Wroclaw	5
Hančl, J.	UK	Liverpool	30
Hančl, J.	Italy	Udine	30
Hančl, J.	Italy	Pisa	30
Havrlant, J.	Poland	Gdansk	9
Huňka, F.	Ireland	Dublin	5
Kočárek, P.	Spain	Barcelona	5
Kočárek, P.	Slovakia	Bratislava	5
Krpeš, V.	Germany	Freiburg	10
Krtička, L.	Finland	Turku	4
Lojkásek, B.	Poland	Wroclaw	5
Mácha, P.	Spain	Seville	13
Majkus, Z.	Poland	Katowice	4
Malachová, K.	Poland	Wroclaw	5
Mišík, L.	Slovakia	Zvolen	14
Mišík, L.	Hungary	Eger	12
Mišík, L.	Slovakia	Bratislava	14
Mišík, L.	Austria	Graz	14
Plášek, V.	Poland	Katowice	5
Plášek, V.	Spain	Barcelona	5
Plášek, V.	Poland	Wroclaw	5
Sedláříková R.	Sweden	Stockholm	5
Sezimová, H.	Poland	Katowice	4
Siwek, T.	Poland	Warsaw	10
Slach, O.	Germany	Bonn	14
Sochor, T.	Portugal	Portalegre	7
Solárová, M.	Slovakia	Nitra	5
Swaczyna, M.	Greece	Heraklion	12
Šaloun, P.	Slovakia	Banská Bystrica	5
Ševčík, J.	Spain	Barcelona	5
Taraba, B.	Slovakia	Nitra	5
Tóth, J.	Hungary	Eger	12

Name	Country	University	Days
Tóth, J.	Slovakia	Bratislava	14
Tóth, J.	Austria	Graz	14
Tóth, J.	Slovakia	Zvolen	14
Vencálek, J.	Slovakia	Trnava	7
Volná, E.	Germany	Berlin	12
Živný, M.	Germany	Freiburg	10

5.2 SOCRATES – ARION, Comenius, Grundtvig

Name	State, Organisation	Days
Telnarová, Z.	Italy, Milan – Comenius 2	4
Volná, E.	Ireland, Limerick - Grundtvig 2	4
Volná, E.	Greece, Patras - Grundtvig 2	5
Volná, E.	Iceland, Reykjavík – Grundtvig 2	7

5.3 Students Mobility During the year 2008

- a) Under the LLP – ERASMUS Programme

Summer semester 2007/2008

Name	Place, Country	Date	Support of the Faculty (CZK)
Adamová Marie	Clerm-Ferrand, France	Jan. 08-June 08	7 200,- CZK
Bajer Michal	Joensuu, Finland	Jan. 08-June 08	14 400,- CZK
Bašanda Petr	Tours, France	Jan. 08-June 08	8 640,- CZK
Bazgierová Dagmar	Roskilde, Denmark	Feb. 08-June 08	12 000,- CZK
Bílková Barbora	Roskilde, Denmark	Feb. 08-June 08	12 000,- CZK
Brezina Kamil	Heraklion, Greece	Feb. 08-June 08	5 760,- CZK
Citnarová Veronika	Klagenfurt, Austria	Sept. 07-Jan. 08	4 320,- CZK
Henneberg Pavel	Braga, Portugal	Sept. 07-Jan. 08	5 760,- CZK
Hráček Jan	Heraklion, Greece	Feb. 08-June 08	5 760,- CZK
Chlopčíková Kat.	Seville, Spain	Sept. 07-July 08	14 400,- CZK
Kaspar Roman	Stockholm, Sweden	Jan. 08-June 08	12 000,- CZK
Klemš Ladislav	Oradea, Romania	Feb. 08-June 08	---
Kornfeilová Lucie	Roskilde, Denmark	Feb. 08-June 08	12 000,- CZK
Kořínková Lucie	Seville, Spain	Sept. 07-July 08	14 400,- CZK
Kubíková Liběna	Klagenfurt, Austria	Sept. 07-Jan. 08	4 320,- CZK
Kuncová Lenka	Sakarya, Turkey	Sept. 07-Jan. 08	4 320,- CZK
Litváková Petra	Erlangen, Germany	Oct. 07-Aug. 08	11 880,- CZK
Máchová Ivana	Roskilde, Denmark	Feb. 08-June 08	12 000,- CZK
Marková Lenka	Ljubljana, Slovenia	Oct. 07-Feb. 08	4 320,- CZK
Maryniok Tomáš	Klagenfurt, Austria	Mar. 08-June 08	5 400,- CZK
Nestrojová Zuzana	Stockholm, Sweden	Jan. 08-June 08	12 000,- CZK
Novotný Lukáš	Liverpool, UK	Jan. 08-June 08	12 000,- CZK
Petrová Zuzana	Salamanca, Spain	Sept. 07-June 08	14 400,- CZK
Petruška Jan	Dublin, Ireland	Feb. 08-June 08	9 600,- CZK

Name	Place, Country	Date	Support of the Faculty (CZK)
Pobořilová Marie	Sakarya, Turkey	Sept. 07-Jan. 08	4 320,- CZK
Satke Tomáš	Leiden, The Netherlands	Jan. 08-June 08	8 640,- CZK
Sýkorová Lucie	Ljubljana, Slovenia	Sept. 07-Feb. 08	5 400,- CZK
Tomášková Hana	Tours, France	Sept. 07-July 08	14 400,- CZK
Večer, Ondřej	Lesbos, Greece	Oct. 07-Feb. 08	5 760,- CZK
Žaludová Michaela	Braga, Portugal	Sept. 07-Jan. 08	5 760,- CZK

Winter Semester 2008/2009

Name	University, Country	Date
Coufalová Jana	Barcelona, Spain	Sept. 08-June 09
Daňhelová Michaela	Seville, Spain	Sept. 08-Jan. 09
Fišer Vít	Ljubljana, Slovenia	Sept. 08-June 09
Fojtík Petr	Joensuu, Finland	Sept. 08-Dec. 08
Gbelec Peter	Ljubljana, Slovenia	Sept. 08-June 09
Gižová Lucie	Joensuu, Finland	Sept. 08-May 09
Hlinka Tomáš	Tours, France	Sept. 08-Jan. 09
Janšová Alena	Ljubljana, Slovenia	Sept. 08-June 09
Kapušová Barbora	Dresden, Germany	Oct. 08-Mar. 09
Keprt Pavel	Tours, France	Jan. 09-June 09
Kolouch Ondřej	Liverpool, UK	Aug. 08-June 09
Kopecká Lenka	Seville, Spain	Sept. 08-Jan. 09
Kupský Adam	Joensuu, Finland	Sept. 08-May 09
Lindovský Martin	Aegean, Greece	Oct. 08-Jan. 09
Lingrová Háta	Tours, France	Jan. 09-June 09
Novotná Karina	Salamanca, Spain	Sept. 08-June 09
Novotný Jan	Minho, Portugal	Sept. 08-Feb. 09
Pavlíková Jana	Clermont Fer., France	Sept. 08-June 09
Petrová Kateřina	Salamanca, Spain	Sept. 08-Jan. 09
Pěnčík Jaromír	Munich, Germany	Oct. 08-Sept. 09
Platošová Jana	Krakow, Poland	Sept. 08-Jan. 09
Pobořilová Marcela	Stockholm, Sweden	Aug. 08-June 09
Saganová Eva	Roskilde, Denmark	Sept. 08-June 09
Šnevajs Josef	Salamanca, Spain	Sept. 08-Jan. 09
Valová Jana	Stockholm, Sweden	Aug. 08-June 09

Note: Students can apply for special scholarship to help fund their study abroad within the framework of the LLP-Erasmus Programme (Dean's regulation No. 9/2008). In 2008 30 applicants were granted the special scholarship and the amount of money spent on the support of the study stays abroad was 276 000,- CZK.

b) Others

Name	Dpt	Country	Place	Conference	Days
Miarka, R.	KIP	Slovakia	Bratislava	Knowledge 2008	3
Ramík, D.	KIP	Slovakia	Smokovec	SOFSEM 2008	7
Kahánek, P	KIP	Slovakia	Bratislava	APLIMAT 2008	1

Name	Dpt	Country	Place	Conference	Days
Miarka, R.	KIP	Slovakia	Nitra	9 th Conf. of PhD students	3
Šustek, J.	KMA	Slovakia	Komárno	Research activities	28
Marková, B.	KSG	Austria	Inviertel	Scientific excursion	5
Rusínská, K.	KSG	Norway	Hedmark	FM EHP Norway	208

KBE Department of Biology and Ecology
 KFG Department of Physical Geography and Geoecology
 KFY Department of Physics
 KCH Department of Chemistry
 KIP Department of Informatics and Computers
 KMA Department of Mathematics
 KSG Department of Human Geography and Regional Development

5.4 List of Bilateral Agreements – LLP– ERASMUS Programme

Code of university	Place	Country	Coordinator	Department
PL BIELSKO02	Bielsko-Biala	Poland	Živný	KBE
PL KATOWIC 01	Katowice	Poland	Živný	KBE
PL WROCLAW01	Wroclaw	Poland	Plášek	KBE
SK BRATISL02	Bratislava	Slovakia	Živný	KBE
SI LJUBLJA 01	Ljubljana	Slovenia	Živný	KBE
D FREIBUR 01	Freiburg	Germany	Živný	KBE
E BARCELO 02	Barcelona	Spain	Plášek	KBE
SI LJUBLJA 01	Ljubljana	Slovenia	Popelková	KFG
S STOCKHO01	Stockholm	Sweden	Popelková	KFG
PL CZESTOC02	Czestochowa	Poland	Kalus	KFY
SK NITRA 01	Nitra	Slovakia	Slovák	KCH
IRL DUBLIN04	Dublin	Ireland	Huňka	KIP
P PORTALE 01	Portalegre	Portugal	Sochor	KIP
SK BANSKO01	Banská Bystrica	Slovakia	Šaloun	KIP
SF OULU01	Oulu	Finland	Hančl	KMA
I CATANIA01	Catania	Italy	Perfilieva	KMA
I PISA 01	Pisa	Italy	Hančl	KMA
I UDIN 01	Udine	Italy	Hančl	KMA
HU DEBRECE01	Debrecen	Hungary	Hančl	KMA
HU EGER01	Eger	Hungary	Tóth	KMA
NL LEIDEN 01	Leiden	The Netherlands	Hančl	KMA
A GRAZ01	Graz	Austria	Mišík	KMA
A GRAZ 02	Graz	Austria	Mišík	KMA
RO CLUJNAP01	Cluj-Napoca	Romania	Tóth	KMA
G IRAKLI01	Heraklion	Greece	Konečná	KMA
SK BRATISL01	Bratislava	Slovakia	Mišík	KMA
SK BRATISL02	Bratislava	Slovakia	Mišík	KMA
SK ZVOLEN 01	Zvolen	Slovakia	Tóth	KMA
D BERLIN 01	Berlin	Germany	Hančl	KMA
D ERLANGE 01	Erlangen	Germany	Hančl	KMA
E LOGRONO01	Logrono	Spain	Hančl	KMA

Code of university	Place	Country	Coordinator	Department
UK LIVERPO 01	Liverpool	UK	Hančl	KMA
SK BANSKO01	Banská Bystrica	Slovakia	Drobík	KSG
DK ROSKILD 01	Roskilde	Denmark	Drobík	KSG
SF JOENSUU01	Joensuu	Finland	Drobík	KSG
F CLERMON 02	Clermont Ferrand	France	Drobík	KSG
F TOURS 01	Tours	France	Drobík	KSG
PL GDANSK01	Gdansk	Poland	Drobík	KSG
PL KRAKOW01	Krakow	Poland	Drobík	KSG
PL LUBLIN01	Lublin	Poland	Drobík	KSG
PL WARSZAW31	Warszawa	Poland	Drobík	KSG
P BRAGA01	Braga	Portugal	Drobík	KSG
P COIMBRA01	Coimbra	Portugal	Drobík	KSG
A KLAGENF 01	Klagenfurt	Austria	Drobík	KSG
RO ORADEA 01	Oradea	Romania	Drobík	KSG
SK PRESOV0	Prešov	Slovakia	Drobík	KSG
SK RUZOMBE01	Ružomberok	Slovakia	Drobík	KSG
SK TRENCIN01	Trenčín	Slovakia	Drobík	KSG
SI LJUBLJA 01	Ljubljana	Slovenia	Drobík	KSG
D BONN 01	Bonn	Germany	Drobík	KSG
D HANNOVE 01	Hannover	Germany	Drobík	KSG
D MUCHEN 02	Munich	Germany	Drobík	KSG
D MUNSTER 01	Münster	Germany	Drobík	KSG
E BARCELO 02	Barcelona	Spain	Drobík	KSG
E SALAMA 02	Salamanca	Spain	Drobík	KSG
E SEVILLA 01	Seville	Spain	Drobík	KSG
S STOCKHO01	Stockholm	Sweden	Drobík	KSG
TR SAKARYA01	Sakarya	Turkey	Drobík	KSG

- KBE Department of Biology and Ecology
 KFG Department of Physical Geography and Geoecology
 KFY Department of Physics
 KCH Department of Chemistry
 KIP Department of Informatics and Computers
 KMA Department of Mathematics
 KSG Department of Human Geography and Regional Development

6 Research Programmes

There were no Research Programmes solved at the Faculty of Science in the year 2008. Researchers from the Department of Mathematics and Department of Informatics and Computers took part in the Research Programme MSM6198898701 (Logical and Algebraic Methods for Elaboration of Information Subjected to Indeterminacy and Their Use in Fuzzy Modelling) solved at the Institute for Research and Applications of Fuzzy Modelling.

6.1 Summary of Project Costs (Faculty)

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	29	12765
Development projects in 2008 (Except of CEP – Central evidence of projects)	20	21556
• Under national budget	11	18347
• Projects financed by the EU Commission	9	3209
Commercial contracts	5	1342

6.2 Summary of Project Costs (Departments)

Department of Mathematics

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	2	657
Development projects in 2008 (Except of CEP – Central evidence of projects)	2	10486
• Under national budget	1	9280
• Projects financed by the EU Commission	1	1206
Commercial contracts	0	0

Department of Informatics and Computers

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	4	1044
Development projects in 2008 (Except of CEP – Central evidence of projects)	11	5264
• Under national budget	5	4737
• Projects financed by the EU Commission	6	527
Commercial contracts	0	0

Department of Physics

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	5	1817
Development projects in 2008 (Except of CEP – Central evidence of projects)	3	474
• Under national budget	2	432
• Projects financed by the EU Commission	1	42
Commercial contracts	1	800

Department of Chemistry

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	5	4734
Development projects in 2008 (Except of CEP – Central evidence of projects)	2	2486
• Under national budget	2	2486
• Projects financed by the EU Commission	0	0
Commercial contracts	1	200

Department of Biology and Ecology

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	7	2023
Development projects in 2008 (Except of CEP – Central evidence of projects)	1	1412
• Under national budget	1	1412
• Projects financed by the EU Commission	0	0
Commercial contracts	1	48

Department of Physical Geography and Geoecology

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	2	358
Development projects in 2008 (Except of CEP – Central evidence of projects)	0	0
• Under national budget	0	0
• Projects financed by the EU Commission	0	0
Commercial contracts	1	166

Department of Human Geography and Regional Development

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2008 (Filed in CEP – Central evidence of projects)	4	2132
Development projects in 2008 (Except of CEP – Central evidence of projects)	1	1434
• Under national budget	0	0
• Projects financed by the EU Commission	1	1434
Commercial contracts	1	128

7 Faculty Service

7.1 The Libraries and Depository and Reading Rooms of Faculty of Science

The libraries and information services of the Faculty of Science (FS) are in two separate locations: the FS-A depository and reading room in the street 30. dubna was added to the University Library on September 1, 1998. At the present time it houses predominantly printed documents for the Departments of Mathematics, Informatics and Computers, and Chemistry and Physics.

The FS depository and reading room in Chittussiho Street was included in the University Library on September 1, 2002 and provides material for the Departments of Biology and Ecology, Physical Geography and Geoecology, as well as Human Geography and Regional Development.

In addition to the organizational layout of the University Library, libraries of departments and institutions provide lending services. FS involves three departmental libraries and one institutional library. These libraries mostly serve as depositories for titles acquired by employees from organizational units within the framework of grant activities.

Book stock and services in the library and depository of the Faculty of Science in 2008

Monitored criteria / reading rooms	FS-A	FS-Chit.	FS Total	OU Total reading rooms
Attendance				
Total number of visitors in 2008	7 502	5 897	13 399	63 462
Visitors on a daily average	31	25	28	270
Number of study locations	25	32	57	237
Lending services				
Total number of checkouts	11 261	17 732	28 993	71 667
Daily average of checkouts	52	81	66	982
Free selection of stock (library units)				
Non-periodical documents	1 948	3 623	5 571	37 748
Periodical documents*	658	121	779	3 024
Number of magazine titles delivered	33	47	80	408
Use of PC				
Total number of PC users in 2008	5 478	3 915	9 393	46 502
Daily average of PC users	23	17	20	200
Number of PCs available to the users	10	7	17	63
Reprography services				
Number of reproductions (copies)	12 262	4 332	16 594	139 273
Number of pages printed using PCs	5 177	4 005	9 182	52 194

Monitored criteria / reading rooms	FS-A	FS-Chit.	FS Total	OU Total reading rooms
Number of scanned pages	2 181	84	2 265	13 391
Number of opening hours in a week (in the academic year)	53	34		53

Notes: The total statistics given are based on the number of copies made in the framework of copying services and recorded on a counter. Number of periodicals in FS-A includes also mathematical journals obtained by exchanges.

Basic information about stock, services and users of the University Library

Library stock as of December 31, 2008

Total number of library items (in IS DAIMON)	213 144
- printed books and periodicals	207 364
- other documents (printed music, CD, DVD, videocassettes)	5 780
Number of periodical titles subscribed	395
Number of copies of subscribed periodicals	519
Final dissertations (IS DIPL)	8 932
Documents obtained by exchanges	5 248

Trends in completion of the book stock from 2004 – 2008

Library stock	2004	2005	2006	2007	2008
Total number of library units	220 712	228 835	237 333	207 412	213 144
Number of periodical titles subscribed	373	357	366	378	395
Growth in stock per year	7 450	8 498	8 546	6 756	6 511
Decrease in stock per year	1206	375	48	1 662	779

Some librarian and information services in 2004 – 2008

Services	2004	2005	2006	2007	2008
Lending services					
Lending services-local	373 334	382 798	372 108	344 131	270 859
outside loans	63 043	69 276	72 657	69 991	71 776
loans for in-house use	310 291	313 522	299 451	274 140	199 083
Interlibrary loan services	2 386	2 168	2 130	2 174	2 286

Services	2004	2005	2006	2007	2008
in CR: to another library	398	306	439	299	157
from another library	1 508	1 306	1 079	1 202	1 172
international: to another library	0	2	1	0	6
from another library	480	554	611	673	951
Additional services					
Bibliographic searches	216	238	267	282	601
Accessible el. databases	27	27	31	30	33
Educational and training activities	22	15	19	23	15
Displays of publications	1	1	2	0	0

Electronic information resources

The OU university library provides access to electronic information resources. Most are accessible in the framework of MŠMT grants for the support of science and research in universities (at the present time 1N for the period of 2004 - 2008). These resources represent information of a bibliographical and factual nature, as well as full-body texts, and are accessible within the scope of the IP address for OU. Electronic information resources also have major significance in the framework of teaching, whereby the library provides, e.g., the subject "Electronic information resources" for the Department of Geography at the Faculty of Science.

Databases accessible within the Faculty of Science

1. Biological Abstracts
2. Bioone Full-Text
3. Blackwell Synergy
4. Czech National Bibliography
5. Eifl Direct - Ebsco
6. Encyclopedia Coto.Je
7. Environment Complete
8. Environetbase
9. ESPM - CSA Environmental Sciences & Pollution Management Database
10. Geobase
11. Georef
12. Geoscienceworld
13. Green File
14. Kluwer
15. Knovel
16. Proquest 5000
17. Science Direct
18. Scifinder Scholar
19. Springer/Link

20. Web of Knowledge
21. Laws in CR Online
22. Zoological Record

8 Centre for Lifelong Education

Head of the Centre: Eva Burianová, PhD.
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Centre Administrators: Simona Polochová e-mail: simona.polochova@osu.cz
Gabriela Burianová e-mail: gabriela.burianova@osu.cz

Overview of Activities

In 2008 the Centre for Lifelong Education at the Faculty of Science, University of Ostrava cooperated with the departments in various organizational activities, primarily in the following fields:

- study programs to expand the knowledge base within the teaching profession (Enlargement Diploma Study) – KMA¹, KIP², KBE³, KSG⁴
- realization of specialist courses Coordinator in the Field of ICT,
- preparatory courses for students admitted to the first year of study – KIP² and KMA¹,
- courses for admitted students – Introduction to study
- organization of accredited courses for teachers within DVPP,
- realization of a workshop for teachers – Workshop on mathematics and informatics for secondary school teachers and teachers at ZŠ⁵ - KMA¹, KIP²,
- courses for students – English for Beginners,
- specialization courses – CISCO, MAYA,
- realization of education for university staff.

Overview of activities realized by the Centre for Lifelong Education in the year 2008

The name of the activity	Number of participants
Preparatory Course in Mathematics (KMA) ¹	23
Preparatory Course for Students Studying Informatics	20
Enlargement Diploma Study 1 st – 3 rd grades (KIP) ²	53
Enlargement Diploma Study of Informatics – graduates (KIP) ²	16
Enlargement Diploma Study of Informatics – ZŠ ⁵ -SS ⁶	2
Enlargement Diploma Study of Mathematics- total	24
Enlargement Diploma Study of Mathematics Graduates (KMA) ¹ 2008	10
Enlargement Diploma Study of Biology from ZŠ ⁵ to SS ⁶ – Graduates 2008	13
Enlargement Diploma Study of Geography – total	16
Coordinator in the Field of ICT 1 st and 2 nd grades	19
Coordinator in the Field of ICT – Graduates 2008	36
Conference for Secondary School Teachers (KMA ¹ ,KIP ²)	138
Course: Introduction to the Study	527
Course: Sign Language for Students at the University of Ostrava	23
Course: Application of ICT at the University of Ostrava	32
DVPP Courses	9
Course: English for Beginners I – 2007/2008	48
Course: English for Beginners I – 2008/2009	28

The name of the activity	Number of participants
Course: English for Beginners II	15
Applied Informatics – study under article 60	4
CISCO Course	20
MAYA Course	10
Total	1086

KMA¹ Department of Mathematics

KIP² Department of Informatics and Computers

KBE³ Department of Biology and Ecology

KSG⁴ Department of Human Geography and Regional Development

ZŠ⁵ Primary School

SŠ⁶ Secondary School

9 Project Research and Assistance Department

Head of the Department: Cyril Klimeš, Assoc. Professor
e-mail: cyril.klimes@osu.cz
Lukáš Straňák
e-mail: lukas.stranak@osu.cz

Staff: Lenka Káňová
e-mail: lenka.kanova@osu.cz
Pavla Janoschová
e-mail: pavla.janoschova@osu.cz

In 2008 Department for Support of Project Activities at the Faculty of Science, University of Ostrava, participated in co-operation with solvers of individual projects primarily in the following spheres:

- registration of the projects proposals,
- registration of the projects being solved,
- arranging formal requisites for the project (signatures of statutory representative, correspondence, communication with support providers, preparation and realization of requests for changes in the projects, preparation of contractual sources),
- communication with the solvers (consultation about budget, checking formal requisites of the project proposal, etc.)
- control of objective fulfillment of the project,
- organization of meetings for control working groups,
- realization of controlling days,
- realization of opponent proceedings,
- preparation and realization of competitive examination,
- preparation of author's contracts, DPP/DPČ,
- preparation of monitoring operating statements and final reports,
- monitoring of financial drawing for individual projects and adjustment of economy,
- preparation of audits,
- co-ordination of EFQM at the faculty,
- preparation of new projects (3 ESF projects),
- participation in activities and solving ESF project – The Modular System of Further Education for Staff of Schools and School Institutions in Moravian-Silesian Region,
- participation in activities and realization of courses of ESF project - Modular System of Study Programs at Universities in Moravian-Silesian Region and its Realization,
- preparation of the Customer Satisfaction Survey,
- preparation of a new website of the departments.

Summary of projects registered at the Faculty of Science, OU in 2008

Type of the Project	Number
Research projects registered in CEP (Central evidence of projects)	29
Development projects (Except of CEP)	20
• Under national budget of CR (FRVS, MSMT)	11
• Financed by the EU Commission and national budget of CR (ESF,	9

Leonardo, Grundtvig, Comenius)	
Commercial contracts	5
TOTAL	54

Summary of projects registered at Faculty of Science, OU in 2008 according to departments

Department	Number
Department of Mathematics	4
Department of Informatics and Computers	15
Department of Physics	9
Department of Chemistry	8
Department of Biology and Ecology	9
Department of Physical Geography and Geoecology	3
Department of Human Geography and Regional Development	6
TOTAL	54

- Economics and economic policy.
- Finance and financial management, accounting, taxes.
- Theory and practice of investing in banking and insurance.
- Management, marketing and economy of the company.
- Czech and European legislation.
- The European Union including project managing.
- Social Management.

10.1 Staff

Head of the Department

Hana Filipczyková, Assoc. Professor

Secretary to the Department

Martina Havelková

Teaching staff

Professor

Tibor Paulík

Assoc. Professors

Hana Filipczyková

External teachers

Pavlína Hronová

Kateřina Kořená, PhD.

Hana Svobodová, PhD.

Marie Sciskalová, PhD.

10.2 Equipment

- 2 personal computers
- 2 notebooks

10.3 Contacts and Cooperation

Cooperation with Universities and Research Institutes in the Czech Republic

- VŠE Prague, Economic Faculty, Department of Economic and Social Policy.
- VŠE Prague, Faculty of Finance and Accounting, Department of Financial Accounting and Auditing, Prague.

- University of Tomáš Baťa, Faculty of Management and Economics, Zlín.
- Masaryk University, Economics - Faculty of Managing, Department of Economics, Department of Finance, Brno.
- VŠB – TU Ostrava, Faculty of Economics, Ostrava.
- Business School, Ostrava.
- Silesian University, School of Business Administration, Karviná.

Cooperation with Universities and Research Institutes abroad

- University of Samuel Tessedik, Faculty of Business, Pécs, (Hungary).
- University of Economics, Faculty of Economics, Department of Economy, Krakow, (Poland).
- Rzeszov University, Faculty of Economics, Department of Economy, Rzeszov, (Poland).
- University of Economics, Faculty of Business, Department of Economy, Department of Insurance, Bratislava (Slovakia).
- University of Matej Bel, Faculty of Economics, Banská Bystrica (Slovakia).
- Technical University in Košice, Faculty of Economics, Department of Finance, Košice (Slovakia).

Conferences 2008

Name	Country	Place	Name of the Conference	Date
Paulík, T.	Slovakia	Bratislava	Economy and social politics	May 21-22
Filipczyková, H.	Slovakia	Bratislava	Developments in Insurance	Jun. 1-12
Paulík, T.	Poland	Rzeszów	Conference	Sept. 24- 25

10.4 Membership in Professional Organizations

Assoc. professor Hana Filipczyková:

- Member of the Chamber of Certified Accountants, CR.

10.5 Publications

Articles in proceedings (proceedings from conferences or institutions)

FILIPCZYKOVÁ, H. *Insurance market in Czech Republic as component of European and world insurance market.* In: Developments in Insurance II. 11. 6. 2008-12. 6. 2008 Senec. Bratislava, University of: Economy, 2008. p. 31-37. ISBN 978-80-225-2556-5.

FILIPCZYKOVÁ, H. *Presenting differences in financial leasing in Czech Republic and in International Financial Reporting Standards.* In: Management, Economics and Business Development in European Conditions VI. 22.-23. 5. 2008. Brno. VUT, Faculty of Business. 2008. p. 46- 52.

PAULÍK, T. *How Far is Czech Euro? Afar!* Międzynarodowa Konferencja Naukowa organizowana w ramach cyklu: „Nierówności społeczne a wzrost gospodarczy” Rzeszow, 24.–25. 9. 2008. ISBN 978-83-7338-368-5

PAULÍK, T. *Macroeconomic Projections for the Euro Area.* Economic and Social Policy EU - III. University of Economics, Faculty of National Economy, Department of Economic Policy. Bratislava 21.-22. 5. 2008. ISBN 978-80-225-2351-6

Main fields of scientific interest:

- Theory of ordered algebraic structures, algebraic number theory, applications of category theory.
- Theory of fuzzy logic, its formal and algebraic aspects, fuzzy approximation, applications for control of technological processes, decision-making, computer science and others.
- Global variational analysis.
- Geometric methods in differential equations and mathematical physics.
- Theory of linear programming in general vector spaces and related areas.
- Measures of size and distribution of sequences of positive integers.
- Irrationality and transcendence.

11.1 Staff

Head of the Department

Ladislav Mišík, Assoc. Professor.

Deputy Head of the Department

Martin Swaczyna, PhD.

Department Secretary

Martin Swaczyna, PhD.

Office Manager

Martina Havelková

Teaching staff

Professors

Olga Krupková
Jiří Močkoř
Vilém Novák
Irina Perfiljeva

Assoc. Professors

Květoslav Burian
Jaroslav Hančl
Ladislav Mišík
János Tóth

Assistant Professors

David Bartl

Petra Konečná
Martin Swaczyna
Zuzana Václavíková
Petr Bulava
Kateřina Kabieszová
Radka Malíková
Martina Daňková
Antonín Dvořák
Jiří Kupka
Martin Štěpnička

External members

Elena Mielcová
Václav Kijonka

Changes carried out during the course of 2008:

Květoslav Burian was substituted by Radka Malíková in September 2008.

11.2 PhD. students

Bizoň Lukáš
Dubovský Viktor
Dyba Martin
Hodáková Petra
Kijonka Václav
Kliment Michal
Kramář Zdeněk
Krčmarský David
Lazar Vladimír
Malíková Radka
Otáhal Miroslav
Paláček Radomír
Pavliska Viktor
Poláková Radka
Polakovič Ondřej
Pučok Libor
Štěpnička Jan
Šustek Jan
Tomanová Iva
Vavříčková Lenka
Večerka Arnošt
Wrublová Michaela
Žižková Kateřina

PhD. students who finished doctoral study in 2008

Martin Štěpnička, PhD. field Fuzzy modelling (supervisor: Prof. Perfiljeva)
Fuzzy transform and its applications to problems in engineering practice
Date: February 26, 2008

Marian Genčev, PhD. field Applied mathematics (supervisor: Assoc. Prof. Hančl)
 Advanced Summation Methods of Infinite Series
 Date: October 7, 2008

11.3 Study Programmes

Code of the study programme¹⁾	Title of the study programme	Title of the study major²⁾	Length of the study³⁾			
			B	MN	P	FS
B1101	Mathematics	Mathematics (double major degree programme)	3			P
B1103	Applied Mathematics	Applied Mathematics for Economics	3			P,K
B1103	Applied Mathematics	Applied Mathematics	3			P,K
B1103	Applied Mathematics	Mathematical and Computer Methods of Data Processing	3			P,K
B1103	Applied Mathematics	Investment Counselling	3			P,K
N1101	Mathematics	Teaching for Secondary Schools-Mathematics (double major degree programme)		2		P
N1101	Mathematics	Teaching for Secondary Schools-Mathematics (single major degree programme)		2		P
N1103	Applied Mathematics	Applied Mathematics for Economics		2		P
N1103	Applied Mathematics	Applied Mathematics		2		P
N1103	Applied Mathematics	Mathematical and Computer Methods of Data Processing		2		P
M1103	Applied Mathematics	Applied Mathematics		5		P
M1103	Applied Mathematics	Applied Mathematics for Economics		5		P
M1103	Applied Mathematics	Teaching for Secondary Schools-Mathematics		5		P
M7504	Teaching for Secondary Schools	Teaching for Secondary Schools-Mathematics		5		P
P1103	Applied Mathematics	Applied Mathematics			3,4	P,K
P1103	Applied Mathematics	Applied Algebra			3,4	P,K
P1103	Applied Mathematics	Fuzzy Modelling			3	P,K
P1103	Applied Mathematics	Applied Mathematics			3	P,K
P1103	Applied Mathematics	Applied Algebra			3	P,K
P1103	Applied Mathematics	Fuzzy Modelling			3	P,K

¹⁾ B – bachelor's degree programme, N – master's degree programme representing a continuation of bachelor's degree programme,

M - master's degree programme, P - doctoral degree programme.

²⁾ Study programmes marked with an asterisk can (usually) be studied only in a chosen study programme in pairs.

³⁾ P – full time study, D – distance form of study, K – combined study form;

11.4 Theses

Bachelor (Bc.) Theses

- BEZCHLEBOVÁ, Eva. *Inverse Function Theorem*. Supervisor: Bartl, David
- ČERMÁKOVÁ, Lucie. *Specific Problems of Long-Term Assets*. Supervisor: Filipczyková, Hana
- DOSKOČILOVÁ, Kateřina. *Distribution of primes*. Supervisor: Hančl, Jaroslav
- FÖRSTEROVÁ, Monika. *Inventory management*. Supervisor: Filipczyková, Hana
- JAŠŠOVÁ, Alena. *Data Analysis in Sport Practice*. Supervisor: Kabieszová, Kateřina
- MINÁRIKOVÁ, Lenka. *Theorem on Constrained Extremes*. Supervisor: Bartl, David
- MOCOVÁ, Jaroslava. *Special type of matrices and their properties*. Supervisor: Václavíková, Zuzana
- NOVOTNÝ, Lukáš. *Methods of Expression of Real Numbers*. Supervisor: Šustek, Jan
- PŘÍVRATSKÁ, Milada. *Accounting and fiscal specifics of small entrepreneur*. Supervisor: Filipczyková, Hana
- RŮŽIČKOVÁ, Monika. *Choice problems of indirect taxes specialized on value added tax*. Supervisor: Filipczyková, Hana
- SALAMONOVÁ, Eva. *Implicit Function Theorem*. Supervisor: Bartl, David
- STARSIAKOVÁ, Soňa. *Selected problems of direct taxes with a focus on corporation income tax*. Supervisor: Filipczyková, Hana
- ZAŤKO, Juraj. *Several probability problems concerning optimization*. Supervisor: Kabieszová, Kateřina

Master (Mgr.) Theses

- BARTÁKOVÁ, Jana. *The harmonisation of accounting standards and fiscal instructions in European Union framework and its overall impact on Czech Republic legislature*. Supervisor: Filipczyková, Hana
- HOĎÁKOVÁ, Petra. *Rationalization of Indefinite Integrals and Elliptic Integrals*. Supervisor: Swaczyna, Martin
- HURTOVÁ, Marie. *Projective Algorithm for Solution Linear Programming Problems*. Supervisor: Bartl, David
- KLEPKOVÁ, Martina. *Application of Brown's method to solve linear programming problems*. Supervisor: Bartl, David
- KNÁPKOVÁ, Iveta. *Choice problems financial reporting in the Czech Republic in context with world harmonisation*. Supervisor: Filipczyková, Hana
- KUCHAŘOVÁ, Daniela. *Systems of linear algebraic equations and their application*. Supervisor: Václavíková, Zuzana
- MIK, Tomáš. *Simulation Models Based on GIS*. Supervisor: Bulava, Petr
- NOVÁKOVÁ, Jaroslava. *Stock management and accounting*. Supervisor: Filipczyková, Hana

- PÍŽOVÁ, Pavlína. *Calculus of Variations*. Supervisor: Swaczyna, Martin
- PUČOK, Libor. *Computer processing of graph theory algorithm*. Supervisor: Konečná, Petra
- ŠVÉDOVÁ, Vendula. *Analysis of The Traveling Salesman Problem*. Supervisor: Bartl, David
- TOMANOVÁ, Iva. *Numerical Solutions of Non-linear Equations and Their Systems*. Supervisor: Václavíková, Zuzana
- VARMUŽA, Vladislav. *The selected financial analysis problems*. Supervisor: Filipczyková, Hana
- VAVŘÍČKOVÁ, Lenka. *On (R)-density of sets*. Supervisor: Tóth, János
- VIZAUER, Jiří. *Specificity trading in tourism*. Supervisor: Filipczyková, Hana
- WRUBLOVÁ, Michaela. *Algebra in Graph Theory*. Supervisor: Konečná, Petra

11.5 Research Projects

Research projects in 2008 (filed in CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
L. Mišík	MEB 080877	Number theory and its applications	23
J. Močkoř	GA201/07/0191	Algebraic, analytic and combinatorial number theory	634

11.6 Development Projects

Development projects in 2008 (except of CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
J. Močkoř	MŠMT 85/1/a	Preparation for participation in Operational programmes and development of resources for internationalization at the University of Ostrava in Ostrava	9280
J. Močkoř	CZ.04.1.03/3.2. 15.2/0250	Modular system of study programs on universities in the Moravian Silesian Region and its Implementation	1206

11.7 Equipment

- 15 PCs.
- 9 Notebooks.

11.8 Conferences and Seminars

- The 14th Conference of High School Teachers of Mathematics and Informatics.
- The 18th Vojtěch Jarník International Mathematical Competition March 31 - April 3, 2008, 116 participants.
- The 7th Polish, Slovak and Czech Conference on Number Theory, Ostravice, June 10 - 12, 2008.
- The 2nd PhD Student Mathematical Conference, Malenovice, October 15 - 17, 2008.
- Seminar in Diophantine Approximations
- PhD. Seminar in Number Theory

11.9 Contacts and Cooperations

Cooperation with Universities and Research Institutes abroad

- Leiden University.
- Liverpool University.
- University of Udine.
- University of Pisa.
- Eger University.
- Babes-Bolyai Cluj-Napoca.
- Universite Jean Monnet St.Etienne.
- TU Graz.
- TU Bratislava.
- TU Zvolen.
- Mathematical Institute SAV Bratislava.
- Silesian University Katowice.

Visitors to the institute

November 19 - 22, 2008 Aleksandrs Šostaks, Světlana Asmuss, Sergejs Solovjovs, Ingrida Uljane, Vecislav Ruzha, Pavels Orlovs (*within the Czech-Latvian seminar*)
University of Latvia, Riga, Latvia

November 19 - 22, 2008 Moataz El-Zekey (*within the Czech-Latvian seminar*)
Slovak University of Technology, Bratislava, Slovakia and Benha University, Egypt

November 17 - 29, 2008 Sandor Jenei
University of Pécs, Hungary

October 13 - 24, 2008 Alexandr Bozhenyuk and Stanislav Belyakov
Southern Federal University, Taganrog, Russia

October 11 - 19, 2008 Radhakrishnan Nair
Liverpool University, England

October 1- 10, 2008 Oto Strauch, Vladimír Baláž
Slovak Academy of Sciences, Bratislava, Slovakia

September 28 - October 12, 2008 Sandor Jenei
University of Pécs, Hungary

June 13 - July 13, 2008 Thomas Vetterlein
Medical University of Vienna, Austria

June 1 - 13, 2008 Jayaram Balasubramaniam
Slovak Technical University, Slovakia

April 21 - 24, 2008 Nadezhda Yarushkina
Ulyanovsk State University, Russia

February 6 - 7, 2008 Hans De Meyer
Ghent University, Belgium

Visits of Staff Members

Conferences 2008

Name	Country	Place	Name of Conference	Date
Mišík, J.	Slovakia	Bratislava	SF UJS	Dec. 4-5
Mišík, L.	France	Marseilles	Conference	Jan. 19-Feb. 2
Swaczyna, M.	Slovakia	Levoča	Global Analysis	June 22-27
Tóth, J.	Slovakia	Bratislava	SF UJS	Dec. 4-5

Short-term stays abroad 2008 (less than 10 days)

Name	Place	State	Action	Date
Kostra, J.	Bratislava	Slovakia	Number Theory	Mar. 17-24
Kostra, J.	Bratislava	Slovakia	Number Theory	Apr. 21-26

Long-term stays abroad 2008 (more than 10 days)

Name	Country	Place	Action	Date
Hančl, J.	Italy	Udine	Science and Research	Apr. 24– May 5
Hančl, J.	Netherlands	Leiden	Science and Research	Oct. 23-Nov. 5
Kostra, J.	Slovakia	Bratislava	Research in Number Theory	Feb.26- Mar. 14
Kostra, J.	Slovakia	Bratislava	Research in Number Theory	Mar. 25- Apr.21
Mišík, L.	France	St.Etienne	Scientific and lecture stay,	Jan. 19- Feb. 2
Mišík, L.	Slovakia	Bratislava	Scientific stay	Aug. 13-22
Tóth, J.	Hungary	Sopron	Scientific and lecture stay,	Apr. 26-May 9
Tóth, J.	Slovakia	Bratislava	Scientific stay	Aug. 13-22

11.10 Student Research Activity

- PhD. student Jan Šustek was a co-author of three and PhD. student Jan Štěpnička was a co-author of two scientific papers published in the year 2008
- Most of the PhD. students took part at the 2nd Summer School for PhD. students, Malenovice, October 15 - 17, 2008.

11.11 Membership in Professional Organisations

Prof. Vilém Novák, Prof. Irina Perfiljeva, Martin Štěpnička, PhD., Martina Daňková, PhD., Dagmar Plšková, Assoc. Prof. János Tóth, Assoc. Prof. Ladislav Mišík

- Members of Organization EUSFLAT (European Society for Fuzzy Logic and Technology).

Petr Bulava, PhD.

- Czech and Slovak Society for System Stimulation - member of the board.

Assoc. Prof. Jaroslav Hančl

- Member of the Union of Czech Mathematicians and Physicists.
- Mathematical Olympics - member of the board

Prof. Olga Krupková

- Member of the Union of Czech Mathematicians and Physicists, member of the Committees for Mathematics and Physics and Organisation of Science.
- Czech Mathematical Society – member of national Committee
- Member of the American Mathematical Society
- Member of the Australian Mathematical Society

Assoc. Prof. Ladislav Mišík

- Member of the Union of Slovak Mathematicians and Physicists.

Prof. Vilém Novák

- Honorary member of the Russian Society of Fuzzy Sets and Systems

Prof. Irina Perfiljeva

- Member of EUSFLAT board, scientific secretary.
- Member of the Russian Society of Fuzzy Sets and Systems

Assoc. Prof. János Tóth

- Member of the Union of Slovak Mathematicians and Physicists.

11.12 Publications

ARTICLES IN PERIODICAL PUBLICATIONS

BARTL, D. *A Short Algebraic Proof of the Farkas Lemma*. In: SIAM Journal on Optimization. ISSN 1052-6234, pp. 234-239.

DI MARTINO, F.; LOIA, V.; PERFILIEVA, I.; SESSA, S. *An image coding/decoding method based on direct and inverse fuzzy transforms*. In: International Journal of Appr. reasoning. ISSN 0888-613X, pp. 110-131.

HANČL, J.; ŠTĚPNIČKA, J. *On the trancendence of some infinite series*. In: GLASGOW MATH J. ISSN 0017-0895, pp. 27-32.

HANČL, J.; ŠTĚPNIČKA, J.; ŠUSTEK, J. *Linearly Unrelated Sequences and Erdos' Problem*. In: RAMANUJAN J. ISSN 1382-4090, pp. 358-372.

- HANČL, J.; SCHINZEL, A.; ŠUSTEK, J. *On Expressible Sets of Geometric Sequences*. In: Functiones approximatio. ISSN 0208-6573, pp. 121-145.
- HANČL, J.; NAIR, R.; RUCKI, P.; ŠUSTEK, J.; BODIAGIN, D. *Summing to arbitrary real numbers*. In: Elemente der Mathematik. ISSN 0013-6018, pp. 30-34.
- HANČL, J.; TIJDEMAN, R. *On the irrationality of polynomial Cantor series*. In: ACTA ARITH. ISSN 0065-1036, pp. 37-52.
- KRUPKOVÁ, O.; KRUPKA, D. *Contact Symmetries and Variational PDEs*. In: Acta Appl. Math., pp. 163-176.
- MOČKOŘ, J. *Models of fuzzy logic in a category of sets with similarity relations*. In: International journal of innovative computing, Information and control. ISSN 1349-4198, pp. 1063-1068.
- NOVÁK, V. *A Formal Theory of Intermediate Quantifiers*. In: Fuzzy Sets and Systems. ISSN 0165-0114, pp. 1229-1246.
- NOVÁK, V.; MURINOVÁ, P. *Omitting Types in Fuzzy Predicate Logics*. In: Fuzzy Sets and Systems. ISSN 0165-0114.
- NOVÁK, V. *A Comprehensive Theory of Trichotomous Evaluative Linguistic Expressions*. In: Fuzzy Sets and Systems. ISSN 0165-0114, pp. 2939-2969.
- PERFILIEVA, I.; NOVÁK, V.; DVOŘÁK, A. *Fuzzy transform in the analysis of data*. In: INT J APPROX REASON. ISSN 0888-613X, pp. 36-46.
- PERFILIEVA, I.; NOSKOVÁ, L. *System of fuzzy relation equations with inf-> composition: complete set of solutions*. In: FUZZY SET SYST. ISSN 0165-0114, pp. 2256-2271.
- ŠTĚPNIČKA, M.; JAYARAM, B. *On the suitability of the Bandler-Kohout subproduct as an inference mechanism*. In: IEEE T FUZZY SYST. ISSN 1063-6706.
- TÓTH, J.; MIŠÍK, L.; FILIP, F. *Dispersion of ratio block sequences and asymptotic density*. In: Acta Arithmetica. ISSN 0065-1036, pp. 183-191.

ARTICLES IN PROCEEDINGS

- KRUPKOVÁ, O.; VOLNÝ, P.; VOLNÁ, J. *Constrained Lepage Forms*. In: Differential Geometry and Its Applications. ISBN 981-279-060-8, pp. 978-981.
- MIŠÍK, L.; TÓTH, J.; BUKOR, J. *On continuity of asymptotic fuzzy measures with respect to a parameter*. In: FSTA Abstracts. Fuzzy Sets Theory and Applications (FSTA). ISBN 978-80-8040-332-4, pp. 24-26.
- MIŠÍK, L.; TÓTH, J. *Distribution functions of ratio block sequences*. In: Zborník príspevkov z medzinárodnej vedeckej konferencie. 70 rokov SvF STU. ISBN 978-80-227-2979-6, pp. 1-8.

MOČKOŘ, J. *Construction of fuzzy logic models in categories of sets with similarities*. In: Proceedings of Czech-Japan 11th Seminare. The 11th Czech-Japan Seminare on Data Analysis and Decision Making under Uncertainty, pp. 27-33.

NOVÁK, V.; ŠTĚPNIČKA, M.; PERFILIEVA, I.; PAVLISKA, V. *Analysis of periodical time series using soft computing methods*. In: Computational Intelligence in Decision and Control. FLINS 2008. ISBN 978-981-279-946-3, pp. 55-60.

PERFILIEVA, I.; NOVÁK, V.; PAVLISKA, V.; DVORÁK, A.; ŠTĚPNIČKA, M. *Analysis and Prediction of Time Series Using Fuzzy Transform*. In: WCCI 2008 Proceedings. 2008 IEEE World Congress on Computational Intelligence/ FUZZ-IEEE 2008. ISBN 978-1-4244-1819-0, pp. 3875-3879.

PERFILIEVA, I.; DAŇKOVÁ, M. *Image Fusion on the Basis of Fuzzy Transforms*. In: Computational Intelligence in Decision and Control. Proceedings of the 8th International FLINS Conference. ISBN 978-981-279-946-3, pp. 471-476.

SWACZYNA, M. *Constraint Lepage one forms in higher order mechanics with nonholonomic constraints on the dynamical space*. In: Differential Geometry and its Applications: Proceedings of the 10th International Conference on Differential Geometry and its Applications 2007: Olomouc, Czech Republic, 27-31 August 2007. 10th International Conference on Differential Geometry and its Applications. ISBN 978-981-279-060-6, pp. 689-702.

ŠTĚPNIČKA, M.; DE BAETS, B.; DAŇKOVÁ, M. *Monotonicity of implicative fuzzy models*. In: Abstracts of 9th International Conference on Fuzzy Set Theory and Applications FSTA. International Conference on Fuzzy Set Theory and Applications - FSTA. ISBN 978-80-8040-332-4, pp. 121-122.

MONOGRAPHIC PUBLICATIONS

HANČL, J.; RUCKI, P. *Increase your mathematical intelligence*. ISBN 978-80-7368-389-4.

KRUPKOVÁ, O.; SAUNDERS, D. *Variations Geometry and Physics*. ISBN 978-1-60456-920-9.

KRUPKOVÁ, O.; KRUPKA, D.; KOWALSKI, O.; SLOVÁK, J. *Differential Geometry and Applications*. ISBN 981-279-060-6.

PARTS OF MONOGRAPHIC PUBLICATIONS, ARTICLES

KRUPKOVÁ, O. *Lepage Forms in The Calculus of Variations*. In: Variations, Geometry and Physics. ISBN 978-1-60456-920-9, pp. 29-56.

KRUPKOVÁ, O.; PRINCE, G. *Second Order Ordinary Differential Equations in Jet Bundles and the Inverse Problem of the Calculus of Variations*. In: Handbook on Global Analysis. ISBN 444-52833-9, pp. 841-908.

Members of the department conduct research in the following fields: biophysics (biophysics, biochemistry and ecophysiology of photosynthesis, adaptation mechanisms of the photosynthesis apparatus of chosen tree species and cereals to global climate changes), chemical physics (computer modelling of interactions, structure, and dynamics of atomic and molecular clusters), didactics of physics (information and communication technologies in teaching physics and education of teachers of natural sciences).

12.1 Staff

Head of the Department

René Kalus, Assoc. Professor

Deputy Head of the Department

Vladimír Špunda, Assoc. Professor

Department Secretary

Martin Čajánek

Office Manager

Jana Janošcová

Teaching staff

Professor

Erika Mechlová

Assoc. Professors

Dalibor Dvořák

Jiří Kalina

René Kalus

Ladislav Sklenák

Vladimír Špunda

Assistant Professors

Martin Čajánek, Ph.D.

Daniel Hrvíčák, Ph.D.

Ivan Janeček

František Karlický

Libor Koníček, Ph.D.

Irena Kurasová, Ph.D.

Martin Navrátil, Ph D.
Karel Oleksy
Jana Podolinská
Michal Štroch, PhD.
Aleš Vítek

Laboratory technicians

Běla Piskořová
Zlata Skripová

PhD. students (staff)

František Karlický

Branch of study: Physical Chemistry
Thesis: Numerical methods of solution of Schrödinger equation for bosonic systems
Supervisor: Prof. A. Malijevský
End: 2009 (Institute of Chemical Technology Prague)

Karel Oleksy

Branch of study: Physical Chemistry
Thesis: Structure of molecular clusters - optimization through evolutionary algorithms
Supervisor: Prof. A. Malijevský
End: 2011 (Institute of Chemical Technology Prague)

Jana Podolinská

Branch of study: Biophysics
Thesis: Response of pigment-protein complexes of photosynthetic apparatus of higher plants to dynamic radiation environment and temperature changes.
Supervisor: Jiří Kalina, Assoc. Professor
End: 2012 (Faculty of Science UP Olomouc)

Aleš Vítek

Branch of study: Physical Chemistry
Thesis: Monte Carlo simulations of complex microsystems
Supervisor: Prof. Anatol Malijevský
End: 2011 (Institute of Chemical Technology Prague)

Changes in 2008

On April 1, 2008 Martin Navrátil, PhD. was awarded the title PhD. in Biophysics
On July 31, 2008 Daniel Hrvíčák terminated the employment
On September 1, 2008 Karel Oleksy became a full-time teacher

12.2 PhD. students

Budzik Sylwia
Caltík Samuel
Dardová Irena
Dragon Adam

Fismol Tomáš
 Foltýnová Jana
 Jarošová Soňa
 Kerlínová Věra
 Kocík Bogušlav
 Kočí Patrik
 Kubincová Libuše
 Madari Pavlína
 Maník Zdeněk
 Masná Michaela
 Mazurek Jiří
 Mazurová Veronika
 Novák Ivo
 Olšovský Pavel
 Půlkrábek Vít
 Smyček Petr
 Veselá Vlasta

12.3 Study Programmes

Code of the study programme⁴	Title of the study programme	Title of the study major⁵	Length of the study⁶			
			B	N,M	P	FS
B1501	Biology	Experimental Biology	3			P
B1701	Physics	Physics (double major degree programme)	3			P
B1702	Applied Physics	Biophysics	3			P
B1702	Applied Physics	Measurement and Computer Presentation of Data	3			P
B1702	Applied Physics	Computer-based modelling in the physics	3			P
N1701	Physics	Teaching for Secondary Schools (double major degree programme)		2		P
N1701	Physics	Teaching for Secondary Schools (single major degree programme)		2		P
N1702	Applied Physics	Biophysics		2		P
N7503	Teaching for Primary Schools	Teaching for Primary Schools (double major degree programme)		2		P
M7503	Teaching for Primary Schools	Teaching Physics for Primary Schools		4		P

⁴ B – bachelor's degree programme, N - master's degree programme representing a continuation of bachelor's degree programme,

M - master's degree programme, P - doctoral degree programme.

⁵ Study programmes marked with an asterisk can (usually) be studied only in a chosen study programme in pairs.

⁶ P – full time study, D – distance form of study, K – combined study form;

Code of the study programme⁴	Title of the study programme	Title of the study major⁵	Length of the study⁶		
M7504	Teaching for Secondary Schools	Teaching Physics for Secondary Schools		5	P
P7507	Specialisation - Pedagogy	Theory of Education in Physics ^{**)}		3	P,K

**) in co-operation with PdF UHK and PdF ZU in Plzen

12.4 Theses

Bachelor (Bc.) Theses

- BŘEZNÝ, Pavel. *Comparison of accuracy of methods for gravity acceleration measurement.* Supervisor: Dvořák, Dalibor
- HELLER, Jiří. *Determination of coenzyme Q10 by microorganisms strains.* Supervisor: Satke, Josef
- JANOSKA, Martin. *Introduction of the method for isolation of active thylakoid membranes from Norway spruce (*Picea abies* [L.] Karst.) needles.* Supervisor: Štroch, Michal
- KOTYZOVÁ, Alena. *Determination of epidermal UV-shielding by detection of chlorophyll a fluorescence in vivo.* Supervisor: Štroch, Michal
- ŘEZNÍČKOVÁ, Eva. *Effect of short- and long-term treatment at elevated temperature on activity of photochemical reactions of Norway spruce photosynthesis.* Supervisor: Špunda, Vladimír
- ŠMEJCOVÁ, Marcela. *Composition of photosynthetic pigments in pigment-protein complexes from barley and chlorina f2 mutant.* Supervisor: Podolinská, Jana
- TESLOVÁ, Petra. *Creation of methodics for determination of sugars content in plant tissues of higher plants.* Supervisor: Kalina, Jiří
- ŽABKOVÁ, Pavla. *Possibilities correction emission spectra fluorescence of chlorophyll a intact assimilatory apparatus on influence re - absorption fluorescence.* Supervisor: Čajánek, Martin

Master (Mgr.) Theses

- BORSKÁ, Šárka. *Effects of elevated CO₂ concentration on the assimilation processes.* Supervisor: Urban, Otmar
- BUKOVSKÁ, Radka. *Differentiation of activity and concentration of rubisco in connection with environmental effects.* Supervisor: Kalina, Jiří
- CINTAVÁ, Silvie. *Theoretical study of fragmental dynamics of ionic clusters.* Supervisor: Janeček, Ivan
- JANČÍKOVÁ, Hana. *Confirmation of importance of photochemical reflectance index for estimation of light use efficiency and activity of xanthophyll cycle.* Supervisor: Navrátil, Martin

- KOVÁČ, Daniel. *Seasonal dynamics of pigment composition of selected plant species in grassland ecosystem.* Supervisor: Navrátil, Martin
- LEVÁKOVÁ, Veronika. *The role of photorespiration in acclimation of Norway spruce to different light and temperature conditions.* Supervisor: Štroch, Michal
- LIŠKOVÁ, Barbora. *Photosynthetic characteristic of energy important plants.* Supervisor: Kalina, Jiří
- MILITKÝ, Jan. *Seasonal dynamics of absorbed light utilization studied with chosen herb species on meadow ecosystem.* Supervisor: Špunda, Vladimír
- OLEKSY, Karel. *Structure of helium cluster ions.* Supervisor: Hrvňák, Daniel
- PAULÍKOVÁ, Barbora. *Theoretical studies of the interactions of rare gases atoms.* Supervisor: Karlický, František
- RÁCOVÁ, Ivana. *Research in 3rd-grade-pupils' attitude to physics.* Supervisor: Koníček, Libor
- SIKORA, Roman. *Oil whirl and whip.* Supervisor: Sklenák, Ladislav
- SLÁNSKÝ, Jan. *Computer - Supported Experiments in Ambit education program human and nature.* Supervisor: Koníček, Libor
- ŠEBESTA, Pavel. *Preparation of experiments of physics for remote laboratory.* Supervisor: Koníček, Libor

12.5 Research Projects

Research projects in 2008 (filed in CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
R. Kalus	1N04125	Centre for numerically demanding computations of the University of Ostrava	143
J. Kalina	GA522/06/0930	Changes in Rubisco amount and activity under the impact of elevated CO ₂ concentration	252
R. Kalus	IAA401870702	Structure and thermodynamics of molecular clusters - structural changes in water clusters	360
M. Štroch	GP522/07/P246	Non-radiative dissipation of excitation energy in relation to organization of pigment-protein complexes in photosynthetic apparatus of higher plants	398
V. Špunda	GA522/07/0759	Acclimation of the Norway spruce photosynthetic apparatus to changes of incident solar radiation	664

12.6 Development Projects

Development projects in 2008 (except of CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
F. Karlický	FRVŠ 2338/F6/a	Innovation of Laboratory Practice in Electricity and Magnetism	254
R. Kalus	MŠMT F10	European Master in Science and Technology: specialization Computer Modelling in Physics and Mechanics	178
L. Koníček	NO/08/LLP-LdV/TOI/131013	MOSEM - Modelling and data acquisition for the continuing vocational training of upper secondary school physics teachers in pupil-active learning of Superconductivity and ElectroMagnetism based on Minds-On Simple ExperiMents	42

Commercial contracts

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
V. Špunda	ÚSBE AVČR	Evaluation, Verification and Interpretation of the Environmental Loads of the Czech Republic	800

12.7 Equipment

- Laboratory of the heat and temperature measurements (standard equipment).
- School experiments laboratory (equipment for school experiment in physics, PC – measuring system ISES, Internet).
- Computer room (11 PCs – Internet).
- Microcomputer based laboratory (10 workstations for computer aided experiments with systems: ISES, CMC-S3, IP-Coach, PC-Internet).
- Laboratory for biochemical methods (range hood, electrophoresis units for protein analysis).
- Laboratories for biophysics (equipment for spectroscopic and analytical methods: double-beam UV/VIS spectrophotometer UV550 Unicam; luminescence spectrofluorimeter LS 50B; high-performance liquid chromatography system TSP Analytical; equipment for biological samples preparation and conservation - centrifuges, pH meters, homogenizers, electromagnetic stirrers, analytical balances, dryers, liquid nitrogen cryostats, freezers etc.)
- Laboratory for microscopic techniques, plant cultivation room (microscopes; 2 growth chambers BIO-LINE HB 1014).
- Laboratory of ecophysiology of photosynthesis (spectroradiometer LI-1800; chlorophyll fluorimeters - PAM 101, 102,103 and XE – PAM units; photosynthetic gas exchange system CIRAS-2; light, temperature and humidity sensors, thermostat).
- Centre for Numerically Demanding Calculations of the University of Ostrava (see <http://artemis.osu.cz/cnnv/index.html>).

- Laboratory of computer modelling in natural sciences - supported by Ministry of Education (server and 16 workstations with specialised software for modelling and computation in the field of mathematics, physics and chemistry).
- Laboratory of optics (lasers, standard school optical equipment, PC – internet).
- Laboratory of electricity and magnetism (measuring instruments, IP-Coach systems).

12.8 Conferences and Seminars

- September 8 - 11, 2008, ICTE – Information and Communication Technology in Education, 65 participants, international.
- throughout year 2008 a cycle of 15 seminars was organized. The seminars presented research of groups of biophysics and chemical physics; experts invited from other universities and research institutes focused on up-to-date research topics.

12.9 Contacts and Cooperation

Cooperation with Universities and Research Institutes in the Czech Republic

- Biological Faculty, University of Southern Bohemia, České Budějovice.
- Department of Experimental Physics, Faculty of Science, Palacky University Olomouc.
- Institute of Systems Biology and Ecology AS CR, Laboratory of Plant Ecological Physiology, Brno.
- Prague Institute of Chemical Technology, Department of Physical Chemistry.
- J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic (Department of Theoretical Chemistry).
- Institute of Physics of the Academy of Sciences of the Czech Republic, Prague.
- VŠB – Technical university of Ostrava.
- Charles University in Prague, Faculty of Mathematics and Physics.
- Charles University in Prague, Faculty of Science.

Cooperation with Universities and Research Institutes abroad

- Institutes of Plant Biology and Biophysics, Biological Research Centre, Hungarian Academy of Sciences, P.O. Box 521, H-6701 Szeged, Hungary (Dr. Gyöző Garab).
- Institute of Botany II (Plant Molecular Biology and Biochemistry), University of Karlsruhe, Kaiserstraße 12, D-76128 Karlsruhe, Germany (Dr. Claus Buschmann, Prof. H. Lichtenhaller).
- Centre for Geo-Information, Wageningen University, Droevedaalsesteeg 3/P.O. Box 47, 6700 AA Wageningen, the Netherlands (Dr. Zbyněk Malenovský).
- Université Paul Sabatier, Institut de Recherche sur les Systèmes Atomiques et Moléculaires Complexes, Toulouse, France (Laboratoire de Physique Quantique, Laboratoire Collisions Agrégats Réactivité).
- University of Ljubljana, (Slovenia).
- University of Udine, (Italy).
- Matej Bel University in Banská Bystrica, (Slovakia).

Visitors to the Institute

- Florent Calvayrac, Université du Maine, Le Mans, Francie, January 17 – 19, 2008
- Nicolas Postec, Université du Maine, Le Mans, Francie, October 23 –24, 2008

- Florent X. Gadéa, Paul Sabatier Université, Toulouse, Francie, November 10 –13, 2008
- Ivo Čáp from University of Zilina, Žilina, Slovakia, November 4, 2008.

Visits of Staff Members

Conferences 2008

Name	Country	Place	Name of Conference	Date
Koníček, L.	Slovakia	Račkova d.	DIDFY2008	Oct. 15-18

Short stays abroad 2008 (less than 10 days)

Name	Country	Place	Action	Date
Kalus, R.	Francie	Le Mans	Science and Research	June 17-24
Mechlová, E.	The Netherlands	Amsterdam	Seminary MOSEM2	Nov. 25-29
Koníček, L.	The Netherlands	Amsterdam	Seminary MOSEM2	Nov. 25-29

Long time stays abroad 2008 (more than 10 days)

Name	Country	Place	Action	Date
Kalus, R.	Francie	Toulouse	Science and Research	Sept. 9-19
Karlický, F.	Francie	Toulouse	Science and Research	Sept. 14 - Oct. 12
Vítěk, A.	Švédsko	Göteborg	Science and Research	Aug. 21- Sept. 22

12.10 Student Research Activity

- Student Research Conference (physics - chemistry), Faculty of Science OU, May 7, 2008, 7 participants.

12.11 Membership in Professional Organisations

Assoc. Prof. Dalibor Dvořák

- Presidium RVŠ – member,
- Advisory Committee of the Science and Technology Park Ostrava – member,
- National committee IUPAP – member.

Assoc. Prof. Jiří Kalina

- Czech Society for Experimental Biology of Plants and Federation of European Societies of Plant Biology (FESPB - former FESPP) – member,
- Union of Czech Mathematicians and Physicists – member,
- Czech Chemical Society – member.

Assist prof. Libor Koníček

- member of GIREP International Research Group on Physics Teaching,
- Physics Pedagogy Society – member of committee.

Assoc. Prof. Vladimír Špunda

- Grant Agency of the Czech Republic, member of Plant physiology committee,
- Scientific board of the Faculty of Sciences, Palacky University Olomouc – member,

- Czech Society for Experimental Biology of Plants and Federation of European Societies of Plant Biology – member.

12.12 Publications

ARTICLES IN IN PERIODICAL PUBLICATIONS

- JANEČEK, I.; VAŠEK, P. *Anisotropic Hall effect in single domain YBaCuO superconductor in mixed state*. In: Physica C. ISSN 0921-4534, pp. 17-22.
- KARLICKÝ, F.; LEPETIT, B.; KALUS, R.; PAIDAROVÁ, I.; GADÉA, F. *Modeling of HeN⁺ clusters. II. Calculation of He3⁺ vibrational spectrum*. In: The Journal of Chemical Physics. ISSN 0021-9606, pp. 124303-124303.
- ŠTROCH, M.; LENK, S.; NAVRÁTIL, M.; ŠPUNDA, V.; BUSCHMANN, C. *Epidermal UV-shielding and photosystem II adjustment in wild type and chlorina f2 mutant of barley during exposure to increased PAR and UV radiation*. In: Environmental and Experimental Botany. ISSN 0098-8472, pp. 271-278.
- ŠTROCH, M.; KULDOVÁ, K.; KALINA, J.; ŠPUNDA, V. *Dynamics of the xanthophyll cycle and non-radiative dissipation of absorbed light energy during exposure of Norway spruce to high irradiance*. In: Journal of Plant Physiology. ISSN 0176-1617, pp. 612-622.

ARTICLES IN PROCEEDINGS

- KALINA, J.; DUCIUCOVÁ, M.; KOŠVANCOVÁ, M.; URBAN, O. *Sezónní dynamika aktivity enzymu Rubisco a pigmentů xantofyllového cyklu smrku a buku pod vlivem zvýšené koncentrace CO₂*. In: Chemické listy. 60. sjezd chemických společností. ISSN 0009-2770, pp. 724-725.
- KARLICKÝ, F. *Kvantová dynamika vibrací modelových mikrosystémů*. In: Den tvůrčích činností Moravskoslezského kraje. ISBN 978-80-248-1711-8, pp. 106-110.
- KONÍČEK, L.; MECHLOVÁ, E. *International projects for physics education - point of view of ict*. In: ICTE2008. ISBN 978-80-7368-577-5, pp. 75-78.
- KONÍČEK, L. *Cíle, realizace a perspektivy pedagogické praxe studentů učitelství fyziky*. In: Nová role učitele - budoucnost učitelů ve světě práce v Moravskoslezském kraji. ISBN 978-80-7368-517-1, pp. 317-320.
- NAVRÁTIL, M. *Prezentace ekofiziologického výzkumu z experimentálního pracoviště Bílý Kříž na 14. Mezinárodním fotosyntetickém kongresu*. In: Den tvůrčích činností Moravskoslezského kraje. ISBN 978-80-248-1711-8, pp. 45-48.
- ŠTROCH, M. *Prezentace biofyzikálního výzkumu Ostravské univerzity na 14. Mezinárodním fotosyntetickém kongresu*. In: Den tvůrčích činností Moravskoslezského kraje. ISBN 978-80-248-1711-8, pp. 137-140.
- VÍTEK, A. *Termodynamika atomových a molekulových klastrů*. In: Den tvůrčích činností Moravskoslezského kraje. ISBN 978-80-248-1711-8, pp. 145-148.

13 Department of Informatics and Computers

- Mathematical methods for elaboration of information subjected to indeterminacy.
- Fuzzy modelling of complicated processes.
- Adaptive personalized web systems.
- Evolutionary algorithms with competitive and cooperative heuristics.
- Computer simulation of anticipating systems.

13.1 Staff

Head of the Department

Cyril Klimeš, Assoc. Prof.

Deputy Head of the Department

Eva Burianová, PhD.

Department Secretary

Eliška Treterová

Office Manager

Simona Polochová
Gabriela Burianová

Teaching staff

Professors

Ivan Křivý
Alena Lukasová

Associate Professors

František Huňka
Cyril Klimeš
Petr Šaloun
Josef Tvrdík

Assistant Professors

Vladimír Bradáč
David Bražina
Eva Burianová
Rostislav Fojtík
Hashim Habiballa
Alexej Kolcun
Miroslav Liška
Jaroslav Procházka

Vladimíra Sehnalová
Tomáš Sochor
Petr Šamánek
Zdeňka Telnarová
Eliška Treterová
Marek Vajgl
Eva Volná
Petr Wagner (till 30. 6. 2008)

Technical Staff

Michal Kusýn

External Teachers

Jiří Ivánek, Assoc. Prof.
Milena Janáková, PhD.
Radim Jiroušek, Professor
Petr Kucharčík
Petr Lukasík
Ivo Martiník, PhD.
Viktor Pavliska
Miroslav Pokorný, Professor
Pavel Smolka
Vladimír Vaněk

13.2 PhD. Students

Bocek Jan
Bujok Petr
Heřtusová Monika
Holek Tomáš
Kahánek Petr
Knybel Jaroslav
Komenda Tomáš
Kotyrba Martin
Lenertová Lucie
Lukasík Petr
Makula Tomáš
Miarka Rostislav
Nekula Jan
Sikora David
Smolka Pavel
Šamánek Petr
Švec Peter
Vajgl Marek
Vaněk Vladimír
Vrábel Marek
Žáček Martin

PhD. students who finished doctoral study in 2008

David Hanzelka, PhD. field Information systems (supervisor: Prof. Křivý)
 Bayesian Networks and their Use in Data Mining
 Date: September 29, 2008

13.3 Study Programmes

Code of the study programme⁷⁾	Title of the study programme	Title of the study major⁸⁾	Length of the study⁹⁾			
			B	N,M	P	FS
B 1801	Information Science	Information Science	3			P
B1801	Information Science	Information Science (double major degree programme)	3			P,K
B1802	Applied Information Science	Applied Information Science	3			K,D
B1802	Applied Information Science	Information Science and Computer technology – Applied Information Science	3			P,K
N 1801	Information Science	Information systems		2		P,K
N 1801	Information Science	Information systems		3		P,K
N 1801	Information Science	Mathematical Information Science		2,3		P
N 1801	Information Science	Teaching for Secondary Schools - Information Sciences (double major degree programme)		2		P
N 1801	Information Science	Teaching for Secondary Schools - Information Sciences (studied in one subject)		2		P
N 7503	Teaching for Primary Schools	Teaching for Primary Schools – Computer Technology (double major degree programme)		2		P
N 7503	Teaching for Primary Schools	Teaching for Primary Schools – Computer Technology (single major degree programme)		2		P
M 1801	Information Science	Information Science and Computer Technology - Information Systems		5		P

⁷⁾ B – bachelor's degree programme, N - master's degree programme representing a continuation of bachelor's degree programme,

M - master's degree programme, P - doctoral degree programme.

⁸⁾ Study programmes marked with an asterisk can (usually) be studied only in a chosen study programme in pairs.

⁹⁾ P – full time study, D – distance form of study, K – combined study form;

Code of the study programme⁷⁾	Title of the study programme	Title of the study major⁸⁾	Length of the study⁹⁾		
M 1801	Information Science	Teaching for Secondary Schools - Information Sciences		5	P
M 7503	Teaching for Primary Schools	Teaching for Primary Schools – Computer Technology		4	P
M 7504	Teaching for Secondary Schools	Teaching for Secondary Schools - Information Science		5	P
P 1801	Information Science	Information systems		3	P,K

13.4 Theses

Bachelor (Bc.) Theses

- DAMCOVÁ, Kateřina. *Installation, configuration and migration to Microsoft Exchange 2007.* Supervisor: Vajgl, Marek
- FIŠER, Adam. *Design and implementation of information system for evidence of archaeological discoveries and museum collections.* Supervisor: Miarka, Rostislav
- GAWLAS, Jiří. *OpenSource Content Management Systems.* Supervisor: Knybel, Jaroslav
- GRULICH, Roman. *Determinism vs. nedeterminism in Computer Science.* Supervisor: Habiballa, Hashim
- HEJL, Lukáš. *Support of Selected CG Algorithms in Various Environments.* Supervisor: Kolcun, Alexej
- HESS, Ladislav. *WMI - Windows Management Instrumentation.* Supervisor: Kusýn, Michal
- HOREŠOVSKÝ, Daniel. *Invoice software for non payers of VAT.* Supervisor: Klimeš, Cyril
- HOUFEK, Dalibor. *Configurators and practical use.* Supervisor: Bražina, David
- HRABAL, Roman. *Problem-oriented tasks from complexity theory.* Supervisor: Habiballa, Hashim
- CHROMÝ, Petr. *History a perspectives of automated reasoning.* Supervisor: Habiballa, Hashim
- JAKUBÉCZY, Michal. *Exercise book for programming in C and ASP.NET.* Supervisor: Vajgl, Marek
- JANOŠCOVÁ, Ivana. *Suggestion and creation of exemplary knowledge bases for fuzzy deducation and their testing with FPLGERDS system.* Supervisor: Habiballa, Hashim
- KAISEROVÁ, Šárka. *Testing system by using Java language.* Supervisor: Huňka, František

- KALOČ, Jakub. *DVD - coding and application.* Supervisor: Bražina, David
- KALUSKOVÁ, Zuzana. *Problem-oriented tasks from context-free languages and stack automata.* Supervisor: Habiballa, Hashim
- KOKOTEK, Martin. *The creation of educational applications using Excel VBA for the selected method of operations research.* Supervisor: Liška, Miroslav
- KOTAČKA, Vít. *The usage of JUnit and Mock frameworks for J2EE architecture testing.* Supervisor: Procházka, Jaroslav
- KOZLOVÁ, Kateřina. *Fractals and their constructions.* Supervisor: Volná, Eva
- KRISTOFČÁK, Martin. *Discussion web forum.* Supervisor: Klimeš, Cyril
- KRSEK, Petr. *Juxtaposition current GPU with view to DAAMIT and NVIDIA.* Supervisor: Bražina, David
- KUBECZKA, Petr. *Visualization of file format GEO of technology application TruTops.* Supervisor: Bražina, David
- KULHÁNEK, Ladislav. *Authomatic Build Tools And Their Practise Use.* Supervisor: Huňka, František
- KULLA, Lukáš. *Confrontation and rating of graphic adapters.* Supervisor: Fojtík, Rostislav
- KYNĚRA, Josef. *A communication by means of coded SMS.* Supervisor: Fojtík, Rostislav
- MACOSZKOVÁ, Silvie. *Resolution principle in artificial intelligence and logic.* Supervisor: Habiballa, Hashim
- MARŠÁLEK, Lukáš. *Usage of content management system at basic school.* Supervisor: Šamánek, Petr
- MAŤOVKA, Marek. *Search Engine Optimization.* Supervisor: Fojtík, Rostislav
- MÍŠEK, Ondřej. *Modular system for information portal.* Supervisor: Smolka, Pavel
- MLČÁK, David. *Technology Web 2.0.* Supervisor: Fojtík, Rostislav
- MOKRÝ, Vojtěch. *Confrontation of the game engines.* Supervisor: Bražina, David
- NITRA, Zdeněk. *Protection of sensitive data of ICT in public administration.* Supervisor: Klimeš, Cyril
- PAVLÍČEK, Miroslav. *Turing machine simulator.* Supervisor: Miarka, Rostislav
- PETERKOVÁ, Milena. *Problem-oriented tasks from regular languages and finite automata.* Supervisor: Habiballa, Hashim
- POULÍK, Jiří. *Business models of agile projects.* Supervisor: Procházka, Jaroslav
- ŘEŠETKA, Zbyněk. *Security in Wireless Networks According to the IEEE 802.11.* Supervisor: Sochor, Tomáš
- SADOVSKÝ, Petr. *Clear goods information system of customs office.* Supervisor: Klimeš, Cyril
- SASÝN, Kamil. *Comparing JVM on various platforms.* Supervisor: Fojtík, Rostislav
- SEIBERT, Martin. *SW approach to superresolution imaging.* Supervisor: Kolcun, Alexej

- SOBEK, Martin. *Network communication with using Java*. Supervisor: Huňka, František
- ŠITAVANC, Adam. *Web accessibility*. Supervisor: Šaloun, Petr
- ŠKOPÍK, Dušan. *Simulamen: Simulator of the behavior of the systems that are expressed by linear differential equations*. Supervisor: Klimeš, Cyril
- ŠTĚPÁNKOVÁ, Pavla. *User Interface for Hydrological Modeling - Implementation in R*. Supervisor: Bražina, David
- ŠUGA, Peter. *Creating ontologies in Oracle*. Supervisor: Telnarová, Zdeňka
- ŠVEC, Stanislav. *Protocols for Secure Communication Including Implementation*. Supervisor: Sochor, Tomáš
- TETUR, Zdeněk. *Description and usage of query language LINQ*. Supervisor: Vajgl, Marek
- VARGA, Petr. *Characteristics and usage of the SCTP protokol*. Supervisor: Sochor, Tomáš
- VESELSKÝ, Jiří. *IP multicast routing*. Supervisor: Sochor, Tomáš
- VESELÝ, Lubomír. *Application for edit and evaluation queries, that are typed in relational algebra in relational database*. Supervisor: Telnarová, Zdeňka
- VEVERKA, Martin. *Characteristics and comparison of CMS and editorial systems*. Supervisor: Fojtík, Rostislav
- VLAŠÁNEK, Pavel. *Usage and characterization symmetrical block cipher*. Supervisor: Fojtík, Rostislav

Master (Mgr.) Theses

- BARTOŇ, Pavel. *Monitoring tool for IT infrastructure*. Supervisor: Procházka, Jaroslav
- BUJOK, Petr. *Security of the university's information technology concerning Czech republic statutory laws*. Supervisor: Pomezný, Pavel
- DRDOL, Andrej. *Filter for Oracle Forms*. Supervisor: Knybel, Jaroslav
- FIALA, Tomáš. *Cellular automaton*. Supervisor: Volná, Eva
- GILL, Aleš. *Design and implementation of a payroll information system with a bank communications interface*. Supervisor: Procházka, Jaroslav
- GÜNTHER, Pavel. *Application of automated theorem proing in fuzzy predicate logic*. Supervisor: Habiballa, Hashim
- HIPÍK, Dalibor. *Process model definition of creating technical documentation in TATRA j. s. c., including support software requirements definition..* Supervisor: Procházka, Jaroslav
- HORÁK, Tomáš. *Process modelling*. Supervisor: Knybel, Jaroslav
- JUŘICA, Tomáš. *Fuzzy deductive database - implementation by the help of resolution principle*. Supervisor: Habiballa, Hashim

- KÁN, Ondřej. *The application of simulation software in teaching of advanced aspects for computer networks.* Supervisor: Sochor, Tomáš
- KOČIAN, Václav. *(Educational) Software for neural network simulation, visualisation and testing.* Supervisor: Volná, Eva
- KOMENDA, Tomáš. *Advance methods of the animation.* Supervisor: Bražina, David
- KOŠAŘ, Radim. *Using Java for developing graphics applications.* Supervisor: Bražina, David
- KOTÝRBA, Martin. *Fractals.* Supervisor: Volná, Eva
- KOVARČÍK, Martin. *Implementation of Evolutionary Algorithms in R.* Supervisor: Tvrďík, Josef
- KOVÁŘÍK, Roman. *Synchronizing PDA with Mozilla products (contacts, calendar, tasks).* Supervisor: Procházka, Jaroslav
- KUBALA, Jan. *Using animation in learning comutability and complexity.* Supervisor: Habiballa, Hashim
- MEDLEN, Igor. *Characteristics and confrontation graphics formats.* Supervisor: Bražina, David
- MICHNIK, Tomasz. *Acquisition and processing of data collected from web.* Supervisor: Šaloun, Petr
- MÍSTECKÝ, Jan. *Project teaching in subject Computer Science at primary school.* Supervisor: Burianová, Eva
- NEKULA, Jan. *Web-based system for collecting, updating, publishing and sharing materials for pedagogues on the Internet.* Supervisor: Telnarová, Zdeňka
- NEVARIL, Josef. *Collection of examples and methodical sheets for the it tuition at the primary schools.* Supervisor: Fojtík, Rostislav
- PAVLOSEK, Přemysl. *Central administration of CISCO network devices.* Supervisor: Lokajová, Pavla
- PEŘINOVÁ, Miroslava. *Formalization and automatization of the deduction examples.* Supervisor: Lukasová, Alena
- POBUCKÝ, Michal. *Demonstrational application for teaching of neural networks.* Supervisor: Volná, Eva
- POLACHOVÁ, Petra. *Object and relation access of Java to database Caché.* Supervisor: Huňka, František
- RAMÍK, Dominik Maximilián. *Applications of Modular Neural Networks.* Supervisor: Volná, Eva
- ROBENEK, Jiří. *Comparison of relation and postrelation design of IS for concrete application.* Supervisor: Huňka, František
- ŘEHULA, Martin. *WebCam as a 3D graphical input device.* Supervisor: Kolcun, Alexej
- SIKORA, David. *Modeling of Time Series Behavior.* Supervisor: Křivý, Ivan
- SLÍVA, Petr. *The application of ICT in Mathematics teaching for elementary schools.* Supervisor: Burianová, Eva

- SZKANDERA, Pavel. *Electronic signature usage*. Supervisor: Fojtík, Rostislav
- ŠKOLEKOVÁ, Zuzana. *Experimental teaching of informatics at elementary school*. Supervisor: Habiballa, Hashim
- VRŠOVSKÝ, David. *Usage of computers in education at primary schools*. Supervisor: Fojtík, Rostislav
- WALIG, Kamil. *ICT and cross-curricular relations at basic school*. Supervisor: Burianová, Eva
- ZLÁMAL, Milan. *Software development Log4j katalog*. Supervisor: Knybel, Jaroslav
- ŽÁČEK, Martin. *Wireless networks analysis and implementation*. Supervisor: Bražina, David

13.5 Research Projects

Research projects in 2008 (filed in CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
P. Šaloun	MEB 080878	Formal languages systems, research and implementation	21
I. Křivý	GA201/06/0612	Computer simulation of anticipatory systems	265
F. Huňka	GA402/08/0277	Business Processes Modeling Based on Ownership Relations and their Exchange (REA System)	354
J. Tvrdík	GA201/08/0472	Evolutionary algorithms and adaptation of their control parameters	404

13.6 Development Projects

Development projects in 2008 (except of CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
P. Šaloun	FRVŠ 25/F1/a	Web publishing	182
C. Klimeš	FRVŠ 2351/A/b	Classroom Specialized in Teaching and Solving Projects in the Field of Computer Graphics	1740
E. Burianová	MŠMT	Creation of the Concept of Lifelong Education at the University of Ostrava	400
P. Šaloun	MŠMT C45/6	Rationalization and Objectification of Teaching	100
Z. Telnarová	MŠMT CSM15/4/b	Integration of Students with Specific Needs into Study at the University of Ostrava	2315
E. Volná	128749-CP-1-2006-IE-	Gender, Innovation and Motivation in Mathematics and Science-GIMMS	30

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
	Comenius-C21		
E. Volná	Pp-2007-96	TF – Teaching: Flex Teaching and Learning in Distance/Flexible Education	92
Z. Telnarová	226699-CP-1-IT-Comenius-C21	SEDEC-Science Education for the Development of European Citizenship	20
Z. Telnarová	Pp-2007-29	KNOWLEDGE TRANSFER ON EDUCATION IN LATER LIFE	140
Z. Telnarová	141981-LLP-1-2008-1-CZ-Grundtvig-GMP	Senior Education and Training Internet Platform	102
E. Burianová	CZ.1.07/1.3.05/1 1.0011	The Modular System of Further Education for Staff of Schools and School Institutions in Moravian-Silesian Region	143

13.7 Equipment

Auditorium – Multimedia presentations

- 1x PC PIII 1GHz, 512 MB RAM, 17" CRT.
- Projector, projecting screen, audio system.

Computer classroom

- 23x PC P4 3.2GHz, 1GB RAM, 19" LCD,
- Projecting screen, colour printer.

Computer classroom

- 16x PC AMD 1.8GHz, 1GB RAM, 17" LCD,
- Projecting screen.

Computer classroom

- 17x PC P4 2.84GHz, 512 MB RAM, 17" CRT.

Computer classroom specialized to computer networks

- 14x PC AMD 1.8GHz, 1GB RAM, 17" LCD, 802.11b/g card, card 100BaseFX.
- Interactive Projecting screen StarBoard.
- Set of Cisco :
 - 2x rack.
 - 6x switch, 5x router, 2x IP telephone, 2x PIX Firewall.
 - 1x WLAN packet (WLAN controller, AP).
- 1x Asterisk server with 4x BRI.
- 2x Server IBM xSeries346.
- Boson router simulator for CCNA, CCNP

Computer classroom specialized to computer graphics

- 17x PC DELL T3400, Intel QuadCore 2.4GHz, 2GB RAM, 22" LCD.
- Screen for 3D projection.
- 3D stereoscopic projector.

- 3D Monitor BOLOD 42“.
- Set of graphic software.
- Data glow.

Computer classroom, Lifelong learning centre

- 15x PC 2.4GHz, 512MB RAM, 17“ CRT.
- Projector, projecting screen, printer, audio.

Servers:

- 1x IBM xSeries 220, Windows 2003.
- 1x IBM xSeries 206, Windows 2003.
- 1x OasaComputer, Debian Linux.

Other equipment:

- 5x portable projector.
- 1x notebook for projector.
- Sonic Foundry MediaSite.
- Canon XM2 camera with camera stand Vinten.
- Wireless microphone AKG.

13.8 Conferences and Seminars

- Software development 2008, 35th National Conference with International Participation (in cooperation with VSB-Technical University Ostrava, Masaryk's University Brno and Czech Society for System Integration).
- Science, Research and Development and their Trends 2007, 2nd National Conference with International Participation.
- Lifelong Education of Teachers 2007, 1st National Conference with International Participation.
- Technologies for e-learning, 7th workshop, <http://acm.osu.cz/paper/tpev2008/> Organized in cooperation with ČVUT FEL Prague, STU FIIT Bratislava and OU Faculty of Science, Ostrava.
- 3rd International Workshop on Semantic Media Adaptation and Personalization (SMAP 2008, <http://www.smap2008.org/>), Prague 2008. Conference organized in cooperation STU FIIT Bratislava and OU Faculty of Science, Ostrava.
- PhD Workshop 2008. Institute of Geonics, Ostrava 2008. Organized in cooperation with Institute of Geonics, Czech Academy of Science ,
- Workshop on Computational Optimization, IMSCIT 2008. Wisla.
- Conference for Full Life 2008, Integration of hard of hearing students into university studies, Ostrava 2008.

13.9 Contacts and Cooperation

Cooperation with Universities and Research Institutes in the Czech Republic

- Charles University in Prague, Faculty of Mathematics and Physics.
- VŠB – Technical University of Ostrava, Faculty of Economics.
- VŠB – Technical University of Ostrava, Faculty of Electrical Engineering and Computer Science.
- Private Business School in Ostrava.

- Czech Technical University in Prague, Faculty of Electrical Engineering.
- Brno University of Technology, Faculty of Information Technology.
- Silesian University in Opava, Faculty of Philosophy and Science.
- University of Economics, Prague Faculty of Informatics and Statistics.

Cooperation with Universities and Research Institutes abroad

- Universidad de Cordoba (Spain).
- University of Zilina (Slovakia).
- Constantine the Philosopher University in Nitra (Slovakia).
- Technical University of Kosice, Faculty of Electrical Engineering and Informatics (Slovakia).
- Matej Bel University in Banska Bystrica, Faculty of Science (Slovakia).

Visitors to the Institute

- Franz Dotter, University of Klagenfurt, Austria, June 10, 2008, Konference Pro plný život 2008 (Conference For Full Life 2008)
- Darina Tarcsiová, Comenius University in Bratislava, PdF, June 10, 2008
- Bernadeta Szcupal, Akademia Pedagogiki Specjalnej, Warszawa, Poland, June 10, 2008
- Elzbieta M. Minczakiewicz, Akademia pedagogiczna Krakow, Poland, June 10, 2008
- Grazyna Gunia, Akademia pedagogiczna, Krakow, Poland, June 10, 2008
- Małgorzata Trojanska, Akademia pedagogiczna, Krakow, Poland, June 10, 2008
- Lydia Tonar, Exualizent Schulungs und Beratungs GmbH, Vienna, Austria, June 10, 2008
- Ch. M. Bernal Palacios, Murica, Spain, December 2 - 5, 2008 – SETIP 01 – Gruntvig 1
- Giselle Janeiro, Santa Rem, Portugal, December 2 - 5, 2008 – SETIP 01 – Gruntvig 1
- Dulce Motta, Santa Rem, Portugal, December 2 - 5, 2008 – SETIP 01 – Gruntvig 1
- Janez Malovrh, Trbolje, Ljubljana, Slovenia, December 2 - 5, 2008 – SETIP 01 – Gruntvig 1
- Joao Luis Miranda, Portalegre, Portugal, Teacher's Mobility LLP-ERASMUS

Visits of Staff Members

Conferences 2008

Name	State	Place	Name of Conference	Date
Burianová E.	Slovakia	Nitra	DIVAI	May 27-30
Burianová, E.	Spain	Barcelona	ICEIS	June 10-18
Burianová, E.	Greece	Athens	The System Dynamics Society	July 18-26
Burianová, E.	Slovakia	Smokovec	SOFSEM 2008	Jan. 19-25
Fojtík, R.	Slovakia	Bratislava	Innovative Process in e-learning	Mar. 4-5
Huňka, F.	France	Montpellier	Workshop	June 13-17
Huňka, F.	Greece	Heraklion	WSEAS	July 21-25
Kindler, E.	Cyprus	Nicosia	ECMS 2008	June 2-7
Kindler, E.	Greece	Heraklion	WSEAS	July 21-25
Kindler, E.	Germany	Baden-B.	Systems Theory	July 28-30
Klimeš C.	Slovakia	Nitra	DIVAI	May 27-30

Name	State	Place	Name of Conference	Date
Klimeš, C.	Spain	Barcelona	ICEIS	June 10-18
Klimeš, C.	Greece	Athens	The System Dynamics Society	July 18-26
Klimeš, C.	Slovakia	Počuvadlo	ISKI2008	Sept. 19-20
Klimeš, C.	Slovakia	Smokovec	SOFSEM 2008	Jan. 19-25
Křivý, I.	Slovakia	Bratislava	APLIMAT 08	Feb. 5-8
Křivý, I.	Cyprus	Nicosia	ECMS 2008	June 2-7
Křivý, I.	Greece	Heraklion	WSEAS	July 21-25
Šaloun, P.	Slovakia	Smokovec	SOFSEM 2008	Jan. 19-25
Šaloun, P.	Slovakia	Bratislava	Znalosti 2008	Feb. 13-15
Šaloun, P.	USA	Pittsburgh	Hypertext 08	June 13-24
Šaloun, P.	Germany	Hanover	Adaptive Hypermedia	July 25- Aug. 2
Šaloun, P.	Slovakia	Smolenice	WIKT 2008	Nov. 6-7
Šamánek, P.	Slovakia	Smolenice	WIKT 2008	Nov. 6-7
Treterová, E.	Slovakia	Smokovec	SOFSEM 2008	Jan. 19-25
Tvrdík, J.	Slovakia	Pribylina	ROBUST 2008	Sept. 8-12
Tvrdík, J.	Poland	Wisla	IMCSIT 2008	Oct. 19-22
Vajgl, M.	Slovakia	St. Lesná	CSE 2008	Sept. 24-26
Volná, E.	Portugal	Funchal	ANNIP 2008	May 13-17

Short stays abroad 2008 (less than 10 days)

Name	State	Place	Name of Conference	Date
Burianová, E.	Slovakia	Nitra	Lecturer in residence	Apr. 22-25
Habiballa, H.	Slovakia	Nitra	Lectures	Sept. 25
Habiballa, H.	Slovakia	Nitra	Lectures	Oct. 23
Habiballa, H.	Slovakia	Nitra	Lectures	Nov. 20
Huňka, F.	Slovakia	Lipt. Ján	Workshop	Oct. 3-6
Huňka, F.	Slovakia	Žilina	Committee member	Sept. 9
Klimeš, C.	Slovakia	Nitra	Lecturer in residence	Feb. 4-7
Klimeš, C.	Slovakia	Nitra	Lecturer in residence	Feb. 27-29
Klimeš, C.	Slovakia	Nitra	Lecturer in residence	Mar. 26-27
Klimeš, C.	Slovakia	Nitra	Lecturer in residence	Apr. 22-25
Klimeš, C.	Slovakia	Nitra	Lectures	Oct. 1-3
Klimeš, C.	Slovakia	Nitra	Lectures	Oct. 29-31
Klimeš, C.	Slovakia	Nitra	Lectures	Nov. 26-28
Šaloun, P.	Slovakia	Prešov	Inauguration	Apr. 29
Šaloun, P.	Slovakia	Košice	Member of SZZ Committee	June 3-5
Šaloun, P.	Slovakia	Bratislava	Member of SZZ Committee	June 5-6
Šaloun, P.	Slovakia	Košice	MŠMT Contact	Aug. 25- Sept. 1
Šaloun, P.	Slovakia	Bratislava	Member of SZZ Committee	Oct. 1-2
Volná, E.	Iceland	Reykjavík	Grundtvig	May 28- June 3
Volná, E.	Ireland	Limeric	Comenius	Oct. 14-17

13.10 Student Research Activity

- Student Research Conference (physics - chemistry), Faculty of Science OU, May 7, 2008, 3 participants.

13.11 Membership in Professional Organisations

Assoc. Prof. Petr Šaloun

- ACM (Association For Computing Machinery),
- Program Committee of international conferences SOFSEM, SMAP, and local conferences/workshops – Znalosti, MEMICS, TPEV, SCO.

Assoc. Prof. Josef Tvrdík

- International Association for Statistical Computing,
- Czech Statistical Society,
- Czech Mathematical Society.

Assoc. Prof. František Huňka

- Association of Simula Users – executive committee.

Prof. Ivan Křivý

- AMS - American Mathematical Society
- International Association for Statistical Computing
- Board of Advisors of American Biographical Institute
- Association of Simula Users – executive committee,
- Czech Statistical Society,
- Union of Czech Mathematics and Physics,
- Czech Association for Simulation of Systems.

Alexej Kolcun, PhD.

- Czech Society for Geometry and Graphics – Union of Czech Mathematicians and Physicists

13.12 Publications

ARTICLES IN IN PERIODICAL PUBLICATIONS

HABIBALLA, H. *Resolution reasoning in fuzzy predicate logic*. In: KYBERNETIKA. ISSN 0023-5954.

HABIBALLA, H. *Mathematical Logic and Deduction in Computer Science*. In: Informatics. ISSN 0868-4952, pp. 1-13.

HABIBALLA, H. *Inference strategies for fuzzy description logic*. In: APLIMAT - Journal of Applied Mathematics. ISSN 1337-6365, pp. 411-422.

HABIBALLA, H. *Israeli curricula for Computer Science* In: Methodical portal - Výzkumný ústav pedagogický. ISSN 1802-4785. (In Czech)

- HUŇKA, F.; HUČKA, M.; KAŠÍK, J.; VYMĚTAL, D. *Business Process Modeling on the base of Proprietary Relationships and their Exchange (REA Systém)* (In Czech). In: Systémová integrace. ISSN 1210-9479, pp. 93 - 105.
- HUŇKA, F.; PAVLISKA, V. *Error Optimization of Fuzzy Transform Using Evolution Algorithms*. In: INFORM SCIENCES. ISSN 0020-0255.
- HUŇKA, F.; VYMĚTAL, D.; HUČKA, M.; KAŠÍK, J. *Production Planning Model Using REA Ontology*. In: E + M Economics and Management. ISSN 1212-3609, pp. 93-102.
- KINDLER, E.; KŘIVÝ, I.; KLIMEŠ, C. *Simulation Aided Anticipation of Intelligent Systems Behavior*. In: International Journal of Information Technologies and System Approach.
- KINDLER, E. *Kongres Eurosim 2007 v Lublani*. In: AUTOMA. ISSN 1210-9592, pp. 50-50.
- KINDLER, E. *Konference o simulaci a modelování ESM 2007*. In: AUTOMA. ISSN 1210-9592, pp. 74-74.
- KLIMEŠ, C. *Expert system utilization for modeling the decision making processes upon indetermination*. In: Acta Electrotechnica et Informatica. ISSN 1335-8243, pp. 40-46.
- KOTYRBA, M.; VOLNÁ, E. *Selforganization in artificial intelligence*. (In Czech) In: Automatizace. ISSN 0005-125X, pp. 785-787.
- KŘIVÝ, I. *Anticipatory Systems in Population Dynamics*. In: International Journal of Computing Anticipatory Systems. 2008, vol. 22 (in print). ISSN 1373-5411.
- KŘIVÝ, I. *Anticipation of Local Epidemics Management*. In: Computing Anticipatory Systems. 2008, vol. 1051, pp. 223-232. ISSN 0094-243X.
- KŘIVÝ, I. *Optimization of Fuzzy Models Using Evolutionary Algorithms*. In: Aplimat - Journal of Applied Mathematics. 2008, vol. 1, pp. 439-449. ISSN 1337-6365.
- PROCHÁZKA, J. *Agile adoption problems* (In Czech). In: Systémová integrace. ISSN 1210-9479, pp. 118-123.
- TVRDÍK, J. *Adaptation in Differential Evolution: A Numerical Comparison*. In: APPL SOFT COMPUT. ISSN 1568-4946. (submitted)
- VOLNÁ, E. *Evoluční algoritmy*. In: Automatizace. ISSN 0005-125X, pp. 91-94.
- VOLNÁ, E. *Od biologického neuronu k Hebbovu učení*. In: Automatizace. ISSN 0005-125X, pp. 333-334.
- VOLNÁ, E. *Asociativní neuronové sítě*. In: Automatizace. ISSN 0005-125X, pp. 709-711.

ARTICLES IN PROCEEDINGS

- BRAŽINA, D. *Generally physical conditions for constructional projects of resonance chambers*. (In Czech) In: Nové trendy v konstruování a v tvorbě technické dokumentace. ISBN 978-80-552-0052-1.

- BRAŽINA, D. *New Trends In Evaluation Of Surfaces Topography Generated by Hydrodynamic Abrasive Dividing.*(In Czech) In: Nové trendy v konstruování a v tvorbě technické dokumentace 2008. ISBN 978-80-552-0052-1, pp. 128-131.
- BURIANOVÁ, E. *Experience with Project Realisation OP RLZ – Modular System of Syllabus at Universities in MSR.* In: Modular Systems in University Studies. Modulární systémy ve vysokoškolském studiu. ISBN 978-80-7368-438-9, pp. 5-10.
- BURIANOVÁ, E. *Dynamic model of the college study sphere.* In: ISKI 2008. ISBN 978-80-8094-351-6, pp. 13-21.
- BURIANOVÁ, E. *Experience with Project Realisation ESF RLZ - Design and Implementation of Modular System for Post Graduate Education of Teachers in MSR.*(In Czech) ISBN 978-80-248-1749-1, pp. 43-47.
- FOJTÍK, R. *A Comparison of students successful in distance and present educations.* (In Czech) In: DIVAI 2008 - ISBN 978-80-8094-317-2, pp. 148-153.
- FOJTÍK, R. *Mechanisms of quality of e-learning.* (In Czech) In: Inovačný proces v e-learningu. ISBN 978-80-225-2510-7, pp. 28-34.
- FOJTÍK, R. *ICT for motivation in education.* In: ICT for motivation in education. ICTE 2008. ISBN 978-80-7368-577-5, pp. 172-175.
- HABIBALLA, H. *Resolution strategies in fuzzy description logic.* In: Proceedings of 7th Intl. Conf. Aplimat. APLIMAT. ISBN 978-80-89313-02-0, pp. 523-532.
- HUŇKA, F.; PAVLISKA, V. *Object Oriented Approach in Optimization of Fuzzy Transform.* In: New Aspects of Computers Part: III. WSEAS International Conference on Computers. ISBN 978-960-6766-85-5, pp. 1066-1071.
- KINDLER, E.; KŘIVÝ, I.; KLIMEŠ, C. *Simulation Aided Anticipation of Intelligent Systems Behavior.* In: Engineering and Management of IT-Based Organisational Systems: A Systems Approach. Engineering and Management of IT-Based Organisational Systems. ISBN 978-1-897233-48-1, pp. 1-6.
- KINDLER, E. *Super-Object-Oriented Programming and Simulation.* In: New Aspects of Computers Part III - Recent Advances in Computer Engineering. 12th WSEAS International Conference on COMPUTERS. ISBN 978-960-6766-85-5, pp. 1049-1059.
- KINDLER, E. *Simulation of Intelligent Transport Tools in Container Yards.* In: Proceedings of the 12th WSEAS International Conference on COMPUTERS. New Aspects of Computers Part III - Recent Advances in Computer Engineering. ISBN 978-960-6766-85-5, pp. 1079-1083.
- KINDLER, E. *Simulace a matematika.* In: Proceedings of 30th Autumn International Colloquium ASIS 2008. 30th Autumn International Colloquium ASIS 2008. ISBN 978-80-86840-42-0, pp. 9-15.

KINDLER, E.; KŘIVÝ, I. *Simulation of Intelligent Systems - Block Structure revisited*. In: Proceedings of ECMS 2008. 22nd European Conference on Modelling and Simulation. ISBN 978-0-9553018-5-8, pp. 90-95.

KINDLER, E. *Všechno je (a bylo a asi i bude) jinak*. In: Proceedings of 30th Autumn International Colloquium ASIS 2008. 30th Autumn International Colloquium ASIS 2008. ISBN 978-80-86840-42-0, pp. 23-30.

KINDLER, E.; KŘIVÝ, I. *An Illustration of Axiomatization of Dynamic Systems*. In: Proceedings of 42nd Spring International Conference MOSIS '08 Modelling and Simulation of Systems. Spring International Conference MOSIS '08 Modelling and Simulation of Systems. ISBN 978-80-86840-40-6, pp. 95-100.

KLIMEŠ, C. *Educational Model of Modular Study programmes in Distant Form of Studies*. (In Czech) In: Model vzdělávání modulárních studijních programů v distanční formě studia. Modulární systémy ve vysokoškolském studiu. ISBN 978-80-7368-438-9, pp. 35-39.

KLIMEŠ, C.; ŠAMÁNEK, P. *Adaptive (Personalized) Web Systems – Introduction to the Problem* (In Czech). In: ASIS 2008 - Adaptívne siete v informačných systémoch. ISBN 978-80-8094-400-1, pp. 19-24.

KLIMEŠ, C. *Model of Adaptive Web with Usage of Time Fuzzy Petri Nets*. (In Czech) In: ASIS 2008 - Adaptívne siete v informačných systémoch. ISBN 978-80-8094-400-1, pp. 115-119.

KLIMEŠ, C. *Quality in Part-time and Combined Forms Within the Sphere of Applied Informatics*. In: Quality in Part-time and Combined Forms Within the Sphere of Applied Informatics. DIVAI 2008, pp. 190-197.

KLIMEŠ, C. *Model of the Decision Support System under Condition of Non-Determination* (In Czech) In: Mathematical - Logical Fuzzy Modeling of Decision Making Processes. ISKI 2008. ISBN 978-80-8094-351-6, pp. 50-60.

KLIMEŠ, C.; TURČÁNI, M.; BALOGH, Z. *Information Education in the Period of Creating a Knowledge Society*. (In Czech) In: Informatické vzdelávanie v období budovania znalostnej spoločnosti. Informatika XXI/2008. ISBN 978-80-7302-151-1, pp. 103-104.

KLIMEŠ, C. *Mathematical - Logical Fuzzy Modeling of Decision Making Processes*. In: Mathematical - Logical Fuzzy Modeling of Decision Making Processes. ISKI 2008. ISBN 978-80-8094-351-6, pp. 47-49.

KLIMEŠ, C.; BALOGH, Z. *Possibility Learning Processes Management Model with Application of Petris Nets and Fuzzy Logic*. In: Possibility Learning Processes Management Model with Application of Petris Nets and Fuzzy Logic. DIVAI 2008, pp. 92-97.

KOLCUN, A. *Least Square Method in the Geometry Context*. In: 28. Konference o geometrii a grafice. JCMF, Medlova zemědělská a lesnická univerzita v Brně, 2008. ISBN 978-80-7375-249-1, pp 155-161.

- MALIK, J., KOLCUN, A., PRASAD, V.V.R., MOHNOT, J. K. *Back Analysis for Effective Design of Bolt Reinforcement*. In: World Tunnel Congress 2008 proceedings. Central Board of Irrigation and Power. New Delhi 2008, pp: 305-312.
- KŘIVÝ, I. *Optimization of fuzzy models using evolutionary algorithms*. In: Proceedings of APLIMAT 2008. 7th International Conference APLIMAT 2008. ISBN 978-80-89313-02-0, pp. 539-548.
- KŘIVÝ, I. *Simulation of in-Patient Mobility in Hospitals*. In: New Aspects of Computers. Prt III. Proceedings of WSEAS International Conference on Computers. WSEAS International Conference on Computers. ISBN 978-960-6766-85-5, pp. 1084-1087.
- PROCHÁZKA, J. *Functional, Non-functional and Regression Testing using Simula Language*. In: Abstracts of Contributions to 4th International Workshop on Data-Algorithm-Decision Making. Internal DAR publication – UTIA 2008/6, pp. 39-39.
- PROCHÁZKA, J. *Experience from agile adoption in distributed environment*. In: Sborník přednášek z celostátní konference Tvorba software 2008. Tvorba softwaru 2008. ISBN 978-80-248-1765-1, pp. 156-163.
- SEHNALOVÁ, V. *Experience and results of the questionnaire evaluation of the project supplementary education of teachers* (In Czech). In: Nová role učitele - budoucnost učitelů ve světě práce v Moravskoslezském kraji. ISBN 978-80-7368-517-1, pp. 333-341.
- SOCHOR, T. *Greylisting method analysis in real SMTP server environment - Case-study*. In: Innovative Techniques in Systems, Computing Sciences and Software Engineering. International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CIS2E 08). ISBN: to appear in 2009/08.
- ŠALOUN, P.; VELART, Z. *Adaptive ontology-based navigation*. In: Adaptive Hypermedia 08 – Authoring of Adaptive and Adaptable Hypermedia 6th workshop. pp. 77-80. [online] http://www.ah2008.org/files/resourcesmodule/@random4875cb58f07c9/1215679368_Proc_AH2008_WS3_Authoring_of_Adaptive_and_Adaptable_Hypermedia.pdf
- TELNAROVÁ, Z.; KRHUTOVÁ, L.; ZEZULKOVÁ, E. *Integration of students with special need into University of Ostrava* (In Czech). In: Mezinárodní konference Slunečnice. Slunečnice. ISBN 978-80-248-1637-1, pp. 133-138.
- TELNAROVÁ, Z. *Integration of students with special needs into university studies* (In Czech). In: Pro plný život. Pro plný život. ISBN 978-80-7368-437-2, pp. 3-6.
- TELNAROVÁ, Z. *Computer graphics for orally handicapped students*. (In Czech) In: Mezinárodní konference Slunečnice 2008. Slunečnice 2008. ISBN 978-80-248-1859-7, pp. 89-93.
- TUREČEK, T.; ŠALOUN, P. *Advanced data organization on Java powered mobile devices*. In: Advanced data organization on Java powered mobile devices. CEE-SET 2008. The post-conference proceedings will appear in Springer LNCS series. pp. 217-222.

TVRDÍK, J. *Adaptive Differential Evolution and Exponential Crossover*. In: Proc. of IMCSIT 2008. IMCSIT 2008. ISBN 978-83-60810-14-9, pp. 927-931.

TVRDÍK, J. *Exponential Crossover in Competitive Differential Evolution*. In: MENDEL 2008, 14th International Conference on Soft Computing. MENDEL 2008. pp. 44-49.

TVRDÍK, J. *Adaptive stochastic algorithms in non-linear regression*. (In Czech) In: sborník ROBUST 2008.. JČMF, Praha, 2009 (In print)

VAJGL, M.; LUKASOVÁ, A. *A Semi-Dedicable Semantic Tableau Proof System in a Description Logic DL1*. In: Proceedings of CSE 2008 International Scientific Conference on Computer Science and Engineering. ISBN 978-80-8086-092-9, pp. 277-284.

VELART, Z.; ŠALOUN, P. *Analýza obsahu kurzu, návrh navigace vytvořené z textu při použití pojmu ontologie*. In: Znalosti 2008. ISBN 978-80-227-2827-0, pp. 391-394.

VOLNÁ, E. *Design of neural network trees*. (In Czech). 14th International Conference on Soft Computing, Mendel 2008. ISBN 978-80-214-3675-6, pp. 161-165.

VOLNÁ, E. *Learning and evolution in artificial neural networks (a comparison study)*. (In Czech). In: Proceedings of the 4th International Workshop on Artificial Neural Networks and Intelligent Information Processing, ANNIIP. International Workshop on Artificial Neural Networks and Intelligent Information Processing. ISBN 978-989-8111-33-3, pp. 10-17.

MONOGRAPHIC PUBLICATIONS.

KLIMEŠ, C.; SKALKA, J. *Informatics: for School-Leaving Exams and Entrance Exams*. ISBN 978-80-89132-71-3.

HRUBÝ, P.; HUŇKA, F.; HUČKA, M.; KAŠÍK, J.; VYMĚTAL, D. *Business Process Modeling on the Base of Value Chains (REA Systém)* (In Czech). ISBN 978-80-248-1872-6, pp. 1-72.

- Texture parameters of carbonaceous materials.
- Study of interactions in heterogeneous systems (calorimetry, gas chromatography, thermal analysis, zeta potential).
- Sorption properties of solids (voltammetry on modified electrodes).
- Information and communication technology in teacher education.
- Professional didactics of chemistry aimed at multimedia educational programs.

14.1 Staff

Head of the Department

Rudolf Peter, PhD.

Deputy Head of the Department

Roman Maršílek, PhD.

Department Secretary

Roman Maršílek, PhD.

Office Manager

Jarmila Schmidlová

Teaching staff

Professor

Boleslav Taraba

Assoc. Professors

Dana Kričfaluši
Zuzana Navrátilová
Václav Slovák
Marie Solárová

Assistant Professor

Michal Haluzík

Laboratory Technician

Dagmar Ryšková

14.2 Study Programmes

Code of the study programme¹⁰⁾	Title of the study programme	Title of the study major¹¹⁾	Length of the study¹²⁾			
			B	N,M	P	FS
B1407	Chemistry	Chemistry	3			P
B1407	Chemistry	Chemistry (double major degree programme)	3			P
N1407	Chemistry	Physical Chemistry of Surfaces		2		P
N1407	Chemistry	Teaching for Secondary Schools - Chemistry (double major degree programme)		2		P
N1407	Chemistry	Teaching for Secondary Schools - Chemistry (single major degree programme)		2		P
N7503	Teaching for Primary Schools	Teaching for Primary Schools - Chemistry (double major degree programme)		2		P
M7503	Teaching for Primary Schools	Teaching for Primary Schools - Chemistry		4		P
M7504	Teaching for Primary Schools	Teaching for Secondary Schools - Chemistry		5		P

14.3 Theses

Bachelor (Bc.) Theses

- GRYČOVÁ, Eva. *Possibility of spectrophotometric study of alkylammonium cations.* Supervisor: Navrátilová, Zuzana
- HAJDUČKOVÁ, Iva. *Sewage disposal by using Fenton's reaction.* Supervisor: Hudec, Rostislav
- JANÍČEK, Martin. *Zinc sorption on altered coal.* Supervisor: Slovák, Václav
- KLUŽÁK, Michal. *Effect of Temperature on the Adsorption behaviour of the Lead on Subbituminous coal: Calorimetric examinations.* Supervisor: Taraba, Boleslav
- KNIEZKOVÁ, Zuzana. *Effect of Temperature on the Adsorption Behaviour of the Lead on Subbituminous Coal.* Supervisor: Taraba, Boleslav
- KOHUTOVÁ, Hana. *Zinc sorption on brown coal.* Supervisor: Slovák, Václav

¹⁰⁾ B – bachelor's degree programme, N - master's degree programme representing a continuation of bachelor's degree programme,

M - master's degree programme, P - doctoral degree programme.

¹¹⁾ Study programmes marked with an asterisk can (usually) be studied only in a chosen study programme in pairs.

¹²⁾ P – full time study, D – distance form of study, K – combined study form;

- KRAJANCOVÁ, Pavla. *Preparation and characterization of montmorillonite modified with alkylammonium cations.* Supervisor: Navrátilová, Zuzana
- PASTVA, Jakub. *Adsorption of cadmium on subbituminous coal.* Supervisor: Maršálek, Roman
- RÁBLOVÁ, Lucie. *Sorption nickel on bituminous coal.* Supervisor: Slovák, Václav
- TAURKOVÁ, Petra. *Monitoring of selected quality indicators of the vsetínská bečva river and the mediňka creek.* Supervisor: Maršálek, Roman
- WITASEK, Roman. *Catalytic efficiency of coals exert influence course of redox reactions.* Supervisor: Peter, Rudolf
- ZELENKA, Tomáš. *Mercury sorption on bituminous coal.* Supervisor: Slovák, Václav

Master (Mgr.) Theses

- BEBKOVÁ, Petra. *The dam reservoirs as a source of the thermal energy.* Supervisor: Peter, Rudolf
- DLOUHÝ, Ondřej. *Analysis and evidence of selected organic compounds in teaching chemistry at secondary schools..* Supervisor: Solárová, Marie
- FOLDYNOVÁ, Kateřina. *Kinetics study of oxidation of iodides aqueous solutions by means of air oxygen with coal as catalyst.* Supervisor: Peter, Rudolf
- KAJFOŠOVÁ, Barbora. *Multimedial guide of laboratory exercise of organic chemistry I..* Supervisor: Peter, Rudolf
- KRIŠTŮFKOVÁ, Tereza. *Thermal analytic characterization energy crop.* Supervisor: Slovák, Václav
- KURASZOVÁ, Radka. *Strengthening of interdisciplinarity in practical education in chemistry at secondary schools.* Supervisor: Solárová, Marie
- LIŠKOVÁ, Zuzana. *Possibilities of Empowering the Key Competencies by Realization School Chemical Experiments.* Supervisor: Solárová, Marie
- MAREČKOVÁ, Kateřina. *Multimedia organic chemistry training manual.* Supervisor: Peter, Rudolf
- MUCHA, Martin. *Computational 3D models of chemical objects.* Supervisor: Slovák, Václav
- OROŠOVÁ, Lenka. *Voltammetry of solid phase aimed at carbon materials.* Supervisor: Navrátilová, Zuzana
- TOMISOVÁ, Veronika. *Troubleshooting of mastering chemistry curriculum in Primary schools due to playing games.* Supervisor: Solárová, Marie

14.4 Research Projects

Research projects in 2008 (filed in CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
R. Maršálek	GP105/07/P041	The zeta potential of carbonaceous	223

		materials - the mechanisms of collectors' adsorption	
B. Taraba	IAA301870801	Temperature aspects of adsorption from aqueous solutions on coals	523
B. Taraba	GA105/06/0630	Modelling the distribution of the coal oxidation heat in the heterogenous porous surroundings	688
R. Maršálek	2A-1TP1/083	Immobilization of heavy metals from waste waters by using nature carbonaceous materials	700
B. Taraba	ABCBU55-07	Access to the coal mine district with spontaneous combustion process and objective indicators for the safe work in these localities	2600

14.5 Development Projects

Development projects in 2008 (except of CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
M. Haluzík	FRVŠ 1490/A/a	Innovation of the Laboratory for Biochemistry in the Field of Biochemical Separative Methods and Enzyme Kinetics	1703
D. Kričfaluši	MSMT C7/2/b	World of Technology and Science for Everyone	783

Commercial contracts

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
B. Taraba	HBZS	Assessment of the Risk of Spontaneous Combustion Process of Coal in Chosen Districts in OKR	200

14.6 Equipment

- Measurement of zeta potential – DELSA 440 SX.
- Thermal analysis (NETZSCH STA 449 C, Germany).
- Calorimeter Setaram C80.
- Mercury porosimeter Carlo Erba2000.
- Sorptomatic Carlo Erba 1810 (measuring of surface area and pore distribution).
- Gas chromatographic devices Carlo Erba Mega 5120 a Chrom 5.
- Atomic absorption spectrometer Varian SPECTRAA240 FS.
- UV/VIS Spectrophotometer Cary 50 Conc.
- Electrochemical analyzer EcaFlow 150 GLP.
- Multifunction centrifuge JOUAN-BR4i.
- Centrifuge Eppendorf 5417/R.

- UV/VIS Spectrophotometer Libra S22.
- AlphaImager HP Gel Documentation System with DE500 Light Cabinet.
- Horizontal and vertical gel electrophoresis systems APELEX with PS 503 power supplies.

14.7 Contacts and Cooperation

Cooperation with Universities and Research Institutes in the Czech Republic

- Faculty of Education TU Liberec.
- Faculty of Education of Jan Evangelista Purkyně University in Ústí nad Labem.
- Faculty of Education MU Brno.
- University of Pardubice.
- VŠB – Technical University of Ostrava.
- Faculty of Chemistry VUT Brno.
- Institute of Chemical Technology, Prague.
- University of Hradec Králové.
- Department of Inorganic Chemistry, Faculty of Science, Palacky University, Olomouc.
- J. Heyrovský Institute of Physical Chemistry AV ČR Prague.
- Institute of Chemical Process Fundamentals of the AS CR.
- Institute of Geonics Czech Academy of Science.
- Institute of Rock Structure and Mechanics AV ČR Prague.
- VVUU, a.s. Ostrava – Radvanice.

Cooperation with Universities and Research Institutes abroad

- Comenius University in Bratislava (Slovakia).
- Matej Bel University, Banská Bystrica (Slovakia).
- University of Mining and Metallurgy, Krakow (Poland).
- Institute of Phys.-organic and Coal Chemistry of Ukr. Academy of Sciences, Doněck (Ukraine).

Visitors to the institute

- Dr. M. Nodzynska (Krakow, Poland) April 10 –11, 2008 – Teacher's Mobility ERASMUS.

Visits of Staff Members

Conferences 2008

Name	Country	Place	Name of Conference	Date
Maršílek, R.	Russia	Moscow	Conference	June 23-28
Maršílek, R.	USA	Pittsburgh	Coal Conference	Sept. 24-Oct. 4
Slovák, V.	Italy	Turín	2nd EuChEMS	Sept. 15-21
Solárová, M.	Slovakia	Smolenice	Evolutionary Trends in Chemistry Education	May 12-13
Solárová, M.	Poland	Krakow	Badania w Dydaktyce	June 26-28
Taraba, B.	USA	Pittsburgh	Coal Conference	Sept. 24-Oct. 4

Short-term stays abroad 2008 (less than 10 days)

Name	Country	Place	Name of Conference	Date
Solárová, M.	Slovakia	Bratislava	Defence of PhD. Thesis	Sept. 29

14.8 Student Research Activity

- Student Research Conference (physics - chemistry), Faculty of Science OU, May 7, 2008, 7 participants.

14.9 Membership in Professional Organizations

Assoc. Prof. Václav Slovák

- Czech Chemical Society (CR) – member of the executive board.

Prof. Boleslav Taraba

- Czech Chemical Society (CR) – chairperson of the local section in Ostrava.

14.10 Publications

ARTICLES IN IN PERIODICAL PUBLICATIONS

KLIKA, Z.; TOMÁŠEK, V.; MARTYNKOVÁ, G.; RITZ, M.; ROUBÍČEK, V.; KRATOŠOVÁ, G.; SLOVÁK, V. *Thermal alteration of frictional material*. In: *Hutnické listy*., pp. 62-66. (In Czech)

KOČIŘÍK, M. *A route to MFI zeolite-alpha-alumina composite membranes for separation of light paraffins*. In: *Desalination*., pp. 76-80.

MARTYNKOVÁ, G.; ČAPKOVÁ, P. *Fluorescence and structure of methyl red-clay nanocomposites*. In: *Journal of nanoscience and nanotechnology*., pp. 2069-2074.

NAVRÁTILOVÁ, Z.; HRANICKÁ, Z. *Montmorillonite modified electrodes for study of Cu adsorption kinetics*. In: *Sensing in Electroanalysis*., pp. 55-63.

TARABA, B.; MICHALEC, Z.; CHURA, J.; SLOVÁK, V.; TAUFER, A. *Modelling of heat evolution during coal oxidation in longwall gob area using FLUENT* . In: *Uhlí - Rudy - Geologický průzkum*. ISSN 1210-7697, pp. 34-38. (In Czech)

TARABA, B.; SLOVÁK, V.; MICHALEC, Z.; CHURA, J.; TAUFER, A. *Development of oxidation heat of the coal left in the mined-out area of a longwall face - modelling using the fluent software*. In: *Journal of Mining and Metallurgy*. ISSN 1450-5339, pp. 73-81.

TRÁVNÍČEK, Z.; PASTOREK, R.; SLOVÁK, V. *Novel octahedral nickel(II) dithiocarbamates with bi- or tetradentate N-donor ligands: X-ray structures of [Ni(Bzppzdtc)(phen)(2)]ClO₄ center dot CHCl₃ and [Ni(Bz(2)dtC)(2)(cyclam)]*. In: *POLYHEDRON*. ISSN 0277-5387, pp. 411-419.

ARTICLES IN PROCEEDINGS

MARŠÁLEK, R.; SLOVÁK, V.; RUPPENTHALOVÁ, L.; KUZNĚCOVOVÁ, L. *The utilization of altered coal as an immobilization agent for removal of heavy metals from waste*

- waters In: Odpadové fórum 2008. Odpadové fórum. ISBN 978-80-02-02012-7, pp. 219-227. (In Czech)
- MARŠÁLEK, R. *Utilization of zeta potential for expressing of phenomenon on interface* In: Chemické listy. 60. jubilejní sjezd asociací českých a slovenských chemických společností. ISSN 0009-2770, pp. 654-655. (In Czech)
- MARŠÁLEK, R.; TARABA, B. *Adsorption of sodium dodecyl sulphate on coal*. In: III International conference of colloid chemistry and physicochemical mechanics, program and summaries. III International conference of colloid chemistry and physicochemical mechanics. ISBN 978-5-9710-0219-2, pp. 31-31.
- NAVRÁTILOVÁ, Z.; TARABA, B.; MARŠÁLEK, R. *Carbon paste electrode modified with coal*. In: Chemické Listy. 12th International Conference on Electroanalysis. ISSN 0009-2770, pp. 121-121.
- SLOVÁK, V.; MARŠÁLEK, R.; JANÍČEK, M.; KOHUTOVÁ, H.; ZELENKA, T.; RÁBLOVÁ, L.; KUKUCZKA, R. *Sorption of heavy metals on natural coal*. In: ODPADOVÉ FÓRUM 2008. ODPADOVÉ FÓRUM 2008. ISBN 978-80-02-02012-7, pp. 4307-4310. (In Czech)
- SLOVÁK, V.; TARABA, B. *The effect of gas flow and particle size on chemisorption phase of coal oxidation*. In: Chemické listy. 60. sjezd chemických společností. ISSN 0009-2770, pp. 742-742. (In Czech)
- SLOVÁK, V.; PASTOREK, R.; SLOVÁK, P. *Ni dithiocarbamates as catalysts of graphite oxidation*. In: Chemické listy. 60. sjezd chemických společností. ISSN 0009-2770, pp. 688-689. (In Czech)
- SLOVÁK, V.; MARŠÁLEK, R.; KUZNĚCOVOVÁ, L.; RUPPENTHALOVÁ, L.; JANÍČEK, M. *Acidobasic behaviour of oxidative altered coal and sorption of metals*. In: ChemZi. 59. zjazd chemikov. ISBN 1336-7242, pp. 79-79. (In Czech)
- SLOVÁK, V.; SOLÁROVÁ, M. *Chemistry at the Silesian-Ostravian castle II*. In: Nové metody propagace přírodních věd mezi mládeží. Nové metody propagace přírodních věd mezi mládeží. ISBN 978-80-244-2127-8, pp. 38-39. (In Czech)
- SOLÁROVÁ, M. *Use of new approaches in the undergraduate training of chemistry teachers*. In: Vedy o výchově a vzdělávání. Aktuální vývojové trendy ve vyučování chemie. ISBN 978-80-8082-182-1, pp. 239-243. (In Czech)
- SOLÁROVÁ, M. *Possible strengthening of the student pedagogical practice in the chemistry teaching at the Faculty of Science Ostrava University*. In: Pedagogická praxe a oborové didaktiky. ISBN 978-80-7392-052-4, pp. 243-249. (In Czech)
- SOLÁROVÁ, M. *Summer workshop of pupils talented in chemistry*. In: Nové metody propagace přírodních věd mezi mládeží. Nové metody propagace přírodních věd mezi mládeží. ISBN 978-80-24421-27-8, pp. 43-46. (In Czech)

SOLÁROVÁ, M. *Diagnostics of key qualifications in the education field Man and nature*. In: Current Trends in Chemical Curricula. Current Trends in Chemical Curricula. ISBN 978-80-86561-60-8, pp. 77-82. (In Czech)

SOLÁROVÁ, M. *Popularization of scientific education in the undergraduate training of teachers*. In: Badania w dydaktyce przedmiotów przyrodniczych. Badania w dydaktyce przedmiotów przyrodniczych. ISBN 978-83-7271-519-7, pp. 337-341. (In Czech)

SOLÁROVÁ, M.; KUBICOVÁ, S. *Possible use of integrated learning within undergraduate training of teachers*. In: XXVI International Colloquium on the Management of Educational Process. ISBN 978-80-7231-511-6. (In Czech)

SOLÁROVÁ, M. Application of the Framework Educational Program *and opinions of teachers from practice*. In: Nová role učitele/Budoucnost učitelů ve světě práce v MS kraji. Nová role učitele. ISBN 978-80-7368-517-1, pp. 221-231. (In Czech)

SOLÁROVÁ, M. *Innovation of teaching methods and forms of chemistry teachers education in the undergraduate training*. In: Nová role učitele/budoucnost učitelů ve světě práce v MS kraji. Nová role učitele. ISBN 978-80-7368-517-1, pp. 213-221. (In Czech)

TARABA, B. *Contribution to determination of adsorption heat of heavy metals from aqueous solutions on coal*. In: Sb.. 30. Mezinárodní český a slovenský kalorimetrický seminář, 1. vyd. Univerzita Pardubice, 2008. s. 79-80, ISBN 978-80-7395-079-8. (In Czech)

VACULÍKOVÁ, L.; NAVRÁTILOVÁ, Z.; KRAJANCOVÁ, P.; ŠUGÁRKOVÁ, V.; PLEVOVÁ, E. *Sorption of alkylammonium cations on montmorillonite*. In: Chemické listy, 102(8). 60. chemický sjezd., pp. 715-715. (In Czech)

PARTS OF MONOGRAPHIC PUBLICATIONS, ARTICLES

MARŠÁLEK, R.; TARABA, B. *Adsorption of SDS on coal*. In: Colloids for Nano- and Biotechnology. ISBN 978-3-540-85133-2, pp. 163-168.

15 Department of Physical Geography and Geoecology

- Hydrology (anthropogenic changes of hydrological regime, hydrology of urban areas, qualitative hydrology, modelling of hydrological processes).
- Geomorphology and geoecology (geomorphological and geoecological mapping, morphotectonics and morphodynamics, structure and geochronology of slope deformations, geomorphological risks, geomorphology and geoecology of the alpinotype orogenies, study regions – esp. Carpathians and Crimean Mountains).
- Surveying and remote sensing (mapping and monitoring physical geographic components by means of RS, GPS and standard geodetic methods).
- Thematic cartography and GIS (visualisation of geographical phenomena, mapping hydrological processes, atlas of small regions, mental maps, theory of thematic maps).

15.1 Staff

Head of the Department

Monika Mulková, PhD.

Deputy Head of the Department

Jana Bohdálková, PhD.

Office Manager

Pavlína Balonová

Teaching staff

Professors

Vladislav Kříž (till February 15, 2008)

Jozef Minár

Assoc. Professor

Tomáš Pánek

Milan Trizna

Assistant Professors

Martin Adamec

Radka Bartošová

Jana Bohdálková

Radek Dušek

Jan Hradecký

Jakub Miříjovský

Monika Mulková

Tomáš Rozehnal

Renata Sedláříková

Veronika Smolková
Karel Šilhán

External teachers

Libor Černíkovský
Kamil Drabina
Marek Drozdek
Otakar Holuša, PhD.
Monika Hradecká
Karel Hrnčíř
Jan Klečka, PhD.
Jarmila Krkošková
Karel Kupec
Jan Prášek
Jaroslav Rožnovský
Miroslav Řepka
Jan Sviták
Radim Tolasz, PhD.
Jan Unucka, PhD.
Roman Voženílek
Milan Žárník

PhD. students (staff)

Radka Bartošová

Major subject: Engineering geology
Thesis: Landslide process and structural geology in the Moravian-Silesian Beskid Mts.
Supervisor: Assoc. Prof. Radomír Grygar
End: 2010 (TU-VŠB Ostrava)

Martin Adamec

Major subject: Geoinformatics
Thesis: Hydrological modelling in the GIS environment.
Supervisor: Assoc. Prof. Jaromír Kaňok
End: 2008 (Faculty of Mining and Geology TU-VŠB Ostrava)

Jana Bohdálková

Major subject: Environmental Geography
Thesis: Accidental situations of watercourses pollution in the Odra River Basin and the upper Morava River Basin.
Supervisor: Prof. Vladislav Kříž
End: 2007 (Faculty of Science, OU Ostrava)

Renata Sedláříková

Major subject: Geoinformatics
Thesis: Retrospective analysis of landscape development with the use of Geoinformation technologies (GIT).
Supervisor: Assoc. Prof. Petr Rapant
End: 2007 (Faculty of Mining and Geology TU-VŠB Ostrava)

15.2 PhD. students

Antoš Ondřej
Bednář Marek
Dytrtová Karolína
Ferková Lenka
Frajer Jindřich
Herot Pavel
Hovorková Tamara
Komárková Veronika
Konupčík Radim
Miartuš Michal
Navrátil Lubor
Netopil Patrik
Novosák Jiří
Opršal Zdeněk
Pachrová Stanislava
Pichler Pavel
Smolková Veronika
Stojanov Robert
Svoboda Jan
Svobodová Jana
Šilhán Karel
Škarpich Václav
Švec Pavel
Tábořík Petr
Tomáš Martin
Volný Roman
Vondroušková Kamila

PhD. students who finished doctoral study in 2008

Jana Bohdálková, PhD. field Environmental Geography (supervisor: Prof. Kříž)
Accidental pollution of watercourses within the Odra River and Upper Morava River basins
Date: March 31, 2008

Aleš Ruda, PhD. field Environmental Geography (supervisor: Prof. Voženílek)
Assessment of tourism impact on landscapes of the Nízký Jeseník Mountains using GIS methods
Date: September 26, 2008

RNDr. Oldřich Hájek, PhD. field Environmental Geography (supervisor: Assoc. Prof. Siwek)
Environmental Aspects of Transport Provision in Zlín Agglomeration
Date: September 26, 2008

15.3 Study Programmes

Code of the study programme¹³⁾	Title of the study programme	Title of the study major¹⁴⁾	Length of the study¹⁵⁾			
			B	N,M	P	FS
B1301	Geography	Cartography and Geoinformatics	3			P
B1301	Geography	Physical Geography and Geoecology	3			P
B1601	Ecology and Environmental Protection	Landscape Protection and Formation	3			P
N1301	Geography	Physical Geography and Geoecology		2		P
N1601	Ecology and Environmental Protection	Landscape Protection and Formation		2		P
M1601	Ecology and Environmental Protection	Landscape Protection and Formation		5		P
P1301	Geography	Environmental Geography			3	P,K

15.4 Theses

Bachelor (Bc.) Theses

- BEDNÁŘOVÁ, Jitka. *The critical section analysis of roads in Moravian-Silesian region for migration of animals.* Supervisor: Popelková, Renáta
- BIČIŠTĚ, Václav. *Mapping with differential GPS with use of CZEPOS.* Supervisor: Dušek, Radek
- BORDOVSKÁ, Hana. *Frenštát Mine: Its Development, Present Operation and Integration into the Landscape.* Supervisor: Bartošová, Radka
- BRŠŤÁKOVÁ, Lucie. *Extreme precipitation events as the source of changes in landscapes.* Supervisor: Trizna, Milan
- CZEPCZOROVÁ, Beata. *Land use changes in the cadastral territory of Dolní Lomná.* Supervisor: Mulková, Monika
- ČECH, David. *Odra river basin streams hydrologic drought assessment.* Supervisor: Trizna, Milan
- DOBEŠ, Petr. *The Hydrological Survey of the Kletenský potok River Basin.* Supervisor: Bohdálková, Jana

¹³⁾ B – bachelor's degree programme, N - master's degree programme following bachelor's degree programme, M - master's degree programme, P - doctoral degree programme.

¹⁴⁾ B – bachelor's degree programme, N - master's degree programme following bachelor's degree programme, M - master's degree programme, P - doctoral degree programme.

¹⁵⁾ P – full time study, D – distance form of study, K – combined study form;

- DOBROVOLNÁ, Jitka. *History and present of seismic activity in the Hrubý Jeseník Mts.*. Supervisor: Bartošová, Radka
- DOKOUPIL, Stanislav. *Polyfurcation of territory Hvězda in Litovelské Pomoraví (historical cartographic research)*. Supervisor: Rozehnal, Tomáš
- FILIPCOVÁ, Petra. *The inventory of the phytocoenose of the tailings piles Ema and Odra*. Supervisor: Mulková, Monika
- GRECMANOVÁ, Iva. *Hydrological models and their use in physical geography*. Supervisor: Trizna, Milan
- HAJDA, Jakub. *Connecting surveys of the locality for the monitoring a water-course (river Morávka, Raškovice)*. Supervisor: Dušek, Radek
- HANÁKOVÁ, Lenka. *The hydrological survey of the Velký potok river basin*. Supervisor: Bohdálková, Jana
- HLÁVKOVÁ, Martina. *Floodplain geomorphology of the Olše river in the Jablunkovská brázda furrow*. Supervisor: Pánek, Tomáš
- HÖNIG, Robin. *Usage of close-range photogrammetry for monitoring stream bank erosion*. Supervisor: Dušek, Radek
- JANZOVÁ, Alice. *The occurrence of invasive plant species and their ecological demands in Divoká Orlice river-basin (Orlické hory Mountains PLA)*. Supervisor: Hradecký, Jan
- JUROSZEK, Waldemar. *Mapping of ZCHÚ Meandry Lučiny*. Supervisor: Adamec, Martin
- KASTNEROVÁ, Veronika. *Land use in the cadastral territories of Lazy u Orlové, Dolní Suchá and Prostřední Suchá in the 19th and at the beginning of the 21th century*. Supervisor: Popelková, Renáta
- KLEPKOVÁ, Romana. *Geomorphology of debris flows in massiv of the Slavič Mt. (The Moravskoslezské Beskydy Mts.)*. Supervisor: Šilhán, Karel
- KORCOVÁ, Ivana. *Data for creation of DMT in inundation areas*. Supervisor: Adamec, Martin
- KOŠTÁL, Jan. *Fluvial-geomorphological analysis of the Olše River (the reach: confluence with Odra river up to the bridge of road I/59)*. Supervisor: Hradecký, Jan
- KOTOUČ, Martin. *The Methodology of Assessing the Radon Risk with the Specific Research in the Village Dlouhá Loučka and its Surroundings*. Supervisor: Bartošová, Radka
- KOZELSKÝ, Vladimír. *Real fluvial-geomorphologic state of the Malý Lipový potok*. Supervisor: Hradecký, Jan
- KRÁLOVÁ, Marie. *Hydrological survey of the river Divoká Orlice basin*. Supervisor: Kříž, Vladislav
- KŘÍSTKOVÁ, Veronika. *Mapping of Reynoutria japonica alongside Čeladenka River*. Supervisor: Popelková, Renáta
- KRUPOVÁ, Michaela. *Meteorological situations and extreme meteorological phenomena*. Supervisor: Trizna, Milan

- KUBAČÁK, Pavel. *The geomorphologic analysis of active landslip in basin of the river Mazak (Moravskoslezske Beskydy)*. Supervisor: Pánek, Tomáš
- KUBENOVÁ, Jitka. *Comparison of land use in the first half of the 19th century with current situation via example within Hrčava and Bukovec u Jablunkova village cadasters*. Supervisor: Popelková, Renáta
- KUPČOVÁ, Kateřina. *Meteorological situations and extreme meteorological phenomena*. Supervisor: Trizna, Milan
- LENART, Jan. *Sedimentary cave fills of the Western Carpathians flysh area*. Supervisor: Bartošová, Radka
- MAJDOVÁ, Pavla. *Project of revitalization about part of water flow and pond in drainage area of Kobylí stream*. Supervisor: Hradecký, Jan
- MATRAS, Martin. *Development of ecological stress in space Benátky nad Jizerou*. Supervisor: Mulková, Monika
- MIČKA, Marek. *Land use changes in the cadastral territory of Horní Lomná*. Supervisor: Mulková, Monika
- MIKLÍN, Jan. *Atlas of Palava PLA*. Supervisor: Dušek, Radek
- NEDOPÍLEK, Vít. *Slope deformations in watershed Kostkov brook*. Supervisor: Pánek, Tomáš
- OZDINCOVÁ, Daniela. *The hydrological survey of the Řečice river basin*. Supervisor: Bohdálková, Jana
- PALONCYOVÁ, Monika. *Hydrogeology research of the river basin of Řečice river*. Supervisor: Bartošová, Radka
- PAVLOVSKÝ, Lukáš. *Pasport of woods and public greenery areas for the town of Vratimov*. Supervisor: Popelková, Renáta
- PEČ, Jan. *Real fluvial-geomorphologic state of The Velký Lipový potok*. Supervisor: Hradecký, Jan
- PSOTA, Karel. *The mapping of phytocoenosis of the tailings pile ema in ostrava*. Supervisor: Adamec, Martin
- ROZSÍVALOVÁ, Eva. *Mapping of quarries in the territory of The White Carpathians Protected Landscape Area*. Supervisor: Popelková, Renáta
- RUČKA, Filip. *Geodetic survey of meanders of the odra river - detail survey*. Supervisor: Dušek, Radek
- SEKEROVÁ, Petra. *Potentialities of intersection photogrammetry in physical-geographic survey*. Supervisor: Dušek, Radek
- SLAVÍK, Ondřej. *Data Processing of the Phytocoenosis Mapping of the Tailing Pile Odra in Ostrava*. Supervisor: Adamec, Martin
- STAŇKOVÁ, Barbora. *Atlas of the maps of the White Carpathian Protected Landscape Area*. Supervisor: Popelková, Renáta
- SYNKOVÁ, Radka. *Development of environmental stresses in the region of Přerov*. Supervisor: Mulková, Monika
- ŠPLÍCHAL, Jiří. *Winter Olympic Games 1924 to 2010 - the physiogeographical comparison of mountain regions*. Supervisor: Rozehnal, Tomáš

- TĚTHAL, Vladimír. *Climate situations and extreme meteorological phenomena.* Supervisor: Trizna, Milan
- TRUNEČKA, Karel. *The mapping of water wells and septic tanks.* Supervisor: Adamec, Martin
- VÁCLAVKOVÁ, Kateřina. *Wind characteristics of Ostrava Region.* Supervisor: Bohdálková, Jana
- VOZNICOVÁ, Tereza. *Changes in the land use in the cadastral territory of Morávka.* Supervisor: Mulková, Monika

Master (Mgr.) Theses

- BALCAR, Jan. *Detailed geomorphological analysis of landslide on the south slope of Mt. Kykula (Oščadnica).* Supervisor: Pánek, Tomáš
- DRASTICH, Lukáš. *Restoration of the landscape ecological stability in the cadastral territories of Darkovice and Hat'.* Supervisor: Hradecký, Jan
- FRANTIŠOVÁ, Markéta. *Worldwaterfalls - Production of the multimedia teaching aids.* Supervisor: Trizna, Milan
- HALOUZKOVÁ, Pavlína. *Incidence of occupational diseases in metallurgical works in Karviná district.* Supervisor: Hrnčíř, Karel
- HORÁK, Jaroslav. *Atlas of island Réunion.* Supervisor: Dušek, Radek
- INSPEKTOR, Tomáš. *Atlas of the Environment in Ostrava - part Land use.* Supervisor: Adamec, Martin
- KOMÁRKOVÁ, Veronika. *Geomorphological analysis of basin of the Satina River in the Moravskoslezské Beskydy Mts..* Supervisor: Pánek, Tomáš
- KROKEROVÁ, Kateřina. *Atlas of the environment in Ostrava - part Water.* Supervisor: Adamec, Martin
- MÁDLOVÁ, Šárka. *Check of management of protected areas using geoinformation technologies.* Supervisor: Popelková, Renáta
- MIČULKOVÁ, Jana. *Atlas of the Environment in Ostrava - part Air.* Supervisor: Adamec, Martin
- NÁHLÍK, Jiří. *Determination of infiltration using Green a Ampt method.* Supervisor: Adamec, Martin
- SMUTKOVÁ, Vendula. *Geomorphological analysis of the deep-slope deformations on the surrounding of Velký Stožek (Slezské Beskydy Mts.).* Supervisor: Pánek, Tomáš
- SUKENÍKOVÁ, Klára. *Atlas of Natural Sites of UNESCO - 2. Part (Asia).* Supervisor: Dušek, Radek
- SVOBODOVÁ, Lucie. *Determination of infiltration by means of SCS method.* Supervisor: Adamec, Martin
- ŠKARPICH, Václav. *Atlas of the environment in Ostrava - part the Old ecological burdens.* Supervisor: Adamec, Martin
- ŽÁKOVÁ, Veronika. *Atlas of the Moravskoslezské Beskydy Mts..* Supervisor: Dušek, Radek

15.5 Research Projects

Research projects in 2008 (filed in CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
J. Hradecký	GP205/06/P131	Geomorphic response of water streams to human disturbance in the area of Western Beskydy Mts	142
T. Pánek	GP205/06/P185	Comparison of morphotectonics and geomorphic effect of surface uplift in the culmination part of flysch Western Carpathians and the Crimean Mountains	216

15.6 Development Projects

Commercial contracts

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
M. Adamec	Ekoservis	Analysis of the Anthropological Effects in the Most Valued Parts of the Protected Landscape Area Jeseníky	166

15.7 Equipment

- L003 Geologic laboratory (Electric water-stage indicator, sensor PH, sensor for conductivity measurement, sensor for temperature measurement).
- L 203 Dendrogeomorphology laboratory (Dendrochronological TimeTable for measurement, binocular microscope, light device, software Bundled).
- L 204 Granulometry and sedimentology laboratory, (Impact hammer - Schmidt Hammer type L, Schmidt Hammer type N, complete granulometric set FRITSCH – shaking apparatus Analysette 3 and for, set of 9 granulometric sieve, ultrasonic purifier, electronic scales OHAUS, software AUTOSIEB, 1 PC).
- L 205 Photogrammetry and dynamic geomorphology laboratory (1 PC, software MicroStation, Z/I Imaging, drilling rig, geophysical set).
- L 303 Digital cartography laboratory (Plotter HP DesignJet 800 ps A1, printer HP DeskJet 1220C, digitizer Summagraphics A0-Mikrogrid III, 2 PC, ArcInfo 9.0).
- L 304 - Map archive (Hand held laser rangefinder, theodolite, geodetic GPS instruments, GTS 212 total station, hand held GPS Garmin).
- L 305 GIS laboratory (16 PC, dataprojector, software ArcGis 9.2, MicroStation v. 8 – 5 licences, Gramis 6).
- L 403 Remote sensing laboratory (21 PC, dataprojector BENQ, PCI Geomatica 9.1, TopoL Remote Sensing 5.5).
- L 404 1 Preparatory room RS (Scanner Umax PowerLock 2100 XL, printer Brother 1870, 1 PC, software PCI Geomatica 9.1, TopoL Remote Sensing 5.5).

15.8 Conferences and Seminars

- GIS Day, 150 participants (students and teachers from secondary schools), on November 20, 2008, Ostrava region and its neighbourhood.

15.9 Contacts and Cooperation

Cooperation with Universities and Research Institutes in the Czech Republic

- Faculty of Science, Charles University in Prague.
- Faculty of Forestry and Wood Technology, Mendel University of Agriculture and Forestry in Brno.
- Faculty of Science, Masaryk University in Brno.
- Faculty of Science, Palacky University in Olomouc.
- VŠB - Technical University of Ostrava VŠB-TU Ostrava.
- T.G. Masaryk Water Research Institute, branch office Ostrava.
- Czech Technical University in Prague.
- Czech hydrometeorological institute, branch office Ostrava.
- University of Defence in Brno.
- University of West Bohemia in Plzeň.
- University of South Bohemia in České Budějovice.
- Technical University of Liberec.
- Institute of Geonics AS CR, branch office Brno.

Cooperation with Universities and Research Institutes abroad

- Comenius University in Bratislava (Slovakia).
- Matej Bel University in Banská Bystrica (Slovakia).
- Institute of Geography, Slovak Academy of Science, Bratislava (Slovakia).
- Faculty of Earth Sciences, University of Silesia - Sosnowiec (Poland).
- Lviv State Ivan Franko University (Ukraine).
- University of Wroclaw, Wroclaw (Poland).
- University of British Columbia, Vancouver, (Canada).
- University of Tübingen, Tübingen (Germany).

Visits of Staff Members

Conferences 2008

Name	State	Place	Name of Conference	Date
Hradecký, J.	Romania	Brašov	Regional Conf. IAG	Sept. 14-20
Hradecký, J.	Japan	Tokyo	World Landslide Forum	Nov. 16-27
Pánek, T.	Romania	Brašov	Regional Conf. IAG	Sept. 14-20
Pánek, T.	Japan	Tokyo	World Landslide Forum	Nov. 16-27
Smolková, V.	Austria	Vídeň	Geosciences Union General Assembly	Apr. 14-17
Smolková, V.	Romania	Brašov	Regional Conf. IAG	Sept. 14-20
Šilhán, K.	Japan	Tokyo	World Landslide Forum	Nov. 16-27

Short stays abroad 2008 (less than 10 days)

Jméno	Stát	Místo	Název akce	Datum
Hradecký, J.	Poland	Warszawa	7 th Frame Programme	Jan. 30.-31
Hradecký, J.	Slovakia	Bratislava	Textbook	Nov. 12
Hradecký, J.	Poland	Krakow	Project Prepatation	Dec. 8
Kříž, V.	Slovakia	Bratislava	Scientific Board	Oct. 10

15.10 Membership in Professional Organisations

Jana Bohdálková, PhD.

- Czech Geographical Society.

Jan Hradecký, PhD.

- Czech Association of Geomorphologists,
- Czech Geographical Society,
- Czech Regional Organization of the International Association for Landscape Ecology,
- Regional Advisory Board of Agency for Nature Conservation and Landscape Protection of the Czech Republic (Moravian-Silesian Region).

Prof. Vladislav Kříž

- Czech Geographical Society.

Prof. Jozef Minár

- Slovak Association of Geomorphologists,
- Slovak Geographical Society.

Monika Mulková, PhD.

- Czech Society for Photogrammetry and Remote Sensing.

Tomáš Pánek, PhD.

- Czech Association of Geomorphologists,
- Czech Geographical Society.

Tomáš Rozehnal:

- Czech Geological Society,
- Czech Geographical Society,
- Czech Hydrogeologic Association.

Veronika Smolková

- Czech Geological Society,
- Czech Geographical Society,
- Czech Association of Geomorphologists,
- The Geological Society of America.

Karel Šilhán

- Czech Association of Geomorphologists

15.11 Publications

ARTICLES IN PERIODICAL PUBLICATIONS

- DANIŠÍK, M.; PÁNEK, T.; MATÝSEK, D.; DUNKL, I.; FRISCH, W. *Apatite fission track and (U-Th)/He dating of teschenite intrusions gives time constraints on accretionary processes and development of planation surfaces in the Outer Western Carpathians.* In: Zeitschrift für Geomorphologie, NF Hauptbände. ISSN 0372-8854, pp. 273-289.
- DUŠEK, R. *Creativity Course for Surveyors – 1st part.* In: Zeměměřič. ISSN 1211-488X, pp. 22-22. (In Czech)
- HRADECKÝ, J.; DĚD, M. *Present-day trends in sediment size composition of gravel bars of stream channels of the Moravskoslezské Beskydy Mts. – case study Sihelský potok Brook.* In: Geologické výzkumy na Moravě a ve Slezsku v.r. 2007. ISBN 978-80-210-4709-9. ISSN 1212-6209. pp. 20-24. (In Czech)
- HRADECKÝ, J.; PÁNEK, T. *Deep-seated gravitational slope deformations and their influence on consequent mass movements (case studies from the highest part of the Czech Carpathians).* In: Natural Hazards, Springer. ISSN 0921-030X, pp. 235-253.
- HRADECKÝ, J.; PÁNEK, T.; ŠVARC, J. *Geoecological Imprints Of Mass Movements On Habitats - Case Studies From The Czech Part Of The Western Carpathians (Czech Republic).* In: Moravian Geographical Reports. ISSN 1210-8812, pp. 25-35.
- MINÁR, J., EVANS, I.S. *Elementary forms for land surface segmentation: The theoretical basis of terrain analysis and geomorphological mapping.* In: Geomorphology 95 (2008) Elsevier. ISSN: 0169-555X, pp. 236–259.
- PÁNEK, T.; HRADECKÝ, J.; SMOLKOVÁ, V.; ŠILHÁN, K. *Gigantic low-gradient landslides in the northern periphery of the Crimean Mountains (Ukraine).* In: Geomorphology, Elsevier. ISSN 0169-555X, pp. 449-473.
- PÁNEK, T.; HRADECKÝ, J.; SMOLKOVÁ, V.; ŠILHÁN, K. *Giant ancient landslide in the Alma water gap (Crimean Mountains, Ukraine): notes to the predisposition, structure, and chronology.* In: Landslides, Springer. ISSN 1612-510X, pp. 367-378.
- SMOLKOVÁ, V.; PÁNEK, T.; HRADECKÝ, J. *Fossil landslide-dammed lake in the Babínek valley (Vsetínské vrchy Hills): contribution to understanding the Holocene relief development in the flysch Carpathians.* In: Geologické výzkumy na Moravě a ve Slezsku v roce 2007. ISSN 1212-6209, pp. 41-43. (In Czech)
- ŠILHÁN, K.; PÁNEK, T. *Research and occurrence debris flows accumulations in the Moravskoslezské Beskydy Mts.* In: Geologické výzkumy na Moravě a ve Slezsku v roce 2007. ISSN 1212-6209, pp. 74-76. (In Czech)
- ŠILHÁN, K. *Discovered lost city.* In: Země a cesty. pp. 10-12. (In Czech)
- UNUCKA, J., ADAMEC, M. *Modelling of the land cover impact on the rainfall-runoff relations in the Olše catchment.* Vodohospodarsky Casopis / Journal of Hydrology and Hydromechanics. 2008, roč. 2008, sv. 56, s. 257-271. ISSN 0042-790X. (In Czech)

ARTICLES IN PROCEEDINGS

- ADAMEC, M.; KAŇOK, J. *Geoinformatic support of rainfall-runoff modelling*. In: Sborník abstraktů výroční mezinárodní konference ČGS. Geografické dny Liberec 2008. ISBN 978-80-7372-367-5, pp. 80-80. (In Czech)
- BOHDÁLKOVÁ, J. *Solution to accidents of watercourses in Czech Republic*. In: Fyzickogeografický sborník 6. Fyzická geografie a trvalá udržitelnost. ISBN 978-80-210-4780-8, pp. 229-235. (In Czech)
- DUŠEK, R.; SKOŘEPA, Z. *Surface of Constant Accuracy in a Specific Direction - Visualization in MATLAB*. In: 16th Annual Conference Proceedings, Technical Computing Prague 2008. Technical Computing Prague 2008. ISBN 978-80-7080-692-0, pp. 28-28.
- HARTVICH, F.; MUGNAI, F.; PROIETTI, CH.; SMOLKOVÁ, V.; STROM, A. *A reconstruction of a former rockslide-dammed lake: the case of the Kokomeren River valley (Tien Shan, Kyrgyzstan)*. In: Geomorfologický sborník 7. Stav geomorfologických výzkumů v roce 2008. ISBN 978-80-86407-39-5, pp. 23-23.
- HRADECKÝ, J.; PÁNEK, T. *Geoecological Effects of Mass-movements on Habitats - the Case Studies from the Western Carpathians (Czech Republic)*. In: Proceedings of The First World Landslide Forum. The First World Landslide Forum., pp. 277-280.
- HRADECKÝ, J. *Application of automated particle sizing in the analyses of accumulation landforms of selected gravel-bed channels (Western carpathians, Czech Rep.)* In: Geomorfologický sborník 7. Stav geomorfologických výzkumů v roce 2008. ISBN 978-80-86407-39-5, pp. 16-17. (In Czech)
- HRADECKÝ, J. *Influence of Man-Made Barriers on Gravel Transport and Formation of Gravel Accumulations and Other Geomorphic Consequences (Western Carpathians, Czech Republic)*. In: Landslides, Floods and Global Environmental Change in Mountain Regions - Book of Abstracts. IAG Regional Conference on Geomorphology. ISBN 978-973-749-433-7, pp. 45-45.
- MÍŘIOVSKÝ, J.; PECHANEC, V. *Landscape knowledge-base for ecoton research*. In: Fyzická geografie a trvalá udržitelnost. ISBN 978-80-210-4780-8, pp. 214-218. (In Czech)
- MÍŘIOVSKÝ, J.; ŠTÁVOVÁ, Z.; VOŽENÍLEK, V. *Meta-description for e-learning courses preparation*. In: Pedagogický software 2008. ISBN 80-85645-59-9, pp. 247-249. (In Czech)
- MÍŘIOVSKÝ, J.; KAŇOK, J. *Cartographic research methods and their applications to ecoton changes evaluation*. In: Geo dny Liberec 2008. ISBN 978-80-7372-367-5, pp. 94-94. (In Czech)
- MÍŘIOVSKÝ, J.; DUŠEK, R. *Identification of Lineaments Based on Point Phenomena Occurrence - Mathematical Model*. In: 16th Annual Conference Proceedings, Technical Computing Prague 2008. Technical Computing Prague 2008. ISBN 978-80-7080-692-0, pp. 72-72.

- MIŘJOVSKÝ, J. *Survey of conditions about the utility of a GPS system as a source of geographical data in the České Švýcarsko national park.* In: Symposium GIS 2008. ISBN 978-80-254-1340-1, pp. 19-19. (In Czech)
- MULKOVÁ, M.; POPELKOVÁ, R. *The effects of deep hard coal mining on the landscape development in Lazy Allotment.* In: Implementation of Landscape Ecology in New and Changing Conditions. Proceedings of the 14th International Symposium on Problems of Landscape Ecology Research. 14th International Symposium on Problems of Landscape Ecology Research. ISBN 978-80-89325-03-0, pp. 295-302.
- PÁNEK, T.; HRADECKÝ, J.; SMOLKOVÁ, V.; ŠILHÁN, K. *Long-term evolution of deep-seated slope failure in the Crimean Mountains (Ukraine): Estimation based on radiocarbon dating and U/Th-series datings.* In: Landslides, floods and global environmental change in mountain regions - book of abstracts. IAG Regional Conference on Geomorphology. ISBN 978-973-749-433-7, pp. 78-78.
- PÁNEK, T.; HRADECKÝ, J.; SMOLKOVÁ, V.; ŠILHÁN, K. *Giant low-gradient landslides in the northern periphery of the Crimean Mountains: predisposition, structure, chronology and links to adjacent regions.* In: Proceedings of The first world landslide forum. The First World Landslide Forum., pp. 463-464.
- PÁNEK, T.; HRADECKÝ, J.; SMOLKOVÁ, V.; ŠILHÁN, K. *Giant Holocene landslides in the Crimean Mountains (Ukraine): types, distribution and predisposition.* In: Geophysical Research Abstracts, vol. 10, EGU General Assembly 2008. ISBN 1607-7962.
- HARTVICH, F.; MUGNAI, F.; PROIETTI, CH.; SMOLKOVÁ, V.; STROM, A. *A reconstruction of a former rockslide-dammed lake: the case of the Kokomeren River valley (Tien Shan, Kyrgyzstan).* In: Geophysical Research Abstracts, vol. 10, EGU General Assembly 2008. ISBN 1607-7962.
- SEDLÁRIKOVÁ, R.; MULKOVÁ, M. *Landscape changes visualization.* In: Sborník z 15. ročníku mezinárodního sympozia GIS Ostrava 2008. GIS Ostrava 2008. ISBN 978-80-254-1340-1, pp. 1-9 (číslo 83).
- SMOLKOVÁ, V.; PÁNEK, T.; HRADECKÝ, J. *Slope deformations in the valley floor: a source of information on the Holocene relief development.* In: Landslides, Floods and Global Environmental Change in Mountain Regions - Book of Abstracts. I.A.G. Regional Conference on Geomorphology. ISBN 978-973-749-433-7, pp. 98-98.
- SMOLKOVÁ, V.; PÁNEK, T.; HRADECKÝ, J. *Landslide dams in the flysch Carpathians: contribution to understanding the Holocene landscape.* In: ÚGN Ph.D. Workshop 2008 Proceedings. ÚGN Ph.D. Workshop 2008. ISBN 978-80-86407-51-7, pp. 55-59.
- SMOLKOVÁ, V.; PÁNEK, T.; HRADECKÝ, J. *Landslide dams in the Czech part of the Flysch Carpathians.* In: Geophysical Research Abstracts, vol. 10, EGU General Assembly 2008. ISSN 1607-7962, pp. 1-1.
- ŠILHÁN, K. *Predisposition slopes masive of the Slavíč Mt. (the Moravskoslezské Beskydy Mts.) to genesis of shallow slope deformations.* In: Fyzickogeografický sborník 6. Fyzická geografie a trvalá udržitelnost. ISBN 978-80-210-4780-8, pp. 253-257. (In Czech)

ŠILHÁN, K.; PÁNEK, T. *Preliminary results of debris flows historical chronology in the Moravskoslezské Beskydy Mts.* In: Geomorfologický sborník 7. Stav geomorfologických výzkumů v roce 2008. ISBN 978-80-86407-39-5, pp. 55-56. (In Czech)

ŠILHÁN, K.; PÁNEK, T. *Geomorphological evidence of fossil debris flows in the Czech part of the flysh Carpathians.* In: IAG regional conference on geomorphology, Landslides, floods and global environmental change in mountain regions - Book of Abstracts. IAG regional conference on geomorphology. ISBN 978-973-749-433-7, pp. 96-96.

ŠILHÁN, K.; PÁNEK, T. *Geomorphic Evidence of Debris Flows in Culmination Parts of the Czech Flysh Carpathians.* In: Proceedings of The first world landslide forum. The First World Landslide Forum., pp. 549-452.

MONOGRAPHIC PUBLICATIONS

PÁNEK, T. *Geomorphic Evolution of the Crimean Mountains: Surface Uplift and Decay of Mountains by Giant Landslides.* ISBN 978-80-7368-441-9.

PARTS OF MONOGRAPHIC PUBLICATIONS

MULKOVÁ, M.; POPELKOVÁ, R. *Cultural and Mining Landscapes: Different Changes and Different Methods to Evaluate the Landscape Development.* In: Geography in Czechia and Slovakia. Theory and Practice at the Onset of 21st Century. ISBN 978-80-210-4600-9, pp. 153-159.

- Complex investigation of the environment with focus on anthropogenic factors in industrial region.
- Evaluation of mutagenic and carcinogenic effects of contaminants using specific bacterial detecting systems, methods of genetic analysis.
- Chorology and ecology of mosses.
- Ecology of herbivorous insects. Ecology and systematics of mycophagous insects.
- Bioindication and biomonitoring of anthropogenic impact using invertebrate groups (Aranea, Odonata, Coleoptera).
- Population characteristics of ichtyocenoses of water streams and reservoirs in the Odra basin, anthropogenic influences on water ecosystems.
- Ecology and biology of native and invasive crayfish; systematics and ecology of crustaceans.

16.1 Staff

Head of the Department

Kateřina Malachová, Assoc. Professor

Deputy Head of the Department

Pavel Drozd, PhD.

Department Secretary

Pavel Drozd, PhD.

Office Manager

Petra Greplová

Teaching staff

Professors

Ján Gáper

Assoc. Professors

Zdeněk Ďuriš

Václav Krpeš

Bohumír Lojkásek

Kateřina Malachová

Assistant Professors

Šárka Cimalová

Aleš Dolný

Pavel Drozd

Petr Kočárek
 Svatava Kubicová
 Zdeněk Majkus
 Zuzana Pavlíčková
 Petr Pečínka
 Vítězslav Plášek
 Hana Sezimová
 Jan Ševčík
 Tomáš Tureček
 Michal Živný

Others

Ludmila Drobíková
 Ivona Horká
 Eva Martinkovská
 Jiří Červeň

Changes carried out during the course of 2008:

On September 1, 2008 Jan Ševčík, PhD.: teaching duty changed from 75 % to 100 %
 On September 1, 2008 Zdeněk Majkus: teaching duty changed from 100 % to 75 %
 On September 1, 2008 Jiří Červeň: became a full-time research worker.

16.2 Study Programmes

Code of the study programme ¹⁶⁾	Title of the study programme	Title of the study major ¹⁷⁾	Length of the study ¹⁸⁾			
			B	N,M	P	FS
B1501	Biology	Systematic Biology and Ecology	3			P
B1501	Biology	Applied ecology	3			P
B1501	Biology	Biology (double major degree programme)	3			P
N1501	Biology	Systematic biology and ecology		2		P
N1501	Biology	Teaching for Secondary Schools - Biology(double major degree programme)		2		P
N1501	Biology	Teaching for Secondary Schools - Biology		2		P
N7503	Teaching for Primary Schools	Teaching for Primary Schools – Biology (double major degree programme)		2		P
M7503	Teaching for Primary Schools	Teaching for Primary Schools - Biology		4		P

¹⁶⁾ B – bachelor's degree programme, N - master's degree programme following bachelof study programme,
 M - Master's degree programme, P – doctoral degree programme.

¹⁷⁾ Study programmes marked with an asterisk can (ordinarily) be studied only in a chosen study programme in pairs.

¹⁸⁾ P – full time study, K – combined study form, D – distance form of study;

Code of the study programme¹⁶⁾	Title of the study programme	Title of the study major¹⁷⁾	Length of the study¹⁸⁾		
M7504	Teaching for Secondary Schools	Teaching for Secondary Schools - Biology		5	P

16.3 Theses

Bachelor (Bc.) Theses

- BĚČÁKOVÁ, Kamila. *Study of spider communities in selected locations of protected landscape area of Beskydy*. Supervisor: Majkus, Zdeněk
- BENDOVÁ, Helena. *Occurrence and Ecology of Dragonflies (Odonata) in respect of Influence of Human Impact to River Odra*. Supervisor: Dolný, Aleš
- BÍLÁ, Michaela. *Amphibian monitoring, migration routes and barriers in the Přívrat ponds*. Supervisor: Lojkásek, Bohumír
- BOHÁČOVÁ, Michaela. *Wood-destroying fungi on woody plant species in the towns of Ústí nad Orlicí, Letohrad and Žamberk*. Supervisor: Gáper, Jan
- BRUS, Jan. *Distribution of mosses within Orthotrichaceae family in Ondřejník mountain range and their ecological requirements*. Supervisor: Plášek, Vítězslav
- BRZICOVÁ, Táňa. *Genotoxic risks of asphalt-tar materials*. Supervisor: Malachová, Kateřina
- ČERNÁ, Jana. *Bryoecological survey of species within the Orthotrichaceae family in valley of Opava river*. Supervisor: Plášek, Vítězslav
- ČÍHAL, Lukáš. *Comparison of historical and recent occurrence of epiphytic bryophytes in the Hrubý Jeseník mts.*. Supervisor: Plášek, Vítězslav
- DOLEŽÁLKOVÁ, Marie. *The population of Salamandra salamandra on the hill Kožná*. Supervisor: Lojkásek, Bohumír
- DROZDOVÁ, Lucie. *Bacterial tests in evaluation mutagenicity of contaminants of environment containing polycyclic aromatic hydrocarbons*. Supervisor: Malachová, Kateřina
- HOCHMANOVÁ, Tereza. *Evaluation of choice water revitalizations in the area of Dolní Moravice through dragonflies (Odonata)*. Supervisor: Dolný, Aleš
- HODEČEK, Jiří. *Ecological- faunistic characteristics of the communities of beetles (Coleoptera) at the coal - mine spoils*. Supervisor: Dolný, Aleš
- HRADILOVÁ, Jitka. *Bryoecological study of epiphytical bryophytes in frenštátská brázda (moravskoslezské beskydy)*. Supervisor: Plášek, Vítězslav
- JURÁKOVÁ, Jana. *The plant communities development on fallows*. Supervisor: Cimalová, Šárka
- KAŠKOVÁ, Jana. *The waterfowls of the ponds in the surroundings of Sezimovo Ústí and the river Lužnice*. Supervisor: Lojkásek, Bohumír
- KOVÁCSOVÁ, Andrea. *The alkylation of DNA and methods of DNA-damage detection*. Supervisor: Pečinka, Petr

- KRATOCHVÍLOVÁ, Petra. *Horticultural evaluation of Zinnia L. cultivars.* Supervisor: Tureček, Tomáš
- KRETOVÁ, Katarína. *Wood-destroying fungi on woody plants in selected parks of the town of Český Těšín, Karviná and Frýdek Mistek.* Supervisor: Gáper, Jan
- KŘÍŽEK, Martin. *Spatiae Distribution of Juvenile Fish in the Ostravice River in the Ostrava City.* Supervisor: Lojkásek, Bohumír
- KRUPAŘ, Matěj. *Taxocoenosis of invertebrates associated with mosses in the area of pražmo (beskydy mountains).* Supervisor: Drozd, Pavel
- LACHOVÁ, Zuzana. *Habitat preferences of carrion beetles: relation to forest or non-forest habitat.* Supervisor: Kočárek, Petr
- MAJTÁNOVÁ, Zuzana. *Reproduction of Rana dalmatina in swimming holes in northwest part of Suchdol forest, Protected Landscape Area Poodří.* Supervisor: Lojkásek, Bohumír
- MARKUŠ, Jan. *Utilization of basic toxicity tests for evaluation of qualities of surface waters.* Supervisor: Sezimová, Hana
- MARŠÁLKOVÁ, Karla. *Binding of a tumor suppressor p53 on open local structures in a superhelical DNA.* Supervisor: Pečinka, Petr
- MYNÁŘOVÁ, Michaela. *Iris Sibirica and Iris Japonica Plantation Evaluation.* Supervisor: Tureček, Tomáš
- PEŠKOVÁ, Markéta. *Seasonal changes in aquatic sowbug Asellus aquaticus (Crustacea: Isopoda) populations in Central Bohemia.* Supervisor: Šuriš, Zdeněk
- PLAČKOVÁ, Martina. *Influence of bacterial organisms on immobilised cultures of wood-rooting fungus Irpex lacteus.* Supervisor: Malachová, Kateřina
- PLASGURA, Lukáš. *Distribution and ecological preferences of bush-cricket Isophya pienensis in PLA Beskydy.* Supervisor: Kočárek, Petr
- PLUHÁČKOVÁ, Jana. *Evaluate mutagenicity of friction materials from brake linings by Ames test.* Supervisor: Malachová, Kateřina
- POKLEMBOVÁ, Petra. *Bryo-ecological study of the mosses within Orthotrichaceae family in valley of Bystřice stream.* Supervisor: Plášek, Vítězslav
- PROCHÁZKOVÁ, Zlatuše. *Quantitative composition of the ornithocenoses of the Vémyslice village in the course of a year.* Supervisor: Ševčík, Jan
- RYBOVIČOVÁ, Blanka. *Fomes fomentarius on Fagus sylvatica in Malenovický kotel Nature preserve.* Supervisor: Gáper, Jan
- ŘEZÁČOVÁ, Jana. *Composition of phytoplankton in selected ponds in PLA Poodří.* Supervisor: Plášek, Vítězslav
- STANÍKOVÁ, Denisa. *Summary of recent knowledge in Carpathian newt (Triturus montandoni, Boulenger, 1880).* Supervisor: Lojkásek, Bohumír
- ŠAFARČÍKOVÁ, Lucie. *Sequence-specific and sequence-nonspecific binding of tumor suppressor p53 on scDNA.* Supervisor: Pečinka, Petr
- ŠIFROVÁ, Helena. *On the occurrence of lizards of the family Lacertidae in the Ostrava region and their associated parasites.* Supervisor: Lojkásek, Bohumír

- ŠIMKOVÁ, Ivana. *The bryological-ecology study of bryophyta in npr kozol.* Supervisor: Plášek, Vítězslav
- ŠTEFÚNOVÁ, Kateřina. *Bryo-ecological study of the mosses within Orthotrichaceae family in Rožnovská pahorkatina highlands.* Supervisor: Plášek, Vítězslav
- VELČOVSKÁ, Martina. *Bank vegetation study of the Mohelnice River.* Supervisor: Cimalová, Šárka
- VIKTORYŇOVÁ, Jana. *Microhabitat preferences of Hermit beetle (*Osmoderma eremita*) in lime tree alleys in Šilheřovice with a proposal for species protection management.* Supervisor: Kočárek, Petr
- ZUMROVÁ, Kateřina. *Utilization of electro-chemical methods for DNA-damage detection.* Supervisor: Pečinka, Petr

Master (Mgr.) Theses

- BLAŠČOKOVÁ, Karin. *Possibilities exploitation ICT in education natural science on elementary school.* Supervisor: Kubicová, Svatava
- BRŠŤÁKOVÁ, Zdeňka. *Population ecology of Somatochlora alpestris and Somatochlora arctica (Insecta: Odonata) in the National nature reserve Rejvíz.* Supervisor: Dolný, Aleš
- BULVOVÁ, Hana. *The floristic study of the area eastern from Ivančice.* Supervisor: Cimalová, Šárka
- ČERVEŇ, Jiří. *Detection of mutagenicity and genotoxicity by means of changes in plasmid dna topology.* Supervisor: Pečinka, Petr
- HANIČINCOVÁ, Ivana. *Toxicity bioassays in the evaluation of contamination of contaminated water.* Supervisor: Malachová, Kateřina
- HUTYROVÁ, Bohdana. *Gonadosomatic and hepatopancreatic indexes by invasive crayfish *Orconectes limosus* in Czech Republic.* Supervisor: Ďuriš, Zdeněk
- JANOVÁ, Kateřina. *The influence of foxes vaccination on incidence of rabies of vertebrates in the Czech Republic.* Supervisor: Lojkásek, Bohumír
- JAŠÍK, Martin. *Taxocoenosis of arthropods associated with mosses in the area of třinec.* Supervisor: Drozd, Pavel
- KAPUŠOVÁ, Barbora. *Bats of Jeseník caves.* Supervisor: Lojkásek, Bohumír
- KLIMKOVÁ, Magdalena. *Classwork of natural science in concept creative school.* Supervisor: Kubicová, Svatava
- KOSTKOVÁ, Veronika. *The using of the cooperative teaching in the project lessons of natural science at the elementary school.* Supervisor: Kubicová, Svatava
- MIČKOVÁ, Petra. *Study of vegetation of exposed pond bottoms in protected landscape area Poodří and near surroundings.* Supervisor: Cimalová, Šárka
- NASTULCZYKOVÁ, Barbara. *Integration pedagogy to health to biological education on basic school.* Supervisor: Kubicová, Svatava
- PAZDEROVÁ, Barbora. *Dragonflies ecological evaluation of man-made water of the Jeseníky Mountains.* Supervisor: Dolný, Aleš

- POSPÍŠILOVÁ, Iva. *Ecological study of taxons Betula pendula and Betula pubescens in Litovelske Pomoravi Protected Landscape Area.* Supervisor: Cimalová, Šárka
- REISCHLOVÁ, Lucie. *Ecological analyse of araneae of selected locations of national park podyjí.* Supervisor: Majkus, Zdeněk
- ROTREKLOVÁ, Lucie. *Distribution and ecology of epiphytic bryophytes in the nature reserve údolí říčky (ochoz u brna).* Supervisor: Plášek, Vítězslav
- ŠIŠKOVÁ, Martina. *Modern Methods of teaching skeletal and muscular system at grammar schools.* Supervisor: Živný, Michal
- VACULÍKOVÁ, Petra. *Obesity at students on the basic and secondary schools and its causes.* Supervisor: Živný, Michal
- VAJDÍKOVÁ, Monika. *The structure and biological aspects of movement activity of children from primary and secondary schools.* Supervisor: Živný, Michal
- VÁVROVÁ, Iva. *The inventory bryophyte research in the area of Ostrava town.* Supervisor: Plášek, Vítězslav
- VONDŘEJC, Tomáš Ernest. *Monitoring of migration of selected carabid species.* Supervisor: Drozd, Pavel

16.4 Research Projects

Research projects in 2008 (filed in CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
M. Živný	GP404/08/P225	Anthropological and archaeological research of cemetery around St. Jacob's church in Brno, Czech Republic	215
Z. Ďuriš	IAA601870701	Factors influencing negative impact of invasive crayfish in the Czech Republic: migratory capability, reproduction, and pathogen transmission	224
B. Lojkásek	SPII2D1/9/07	The biological and ecological requirements of fishes: factors determining the function of fish ladders	232
P. Pečinka	IAA500040701	Interactions of wild type and mutant p53 proteins with damaged DNA and their roles in cellular response to anticancer chemotherapy	255
P. Drozd	GA206/07/0811	Host specificity and species diversity of bryophagous insect communities - key factors analysis	416
K. Malachová	GA106/07/1436	Friction materials based on polymer matrix containing metals and their impact on environment	545
H. Sezimová	SP/2e7/67/08	Identification of Anthropogenic Pressures at the Czech Part of the	136

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
		International Odra River Basin	

16.5 Development Projects

Development projects in 2008 (except of CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
V. Plášek	FRVŠ 2497/A/a	Setting up a Modern Multipurpose Laboratory for Interactive Teaching Botanical Disciplines	1412

Commercial contracts

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
V. Krpěš	Ekotoxa	Reduction of corporate function of the forest owing to potential impact of ground level ozone in relation to global change	48

16.6 Equipment

- C 608 Laboratory for Ecological Physiology and Anatomy of Plants including a Preparatory Room (Electrophoresis unit Biometry, Powersupply ELFO 200t and Cooling Set Heto CBN 8-30, Muffle furnace, Drying boxes HS62A, Thermostats, Analytical balances Sartorius, Dryer TS200, Microscope Zeiss, Rotation Mikrotome HS325, Sledge Mikrotome, Centrifuge, Rotation vacuum evaporator, Exhauster, Heating nests).
- C705, C705a Laboratory of Microbiology - (Incubators, sterilizers, centrifuges, shaking devices, microscopes, scales, stirrers, water bath, distilling apparatus, deep freeze box, flow box,).
- C 706 Laboratory of Toxicology and Genotoxicology (Lumistox 300, thermostat, water bath, Analytical balances, sterilizer, redistillation apparatus, spectrophotometer, vacuum evaporator, stirrer RZR 2020).
- C712, C713 Laboratory of Molecular Biology (deep freeze box, flow box, centrifuges, gradient cycler for PCR, scales, apparatus for vertical and horizontal electrophoresis, power supplies, thermomixer, documentation system, spectrophotometer, Autolab system)
- L 338 Laboratory of Invertebrate Zoology (Local fume chamber for all workplaces, Microscopes and binocular magnifying glasses, photostereomicroscope, project video-stereomicroscope, equipment for underwater video- and photo documentation, field multimeter).
- L 244 – Classroom – 24 PCs, data projector.
- L 429 – Classroom – data projector, PC, loudspeakers.

16.7 Conferences and Seminars

Conferences

- Environmental changes and biological assessment IV, April 10 - 11, 2008

Workshops

- Underwater life of the Biebrza River. Municipal Culture Center Meetings, Mońki, Poland. Zdeněk Ďuriš, Ivona Horká.
- Misleadings in quantitative ecology - České Budějovice, November 2008, 20 participants, lecturer: P. Drozd
- How many species live on Earth and how we know that? - Masaryk University Brno, 50 participants, lecturer: P. Drozd
- How many species live on Earth and how we know that? - ZOO Ostrava, 30 participants, lecturer: P. Drozd

16.8 Contacts and Cooperation

- Institute of Vertebrate Biology, v.v.i., Brno.
- Institute of Entomology, České Budějovice.
- Institute of Microbiology, AS CR, v.v.i. Prague
- Institute of Biophysics, AS CR, v.v.i. Brno
- National Museum in Prague.
- Museum of Beskydy in Frýdek-Místek.
- Silesian Museum in Opava (membership in the editorial board of the Journal of Silesian Museum).
- ZOO Ostrava.
- Silesian Museum - Arboretum Nový Dvůr.
- The Forestry and Game Management Research Institute, Frýdek-Místek.
- Masaryk University, Faculty of Science and Faculty of Social Studies.
- Palacký University Olomouc, Faculty of Science.
- Czech Botanical Society (membership in committee of Moravian-Silesian branch).
- T. G. Masaryk Water Research Institute, Prague, Ostrava.
- VŠB-Technical University of Ostrava.
- VŠCHT - Faculty of Food and Biochemical Technology, Prague.
- Charles University in Prague – Faculty of Science.
- Ostrava Museum.
- Institute of botany and zoology, biological section, FS, Masaryk University, Brno.
- Department of Biology, Ped.F., Masaryk University, Brno.
- Centre for young people interested in natural sciences: Stanice přírodovědců-Zařízení volného času Korunka, Ostrava.

Cooperation with Universities and Research Institutions abroad

- Faculty of Natural Sciences, Comenius University, Bratislava (Slovakia).
- Slovak University of Agriculture in Nitra, Horticulture and Landscape Engineering Faculty, Botanic garden (Slovakia).
- University in Lodž (Poland).
- Gdańsk University (Poland).
- University of Agriculture, Poznaň (Poland).

- Medical Institute Sosnowiec (Poland).
- Univerzitet Slaski Katowice (Poland).
- Maria Curie-Skłodowska University, Lublin. (Poland).
- US Nature Heritage Centre, Katowice (Poland).
- Editorial Board of the journal: ATH, Bielsko Biala (Poland).
- Edition Board of the journal: Silesia Natura (Poland).
- Coe College, Cedar Rapids, Iowa, (USA).
- Knox College, Galesburg, Illinois, (USA).
- Institute of Oceanography, Vietnamese Academy of Sciences and Technology, Nha Trang, (Vietnam).
- Institute of Evolutionary Biology, Russian Academy of Sciences, Moscow, Russia.
- University of Sofia (Bulgaria).
- Bryological Centre in Vierves sur Viroin (Belgium).
- University in Wroclaw (Poland).
- Warmińsko-Mazurská University in Olštyn (Poland).
- Durham University, (USA).
- Natural History Museum (London).
- Hungarian Natural History Museum (Budapest)
- Auburn University, Auburn, Alabama, USA

Visitors to the institute

- doc. RNDr. Eva Bulánková, CSc., Comenius University in Bratislava, Slovakia, TM Erasmus, April 7 – 11, 2008.
- Prof. Floyd Sandford, Coe College, Cedar Rapids, Iowa, USA, February 20 - 28, 2008
- Anna Jakubska, Uniwersytet Wroclawski, March 2008
- Zygmund Dajdok, Uniwersytet Wroclawski, March 2008
- Jadwiga Aniol-Kwiatkowska, Uniwersytet Wroclawski, March 2008

Visits of Staff Members

Conferences 2008

Name	Country	Place	Name of the Conference	Date
Majkus, Z.	Slovakia	Východná	Conference	Sept. 12-13
Plášek	USA	Alaska	4 th International Meeting on the Biology of Sphagnum	July 30-Aug. 16
Živný	Slovakia	Nitra	Prírodovedecké metódy v službách archeológie	June 2-5
Malachová, K.	Greece	Rhodos	EUROTOX 2008	Oct. 4-12

Short-term stays abroad 2008 (less than 10 days)

Name	Country	Place	Name of the Conference	Date
Drozd, P.	Slovakia	Runina	Field trip	June 16-22
Ďuriš, Z.	Poland	Prudnik	Field research	Apr. 3-6
Horká, I.	Poland	Prudnik	Field research	Apr. 3-6
Ďuriš, Z.	Poland	Narew River	Field research	May 1-9
Horká, I.	Poland	Narew	Field research	May 1-9

Name	Country	Place	Name of the Conference	Date
		River		
Lojkásek, B.	Slovakia	Runina	Field trip	June 16-22
Plášek, V.	Poland	Wigry	Field research	May 5-10
Ševčík J.	Hungary	Budapest	Synthesys project visit	Feb. 3-8
Ševčík J.	Slovakia	Poľana	Field research	May 12-16
Ševčík J.	Slovakia	Muráň	Field research (ATBI project)	Sept. 3-7

Long-term stays abroad 2008 (more than 10 days)

Name	Country	Place	Name of the Conference	Date
Ďuriš, Z.	Jordan	Aqaba	Research cooperation	June 8-26
Ďuriš, Z.	Vietnam	Nhatrang	Research cooperation	Aug. 8-Sept. 19
Horká, I.	Vietnam	Nhatrang	Research cooperation	Aug. 8-Sept. 19
Malachová, K.	Canada	Calgary	Research cooperation	Aug. 30-Sept. 11
Plášek, V.	Tajikistan	Duszanbe	Research cooperation	June 15-June 30
Ševčík J.	Great Britain	London	Synthesys project visit	Jan. 20-Feb. 2
Ševčík J.	Canada	Guelph	Research cooperation	June 10-25

16.9 Student Research Activities

- Jašík, Krupař - posters at the International Meeting on the Biology of Sphagnum
- Krupař - Environmental changes and their biological assessment

16.10 Membership in Professional Organizations

Šárka Cimalová

- Czech botanical society, member of the committee in Moravian-Silesian branch,
- Member of editing committee: Čas. the Silesian regional museum.

Aleš Dolný, PhD.

- IALE (International Association for Landscape Ecology),
- S.I.O. - Societas Internationalis Odonatologica.

Assoc. Prof. Zdeněk Ďuriš

- International Association of Astacology,
- Czech National Committee for cooperation with Intergovernmental Oceanographic Committee, UNESCO,
- Consultative committee for specialized program Crayfish of the Czech Union of Conservators of the Nature,

Petr Kočárek, PhD.

- Czech Entomological Society, Prague,
- The Orthopterists Society, Wyoming, USA.

Assoc. Prof. Kateřina Malachová

- J.G. Mendel Genetic Society,
- Czechoslovak Biological Society,

- European Environmental Mutagenesis Society,
- Biotechnological Society,
- International Biodeterioration and Biodegradation Society,
- Council for the European Conference for Molecular Biology,
- Editorial Board of the journal Auxilium Sociale-Wsparcie Społeczne.

Vítězslav Plášek, PhD.

- American Bryological Society (ABLS),
- British Bryological Society,
- BASEE (Bryological Association of SE Europe),
- Czech Botanical Society,
- Slovak Botanical Society,
- Edition Board of the journal: Magazine: Silesian Museum Opava,
- IAB (International Association of Bryologists).

Jan Ševčík, PhD.

- Czech Entomological Society, Prague
- Czech Society for Ornithology, Prague

Tomáš Tureček

- Association of Botanic Gardens in the Czech Republic.

16.11 Publications

ARTICLES IN IN PERIODICAL PUBLICATIONS

BEREZINA, N.; ĎURIŠ, Z. *Record of the invasive species Dikerogammarus villosus (Crustacea: Amphipoda) in the Vltava River (Czech Republic)*. In: Aquatic Invasions. ISSN 1818-5487, pp. 467-472.

BRÁZDOVÁ-JAGELSKÁ, E.; BRÁZDA, V.; PEČINKA, P.; PALEČEK, E.; FOJTA, M. *DNA topology influences p53 sequence-specific DNA binding through structural transitions within the target sites*. In: Biochemical Journal. ISSN , pp. 57-63.

DOLNÝ, A.; BÁRTA, D.; VESELÝ, M. *Mimikry u vážek aneb Čím se liší Bradinopyga cornuta*. In: Vesmír. ISSN 1214-4029, pp. 314-319.

DOLNÝ, A.; ĎURIŠ, Z. *Potápění jako součást zvláštní životní strategie vážek*. In: Živa. ISSN 0044-4812, pp. 220-222.

ĎURIŠ, Z.; HORKÁ, I.; MARIN, I. *Periclimenes sulcatus sp. nov., a new pontoniine shrimp (Crustacea: Decapoda: Palaemonidae) from Vietnam*. In: Zootaxa. ISSN 1175-5326, pp. 35-50.

ĎURIŠ, Z.; HORKÁ, I. *A new shrimp species of the genus Leptomenaeus Bruce, 2007 (Crustacea: Decapoda: Pontoniinae) from Vietnam*. In: Zootaxa. ISSN 1175-5326, pp. 45-58.

HARABIŠ, F.; DOLNÝ, A. *Red list of dragonflies (Odonata) of the Czech part of Silesia (2008)*. In: Čas. Slez. Muz. Opava (A). ISSN 1211-3026, pp. 31-36.

- HOLUŠA, J.; KOČÁREK, P. *The occurrence of Pterolepis germanica (Herrich-Schaeffer, 1840) in Slovakia (Orthoptera: Tettigoniidae)*. In: Acta Musei Moraviae, Scientiae biologicae (Brno). ISSN 1211-8788, pp. 1-6.
- JANKO, K.; DROZD, P.; FLÉGR, J.; PANDEL, J. *Clonal turnover versus clonal decay: A null model for observed patterns of asexual longevity, diversity and distribution*. In: Evolution. ISSN 0014-3820, pp. 1264-1270.
- KOČÁREK, P.; HOLUŠA, J.; VLK, R.; MARHOUL, P.; ZUNA-KRATKY, T. *Recent expansions of the bush-crickets Phaneroptera falcata and Phaneroptera nana (Orthoptera: Tettigoniidae) in the Czech Republic*. In: Articulata. ISSN 0942-7066, pp. 67-75.
- KOZUBÍKOVÁ, E.; PETRUSEK, A.; ĎURIŠ, Z.; MARTÍN, ; DIÉGUEZ-URIBEONDO, J.; OIDTMANN, B. *The old menace is back: Recent crayfish plague outbreaks in the Czech Republic*. In: Aquaculture. ISSN 0044-8486, pp. 208-217.
- KUČERA, J.; KUBEŠOVÁ, S.; PLÁŠEK, V. *Nová bryologická literatura XIX*. In: Bryonora. ISSN 0862-8904, pp. 34-43.
- MALACHOVÁ, K.; PAVLÍČKOVÁ, Z.; NOVOTNÝ, Č. *Detection of genotoxicity of biodegradation intermediates*. In: TOXICOL LETT. ISSN 0378-4274, pp. 190-190.
- MALACHOVÁ, K.; PRAUS, P.; PAVLÍČKOVÁ, Z.; TURICOVÁ, M. *Activity of antibacterial compounds immobilised on montmorillonite*. In: APPL CLAY SCI. ISSN 0169-1317.
- NĚMEČKOVÁ, I.; MRLÍK, V.; DROZD, P. *Timing of breeding, habitat preference and reproductive success of marsh harriers (Circus aeruginosus)*. In: Biologia. ISSN 0006-3088, pp. 261-265.
- NOVOTNÝ, Č.; VÁNDROVCOVÁ, M.; ŠUŠLA, M.; MALACHOVÁ, K. *Biological toxicity of pollutants measured by growth of basidiomycetous fungi*. In: Toxicol lett. ISSN 0378-4274, pp. 194-195.
- PLÁŠEK, V.; MARKOVÁ, I. *Orthotrichum pulchellum Brunt. In. New national a regional bryophyte records, 18*. In: J BRYOL. ISSN 0373-6687, pp. 163-164.
- PLÁŠEK, V.; CIMALOVÁ, Š. *Zajímavé botanické nálezy z regionu severní Moravy a Slezska I*. In: Čas. Slez. Muz. Opava (A). ISSN 1211-3026, pp. 45-48.
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CIMALOVÁ, Š.; CHYTRÝ, M.; LOSOSOVÁ, Z. *Local and regional factors determining species composition of Central European weed vegetation.* In: 17th International Workshop., pp. 27-27.

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KOČÁREK, P.; GRUCMANOVÁ, Š.; FILIPCOVÁ, Z.; BRADOVÁ, L.; PLÁŠEK, V.; HOLUŠA, J. *Mosses as a food component of groundhopper Tetrix ceperoi (Orthoptera: Tetrigidae).* In: 4th International Meeting on the Biology of Sphagnum. 4th International Meeting on the Biology of Sphagnum, pp. 9-9.

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LOSOSOVÁ, Z.; CIMALOVÁ, Š. *Native and alien weed species richness and diversity under different regime of disturbances.* In: 17th International Workshop European Vegetation Survey. 17th International Workshop European Vegetation Survey. ISBN 978-80-210-4585-9, pp. 71-71.

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MONOGRAPHIC PUBLICATIONS

DOLNÝ, A.; BÁRTA, D.; WALDHAUSER, M.; HOLUŠA, O.; HANEL, L. ET AL. 2007: *Vážky České republiky: Ekologie, ochrana a rozšíření / The Dragonflies of the Czech Republic: Ecology, Conservation and Distribution.* Vlašim: Český svaz ochránců přírody Vlašim, 672 pp. ISBN 978-80-86327-71-6.

PARTS OF MONOGRAPHIC PUBLICATIONS, ARTICLES

CHADWICK, N. E.; ĎURIŠ, Z.; HORKÁ, I. *Biodiversity of and behavior of shrimps and fishes symbiotic with sea anemones.* In: Aqaba-Eilat, the Improbable Gulf. Environment, Biodiversity and Preservation. ISBN 978-965-493-380-3, pp. 209-225.

ČERVEŇ, J.; PAVLÍČKOVÁ, Z.; PEČINKA, P. *Detection of genotoxicity by the means of DNA repair enzymes.* In: Environmental changes and biological assessment IV. ISBN 978-80-7368-451-8, pp. 17-20.

HOLUŠA, J.; KOČÁREK, P.; KONVIČKA, O. *Rovnokřídly hmyz (Orthoptera), švábi (Blattaria), škvoři (Dermaptera), kudlanky (Mantodea).* In: Louky Bílých Karpat. ISBN 978-80-903444-6-4, pp. 242-246.

KOČÁREK, P.; GRUCMANOVÁ, Š.; FILIPCOVÁ, Z.; BRADOVÁ, L.; PLÁŠEK, V.; HOLUŠA, J. *Bryophagy in the groundhopper Tetrix ceperoi (Orthoptera: Tetrigidae): analysis of alimentary tract contents.* In: Environmental changes and biological assessment IV. ISBN 978-80-7368-451-8, pp. 348-352.

KRPEŠ, V.; HRIVŇÁK, D. *Effect of reactive forms of oxygen within mesophyl tissues of the norwegian spruce picea abies.* In: Působení reaktivních forem kyslíku v mezofylových pletivech smrku ztepilého Picea abies. ISBN 978-80-7368-451-8, pp. 50-54.

MALACHOVÁ, K. *Cellular and subcellular levels of the effects of nanoparticles.* In: Environmental changes and biological assessment IV. ISBN 978-80-7368-451-8, pp. 64-69.

PAVLÍČKOVÁ, Z.; PEČINKA, P.; ČERVEŇ, J. *Oxidative damage of DNA induced in plasmid by the reactions with chemical agents.* In: Environmental changes and biological assessment IV. ISBN 978-80-7368-451-8, pp. 85-89.

PLÁŠEK, V.; ZMRHALOVÁ, M.; ČÍHAL, L. *Epiphytic mosses within Orthotrichaceae family in the Hrubý Jeseník Mts. A preliminary comparison of historical & recent data.* In: Environmental changes and biological assessment IV. ISBN 978-80-7368-451-8, pp. 163-169.

- SAWICKI, J.; PLÁŠEK, V.; SZCZECIŃSKA, M. *Testing candidate trnH-psbA noncoding plant barcode region in the Orthotrichum genus.* In: Environmental changes and biological assessment IV. ISBN 978-80-7368-451-8, pp. 170-177.
- ŠEVČÍK, J. *Síťokřídli (Neuroptera), střechatky (Megaloptera), srpice (Mecoptera).* In: Louky Bílých Karpat. ISBN 978-80-903444-6-4, pp. 254-255.
- TROMBIKOVÁ, K.; KOČÁREK, P. *There is not any influence of forest fragmentation on carrion beetles (Coleoptera: Silphidae) in agricultural landscape.* In: Environmental changes and biological assessment IV. ISBN 978-80-7368-451-8, pp. 381-385.
- ŽIVNÝ, M. *Antropologická analýza nalezených kosterních pozůstatků.* In: Vrána, J. Olomouc-Slavonín (U hvězdárny). Mladohradištní pohřebiště. ISBN 978-80-86989-13-6, pp. 17-34.

17 Department of Human Geography and Regional Development

Research activities

- **Geopolitical, Geocultural and Geoeconomic Processes Across the World** (politics and geopolitical conceptions, religions and geocultural conceptions, relationship between nations and state authorities, international migration, conflicts, foreign relations and international law, geo-economics trends and integration processes). Applied research focused particularly on post-communist and communist area of Eurasia in the context of globalization processes (case studies).
- **Innovative Concepts and Approaches to the Development of Towns and Regions** with the emphasis on the role of institutions in local and regional development (regional policy, territorial marketing and management in the development of towns and regions, regional governance and regional innovative systems). Applied research focused on Moravian-Silesian Region as an industrial and border region in the context of the Czech Republic and EU (structural analysis, disparity, institutions and participants, processes, and evaluation).
- Didactic Problems in Geography, Application of the European Dimension in All Types of Schools.

17.1 Staff

Head of the Department

Petr Rumpel, PhD. (till March 30, 2008)
Vladimír Baar, Assoc. Professor (since April 1, 2008)

Deputy Head of the Department

Petr Rumpel, PhD. (from April 1, 2008)

Department Secretary

Monika Šumberová

Office Manager

Jiřina Kučerová

Teaching staff

Professors

Jaroslav Vencálek
Arnošt Wahla (till August 31, 2008)
Robert Ištok

Associate Professors

Vladimír Baar
Jan Havrlant
Tadeusz Siwek
Petr Šindler

Assistant Professors

Pavel Bednář
Tomáš Boruta
Tomáš Drobík
Vincenc Kopeček
Martin Kovář
Luděk Krtička
Přemysl Mácha, PhD.
David Walter Novák, PhD.
Petr Rumpel, PhD.
Kateřina Sidiropulu Janků, PhD. (till August 31, 2008)
Ondřej Slach
Monika Šumberová
Petr Wilam (till August 31, 2008)
Petr Žufan, PhD.

Research project managers

Tomáš Boruta
Ondřej Slach

External teachers

Irena Eibenová
Klaudia Eibenová
Hana Chlebečková
Václav Jurečka, Professor
Jiří Krhut
Jan Malinovský, PhD.
Jiří Novosák
Petra Psíková
Svatava Rumpelová
Lenka Říhová
Kateřina Sidiropulu Janků, PhD. (since September 1, 2008)
Robert Stojanov
Eva Šmidáková
Lubor Tvrď, PhD.
Arnošt Wahla, Professor (since September 1, 2008)
Petra Žižlavská

17.2 PhD. Students

Antal Daniel
Boháč Artur
Böhm Hynek
Hoch Tomáš
Houdková Zuzana
Jiránek Jan
Kopeček Vincenc
Knotová Ludmila
Madleňák Tibor
Mečiar Jozef

Ottmář Aleš
 Pokrupová Michaela
 Šerý Miloslav
 Vomočilová Lucie

17.3 Study Programmes

Code of the study programme¹⁹⁾	Title of the study programme	Title of the study major²⁰⁾	Length of the study²¹⁾			
			B	N,M	P	FS
B1301	Geography	Political and Cultural Geography	3		P	
B1301	Geography	Social Geography and Regional Development	3		P	
B1301	Geography	Geography and Regional Development	3		P,K	
B1301	Geography	Geography (double major degree programme)	3		P	
N1301	Geography	Political and Cultural Geography		2	P	
N1301	Geography	Social Geography and Regional Development		2	P	
N1301	Geography	Geography and Regional Development		2	P	
N1301	Geography	Teaching Geography for Secondary Schools (double major degree programme)		2	P	
N1301	Geography	Teaching Geography for Secondary Schools (single major degree programme)		2	P	
N7503	Teaching for Primary Schools	Teaching Geography for Primary Schools (double major degree programme)		2	P	
M1301	Geography	Geography		5	P	
M1301	Geography	Political and Cultural Geography		5	P	
M1301	Geography	Teaching Geography for Secondary Schools		5	P	
M7503	Teaching for Primary Schools	Teaching Geography for Primary Schools		4	P	
M7504	Teaching for Secondary Schools	Teaching Geography for Secondary Schools		5	P	
P1301	Geography	Political and cultural Geography			3	P,K

¹⁹⁾ B – bachelor's degree programme, N - master's degree programme following bachelor's degree programme, M - master's degree programme, P - doctoral degree programme.

²⁰⁾ Study programmes marked with an asterisk can (ordinarily) be studied only in a chosen study programme in pairs.

²¹⁾ P – full time study, D – distance form of study, K – combined study form;

17.4 Theses

Bachelor (Bc.) Theses

- BAJEROVÁ, Lenka. *Rural Development on the Example of Poodří*. Supervisor: Novák, David Walter
- BEZDĚKOVÁ, Eva. *Quebec question as an example of ethnic conflict*. Supervisor: Siwek, Tadeusz
- BÍLKOVÁ, Barbora. *Geopolitical position of China in Africa*. Supervisor: Kovář, Martin
- CUDLÍN, Jiří. *Mandeism - Cultural-geographical Analysis*. Supervisor: Baar, Vladimír
- CYMOREK, Petr. *Kyrgyzstan - Integration Processes and Threat of Islamic Fundamentalism*. Supervisor: Kovář, Martin
- CZYŽ, Pavel. *Land use conflict in the municipalities Trojanovice and Frenštát - coal mining vs. interests of citizens*. Supervisor: Rumpel, Petr
- ČERNOBILA, Vladan. *Analysis of natural and migrational dynamics of population in region Zlín*. Supervisor: Vencálek, Jaroslav
- DĚDKOVÁ, Ilona. *The Geopolitical Position of Morocco*. Supervisor: Kovář, Martin
- DRÁŽNÁ, Barbora. *The specifics of fair and congressional tourism in the Czech Republic*. Supervisor: Havrlant, Jan
- DUSBABA, Jan. *Rural Development on the Example of Krkonoše*. Supervisor: Novák, David Walter
- FABÍK, Tomáš. *Analysis of natural and migrational dynamics of population in districts Třebíč, Jihlava*. Supervisor: Vencálek, Jaroslav
- FIŠER, Vít. *The boundary dispute between Ecuador and Peru*. Supervisor: Wilam, Petr
- FOJTÍK, Petr. *Western Balkan in the Preparation Process of Entrance into the EU*. Supervisor: Baar, Vladimír
- GAJDUŠEK, Jiří. *Contemporary urbanization processes in Beskydy region case study: Čeladná and Ostravice*. Supervisor: Bednář, Pavel
- GBELEC, Peter. *Aspects of migration from Africa to Spain*. Supervisor: Sidiropulu Janků, Kateřina
- HAMPLOVÁ, Iveta. *The influence of regional airports on regional development on example Leoš Janáček's airport*. Supervisor: Boruta, Tomáš
- JINDROVÁ, Petra. *Analysis of the Crisis in the Ivory Coast*. Supervisor: Kovář, Martin
- KOLAŘÍK, Petr. *Transformation of Tourism Infrastructure in the Jeseníky Region*. Supervisor: Havrlant, Jan
- KOLÁŘOVÁ, Veronika. *Comparation of the autonomic suits on the archipelagos Zanzibar and Comores*. Supervisor: Kovář, Martin

- KOLÍNEK, Ondřej. *Aspects of reforms in the French overseas departments.* Supervisor: Kovář, Martin
- KRESTA, Jan. *Industrial zones as the factors of regional development (on the example of the Frydek-Místek district).* Supervisor: Havrlant, Jan
- KRPCOVÁ, Martina. *Regional Aspects of Labour Market in Frýdlant nad Ostravici Region.* Supervisor: Wilam, Petr
- KUBIZNÁK, Pavel. *The Geopolitics of Oil.* Supervisor: Šumberová, Monika
- KUČEROVÁ, Kateřina. *Apartment housing and internal social spatial structure of the Ostrava-Poruba urban district.* Supervisor: Bednář, Pavel
- KUNCOVÁ, Petra. *Movement of resistance - Earth First!* Supervisor: Drobík, Tomáš
- LHOTOVÁ, Jana. *Geographical Analysis of Industrial Structures in Semily Region.* Supervisor: Wilam, Petr
- LIČKOVÁ, Daniela. *Analysis of elections - geographical factors and election preferences.* Supervisor: Šumberová, Monika
- LINDOVSKÝ, Martin. *Public services on the real estate Ostrava-Dubina and Ostrava-Bělský Les.* Supervisor: Sidiropulu Janků, Kateřina
- MACHÁČEK, Jan. *UNPO - the Platform of Stateless Nations.* Supervisor: Baar, Vladimír
- MACHOVIČOVÁ, Renata. *Conversion of traffic structures for needs of cycling infrastructure.* Supervisor: Boruta, Tomáš
- NOVOTNÝ, Jan. *Development of Public Transport in Rural Regions.* Supervisor: Boruta, Tomáš
- PAVLÍKOVÁ, Jana. *Movements of Resistance against Missile Tracking Radar Base in Brdy.* Supervisor: Drobík, Tomáš
- PAVLIŠTÍKOVÁ, Dana. *Opposition groups in Saudi Arabia.* Supervisor: Drobík, Tomáš
- PETROVÁ, Kateřina. *Public services on the real estate Svitavy-Lány.* Supervisor: Sidiropulu Janků, Kateřina
- POBOŘILOVÁ, Marcela. *Specifics of African democracies.* Supervisor: Kovář, Martin
- POBOŘILOVÁ, Marie. *Diasporical world structures - Jews.* Supervisor: Drobík, Tomáš
- POLÁŠEK, Jan. *The geopolitical importance of maritime narrows.* Supervisor: Šindler, Petr
- PŠENICA, David. *Local territory conflicts in the Czech Republic - Building of hypermarket in Unicov.* Supervisor: Šumberová, Monika
- RICHTAR, Jan. *Case study of migration policies in Denmark.* Supervisor: Šumberová, Monika
- ROŽNOVSKÁ, Jana. *Movements of Resistance - Zapatistas in Chiapas.* Supervisor: Drobík, Tomáš

- RUBINA, David. *Analysis of natural and migrational dynamics of population in districts Břeclav, Hodonín, Znojmo.* Supervisor: Vencálek, Jaroslav
- STACHOŇOVÁ, Martina. *Geographical Analysis of Industrial Zones in Kroměříž Region.* Supervisor: Wilam, Petr
- STEPEK, Viktor. *Retail network in small municipalities in Easter rear city Ostrava.* Supervisor: Bednář, Pavel
- STRZELCOVÁ, Kateřina. *Aspects of relations of Himalayan kingdoms Nepal and Bhutan to "people" of China.* Supervisor: Kovář, Martin
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- VALOVÁ, Jana. *Evolution and influence of nationalism to panarabic integrations.* Supervisor: Kovář, Martin
- VICHÁNKOVÁ, Danuše. *Contemporary residential development in the Ostrava agglomeration.* Supervisor: Bednář, Pavel
- VITÁSKOVÁ, Eliška. *The analysis of natural and migration dynamic of inhabitants in Olomouc Region in years 1981-2005.* Supervisor: Vencálek, Jaroslav
- VOLKMEROVÁ, Petra. *Housing and residential preferences of the engineering students at the Faculty of Electrical Engineering and Computer Science VŠB-Technical University of Ostrava.* Supervisor: Bednář, Pavel
- ZAHNAŠOVÁ, Radka. *CEFTA - foregoing step to integration with EU.* Supervisor: Siwek, Tadeusz
- ZAJÍCOVÁ, Zuzana. *Cycling transport in cities: instance of Ostrava city.* Supervisor: Boruta, Tomáš
- ZIMA, Jiří. *Rural Development on the Example of Broumovsko.* Supervisor: Novák, David Walter
- ZOMBORI, János. *Analysis of natural and migrational dynamics of population in districts Žďár nad Sázavou, Havlíčkův Brod.* Supervisor: Vencálek, Jaroslav
- ŽITNÍK, Petr. *Cultural Events and Festivals in the City of Ostrava.* Supervisor: Slach, Ondřej

Master (Mgr.) Theses

- ALBRECHT, Michal. *Political changes in Hungary after 1990.* Supervisor: Žufan, Petr
- ANDĚL, Milan. *Image and Reality of Destination Management in Moravian-Silesian Region.* Supervisor: Rumpel, Petr
- ANTAL, Daniel. *The United Nations peace operation as the approach to the international conflict management.* Supervisor: Šumberová, Monika
- BARNA, Lukáš. *Social and political changes in Slovenia after 1991.* Supervisor: Žufan, Petr
- BENEŠOVÁ, Veronika. *Restructuring of manufactory industry in Frýdek-Místek microregion..* Supervisor: Havrlant, Jan
- BOHÁČ, Artur. *The Position of Christian Minorities in Islamic Countries of the Middle East.* Supervisor: Baar, Vladimír
- CITNAROVÁ, Veronika. *Political scene in Democratic republic of Congo.* Supervisor: Kovář, Martin
- CVIKÝŘOVÁ, Vendula. *Evaluation of application of the city marketing - case study of the town Münster and Osnabrück.* Supervisor: Rumpel, Petr
- ČAPKOVÁ, Lucie. *The Natural Range of Lednice-ValticeRegion as a Social-Cultural Phenomenon of the Local Scenery.* Supervisor: Vencálek, Jaroslav
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- FOLTÝNOVÁ, Veronika. *Geography of the Amish Society.* Supervisor: Siwek, Tadeusz
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- HENNEBERG, Pavel. *Industry restructuralization in the Pardubice region.* Supervisor: Havrlant, Jan
- HLÁSNÁ, Kristina. *Geographical Aspects of Organic Farming in Náchod District.* Supervisor: Žufan, Petr
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- HURTÍK, Roman. *The euroregions on the Czech-Polish border in Moravian-Silesian Region - the analysis of the cross-border cooperation problematic spheres.* Supervisor: Wilam, Petr
- HÚSEK, Pavel. *Development of the internal area structure of Uherské Hradiště town.* Supervisor: Šindler, Petr
- HÝBLOVÁ, Pavlína. *Taiwan's Way to Democracy: Impetus and Impediments.* Supervisor: Šumberová, Monika
- CHLUD, Lukáš. *Analysis of documents dealing with traffic infrastructure on the example of Zlín region.* Supervisor: Boruta, Tomáš

- CHRÁPKOVÁ, Andrea. *The Importance of the Local Action Groups for the Rural Development in the Moravian-Silesian Region.* Supervisor: Žufan, Petr
- CHUDÁ, Gabriela. *Political-geographical processes in Black Africa as the subject of education at primary school.* Supervisor: Kovář, Martin
- JANEČEK, Přemysl. *Industry restructuring in Zlín region.* Supervisor: Havrlant, Jan
- KAŠPAR, Roman. *Social and political changes in Slovakia after 1993.* Supervisor: Žufan, Petr
- KLAMKOVÁ, Veronika. *Possibilities of Travel Movement Development in Recreation Area of Staré Hamry - Grúň - Bílá - Bílý Kříž.* Supervisor: Havrlant, Jan
- KLOSOVÁ, Kateřina. *Possibilities of development of choice tourism forms in Vrbno, Albrechtice and Osoblaha recreation areas.* Supervisor: Havrlant, Jan
- KNOTOVÁ, Ludmila. *The role of microregions and regional managements in Zlín region.* Supervisor: Rumpel, Petr
- KOHLOVÁ, Lucie. *Human Rights in Asia - Case Study of India.* Supervisor: Kovář, Martin
- KOLÁŘ, Jiří. *Geographical Analysis of Elections in present Germany.* Supervisor: Siwek, Tadeusz
- KOŘÍNKOVÁ, Markéta. *Image of the town Nový Jičín.* Supervisor: Šindler, Petr
- KOSTELNÍKOVÁ, Veronika. *Perception of the regional merits by inhabitants of the microregion Frenštátsko.* Supervisor: Vencálek, Jaroslav
- KOŽUSZNÍK, Jiří. *Nation and Nationalism: Theories, Development and Potential in Sub-Saharan Africa.* Supervisor: Kovář, Martin
- KRAJČOVÁ, Jana. *Changes of Dynamic of Inhabitants in Moravian-Silesian Region in Years 1971-2005.* Supervisor: Vencálek, Jaroslav
- KREJSOVÁ, Dana. *The influence of education on regional development with Warwickshire (England) as an example.* Supervisor: Tvrdý, Lubor
- KUKAČKOVÁ, Lenka. *Geopolitics in film: Behind Enemy Lines I., Black Hawk Down and Tears of the Sun.* Supervisor: Drobík, Tomáš
- LAŠTUVKOVÁ, Lucie. *Geographical characterization of Maghrebian countries during education of crucial competences.* Supervisor: Kovář, Martin
- LAZAROVÁ, Martina. *Urban retailing structure in Opava.* Supervisor: Bednář, Pavel
- LYČKOVÁ, Lenka. *Common Integration Policy of the European Union.* Supervisor: Baar, Vladimír
- MACKOVÁ, Lenka. *Perspectives of tourism development in Slezská Harta - Kružberk recreation area.* Supervisor: Havrlant, Jan
- MATAL, Ondřej. *The Hungarian Minority in Slovakia after 1989.* Supervisor: Siwek, Tadeusz
- MATĚJKOVÁ, Dagmar. *Geographical aspects of organic farming in Uherské Hradiště district.* Supervisor: Žufan, Petr
- MUSILOVÁ, Kateřina. *ETA - Basque Fatherland and Liberty.* Supervisor: Kopeček, Vincenc

- NOVOTNÁ, Aneta. *Development possibilities of tourist trade in Liberec county.* Supervisor: Wilam, Petr
- OTTMÁR, Aleš. *The Shanghai Cooperation Organization.* Supervisor: Baar, Vladimír
- OVČAČÍKOVÁ, Pavlína. *The Model solution of thematic field of the Framework educational programme "Ecosystems".* Supervisor: Vencálek, Jaroslav
- PAVLICOVÁ, Romana. *Image of Microregion Rožnov pod Radhoštěm.* Supervisor: Havrlant, Jan
- POKRUPOVÁ, Michaela. *Sociocultural adaptation and its transnational aspects. Case study of international protection seeker from Syria.* Supervisor: Sidiropulu Janků, Kateřina
- POLÁŠOVÁ, Veronika. *Globalization of the passenger air service.* Supervisor: Bednář, Pavel
- PRCHALOVÁ, Hana. *The Retail Network in Karvina.* Supervisor: Bednář, Pavel
- PŘÍVRATSKÝ, Jan. *Industrial Area in Trutnov and its Influence on Development of the Microregion.* Supervisor: Wilam, Petr
- RÝPAROVÁ, Michaela. *The retail network of Přerov.* Supervisor: Bednář, Pavel
- ŘEZNIČKOVÁ, Lucie. *Analysis of Producer Services in Ostrava.* Supervisor: Rumpel, Petr
- SERBOUSEK, Pavel. *Geographical analysis of industrial structures shown on Náchod and Trutnov regions during transformation period.* Supervisor: Wilam, Petr
- SKÁLA, Aleš. *Social and Economic Analysis of Border Microregion Hanušovicko.* Supervisor: Wilam, Petr
- SLAVÍKOVÁ, Hana. *Suburbanization processes in the southwest part of Ostrava city hinterland.* Supervisor: Bednář, Pavel
- STARZYKOVÁ, Lenka. *Housing Problematic and the Collective Housing's Situation on the Example of Český Těšín City.* Supervisor: Bednář, Pavel
- SVOBODA, Jiří. *Analysis of EU air passenger transport development.* Supervisor: Wilam, Petr
- SÝKOROVÁ, Lucie. *Public Participation and the Role of NGO's in Local and Regional Development.* Supervisor: Rumpel, Petr
- ŠIŘINA, Jan. *Development possibilities of selected types of tourism in Karviná region.* Supervisor: Havrlant, Jan
- ŠTĚPÁN, Jiří. *Socioeconomical impacts of the D47 highway construction to the Odersko microregion and its surroundings (Case study of the microregion - analysis of the selected characteristics).* Supervisor: Sidiropulu Janků, Kateřina
- ŠŮLA, Jiří. *Boundaries - recessive or transforming phenomenon?.* Supervisor: Drobík, Tomáš
- TONKOVIČ, Ondřej. *An internet usage in the climatology lesson at primary school.* Supervisor: Wahla, Arnošt
- TRIGAS, Paskal. *Local and Global Terrorism.* Supervisor: Kopeček, Vincenc

- VAŠÍČEK, Lukáš. *Comparison of housing policy and urban planning of Shanghai and Singapore: a lesson for the Czech Republic?* Supervisor: Bednář, Pavel
- VICHOVÁ, Veronika. *Geographic analysis of election in Italy.* Supervisor: Siwek, Tadeusz
- VOBORNÝ, Miloš. *Active policy of employment rate in Czech republic on case region Znojmo.* Supervisor: Wilam, Petr
- VOMOČILOVÁ, Lucie. *Influence of industrial zones on development of Pardubice county.* Supervisor: Wilam, Petr
- VYSKOČILOVÁ, Eva. *The use of electronic information resources for the regional geographic education of Western Europe.* Supervisor: Žufan, Petr
- WALACHOVÁ, Pavlína. *Labour market in Karviná region.* Supervisor: Wilam, Petr
- WITTKOVÁ, Veronika. *Russian Economic Relations with Near Foreign Countries.* Supervisor: Baar, Vladimír
- ŽALUDOVÁ, Michaela. *Perspectives of Wine Tourism Development in Region Slovácko.* Supervisor: Havrlant, Jan

17.5 Research Projects

Research projects in 2008 (filed in CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
P. Žufan	MEB 090630	Organic farming as development potential for rural areas	27
P. Rumpel	GECRP/07/E005	Constructing Regional Advantage: Towards State-of-the-Art Regional Innovation System Policies in Europe?	220
P. Rumpel	WD-61-07-1	The role of soft localizing factors within eliminating regional disparities in two structurally affected regions - Ostrava and Ústí nad Labem region.	642
P. Rumpel	WD-35-07-1	Complex regional marketing as concept of the development of the rural peripheral region Jeseníky.	1243

17.6 Development Projects

Development projects in 2008 (except of CEP – Central evidence of projects)

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
M. Šumberová	CZ.04.1.03/3.2.15.3/0439	Innovation and internationalization of selected study programmes at University of Ostrava	1434

Commercial contracts

Coordinator	Provider (agency)	Project title	Grant (ths. CZK)
K. Janků	ÚGN AVČR	Socio-spatial consequences of demographic change in East European Cities, the case of Ostrava, Czech Republic	128

17.7 Equipment

For study purposes:

- one fully equipped multimedia showroom (data projector, video recorder, TV, document camera),
- 3 classrooms equipped with data projector and loud-speakers,
- portable data projector,
- high speed Wi-Fi internet connection covering the whole building,
- study library equipped with down-to-date publications (monographic and periodical) lounges for students.

For research purposes:

- Software equipment (SPSS, ArcView, Corell, OCAD),
 - company car for field research,
 - camera,
 - dictaphones,
- access to specialized research databases.

17.8 Contacts and Cooperation

Cooperation with Universities and Research Institutes in the Czech Republic

- West Bohemian University Plzeň, Faculty of Economics, Centre of Regional Development (Jiří Ježek).
- Technical University Ostrava, Faculty of Economics, Department of European Integration (Assoc. Prof. Karel Skokan), Department of Regional Economics (Jan Malinovský).
- Silesian Institute Opava (Assoc. Prof. Radim Prokop).
- Charles University, Faculty of Science, Department of Human Geography and Regional Development (Assoc. Prof. Jiří Blažek).
- Regional Development Agency Ostrava (Pavla Břusková).
- Institute of Geonics Brno (Antonín Vaishar, Assoc. Prof. Karel Kirchner).

Cooperation with Universities and Research Institutes abroad

- CIMA Österreich, Austria – Ried im Innkreis (Roland Murauer).
- Leibniz Institute of Regional Geography Leipzig, Germany - Leibniz Institut für Länderkunde Leipzig (Prof. Sebastian Lentz, Prof. Joachim Burdack, Christoph Waack, Judith Miggelbrink).
- Matej Bel University Banská Bystrica, Slovakia, Faculty of Economics, Institute of Development of Municipalities and Regions (Anna Vaňová, PhD.).
- Matej Bel University Banská Bystrica, Slovakia, Faculty of Science, Department of Geography.
- Regional Association Ruhrgebiet – Regionalverband Ruhr (Sabine Lange, Wilfried Dege).
- Prešov University, Slovakia, Faculty of Humanities and Natural Sciences, Department of Geography.
- Helmholtz-Zentrum für Umweltforschung GmbH Leipzig – UFZ, Department Stadt- und Umweltoziologie (Prof. Dr. Dieter Rink, Permoserstraße 15, 04318 Leipzig).

Visitors to the institute

Within the LLP (Erasmus) four visits were realized:

- Robert Pawlusinski, Jagiellonian University, Krakow, Poland, April 18 - 25, 2008
- Robert Faracik, Jagiellonian University, Krakow, Poland, April 18 - 25, 2008
- Radoslaw Dobrowolski, University of Lublin, Poland, April 20 - 22, 2008
- František Murgaš, Catholic University, Ružomberok, Slovakia, October 01- 15, 2008

Visits of Staff Members

Conferences 2008

Name	Country	Place	Conference	Date
Baar, V.	Slovakia	Trnava	1 st Slovak Politological congress	Nov. 6-7
Baar, V.	Slovakia	B. Bystrica	Geographical workshop	Dec. 15-16
Baar, V.	Poland	Świnoujście	Conference on Political Geography	Sept. 16-20
Boruta, T.	Slovakia	Sládkovičovo	Supraregional Cooperation in Trnava Region	Oct. 15-17
Boruta, T.	Slovakia	Nitra	Central European Space	Sept. 9-11
Drobík, T.	Slovenia	Ljubljana	World International Studies Committee	July 22-27
Havrlant, J.	Slovakia	Nitra	Central European Space	Sept. 9-11
Havrlant, J.	Slovakia	B.Bystrica	Geographical Research	Oct. 22-23
Kopeček, V.	Slovakia	B.Bystrica	Geographical Research	Oct. 22-23
Sidiropulu, J.	Germany	Leipzig	Research Consortium	Apr. 13-17
Siwek, T.	Poland	Bialowieża	57 th Congress of PGS	Sept. 9-12
Siwek, T.	Poland	Świnoujście	Conference on Political Geography	Sept. 16-20
Siwek, T.	Tunisia	Tunis	31 th International Geographical Congress	Aug. 11-17
Siwek, T.	Poland	Cieszyn	Year 1968 in Poland and	May 16-17

Name	Country	Place	Conference	Date
			Czechoslovakia	
Slach, O.	UK	Southampton	Measuring and Understanding	Sept. 22-27
Slach, O.	Slovakia	Sládkovičovo	Supraregional Cooperation in Trnava Region	Oct. 15-17
Šindler, P.	Slovakia	Nitra	Central European space	Sept. 9-11
Šumberová, M.	Slovenia	Ljubljana	World International Studies Committee	July 22-27
Vencálek, J.	Slovakia	Trenčín	Man and Technology	Oct. 30-31
Vencálek, J.	Slovakia	Sládkovičovo	Supraregional Cooperation in Trnava Region	Oct. 15-17
Vencálek, J.	Slovakia	Bratislava	Theory and Methodology	Nov. 17-18
Vencálek, J.	Slovakia	B. Bystrica	Geographical Research	Oct. 22-23
Vencálek, J.	Slovakia	Nitra	Central European Space	Sept. 9-11

Short stays abroad 2008 (less than 10 days)

Name	Country	Place	Action	Date
Baar, V.	Slovakia	Prešov	Specialist board	Mar. 25-26
Baar, V.	Slovakia	Prešov	Inauguration	Apr. 28-29
Baar, V.	Slovakia	Prešov	Inauguration	June 24-25
Bednář, P.	Slovenia	Ljubljana	Contact MZV	Dec. 14-18
Boruta, T.	Austria	Inviertel	Research field practice	Oct. 6-10
Havrlant, J.	Austria	Tyrol	Field practice	May 23-28
Rumpel, P.	Netherlands	Utrecht	Workshop	Feb. 10-13
Siwek, T.	Slovakia	Bratislava	Member of a committee	Nov. 19
Slach, O.	Austria	Inviertel	Research field practice	Oct. 6-10
Slach, O.	Poland	Krakow	Research	July 18-19
Vencálek, J.	Slovakia	Prešov	Negotiation with opponents	Jan. 18
Vencálek, J.	Slovakia	Trenčín	Course books	Jan. 31
Vencálek, J.	Slovakia	Prešov	Habilitation procedure	Mar. 12-13
Vencálek, J.	Slovakia	Trenčín	Inauguration of the Dean	Apr. 2
Vencálek, J.	Slovakia	Trnava	Erasmus	Nov. 24-30
Vencálek, J.	Slovakia	Trenčín	Cross-border cooperation	Dec. 8
Wahla, A.	Slovakia	Bratislava	Member of a committee	Apr. 29-30
Žufan, P.	Slovenia	Ljubljana	Contact MZV	Dec. 14-18

Long time stays abroad 2008 (more than 10 days)

Name	Country	Place	Action	Date
Mácha, P.	Spain	Seville	Erasmus	Oct. 17-Oct. 29
Slach, O.	Germany	Bonn	Erasmus	June 28-July 11
Stojanov, R.	India + Bangladesh	Calcutta, Dacca	Research	Mar. 5-Mar. 25
Šumberová, M.	UK	London	Study stay	Apr. 27-May 17
Rumpel, P.	USA	Gainesville, Florida	Fulbright:Research	Aug. 20, 2008 -Jan. 31, 2009

Foreign students at KSG

2007/2008

Name	University	Country	
Karol Bruchman	University of Gdansk	Poland	WS
Ryszard Szatkowski	University of Gdansk	Poland	WS
Ecaterina Elisabeta Zamfor	University of Oradea	Romania	WS
Otilia Petronela Matica	University of Oradea	Romania	WS
Engin Doganay	University of Sakarya	Turkey	SS
Imos Acik	University of Sakarya	Turkey	SS
Clara Pascual Bordas	Autonomous University of Barcelona	Spain	WS/SS

2008/2009

Name	University	Country	
Aneta Tomek	University of Victoria	Canada	WS/SS
Lisa Wagner	University of Bonn	Germany	WS
Benjamin Frank	University of Hanover	Germany	WS/SS
Cihan Ersaru	University of Sakarya	Turkey	WS
Yavuz Olgun	University of Sakarya	Turkey	WS/SS
Krysztof Marek	University of Gdansk	Poland	WS/SS
Lukasz Orzel	University of Gdansk	Poland	WS/SS
Anna Oravcová	University of Presov	Slovakia	WS

17.9 Membership in Professional Organisations

Assoc. Prof. Vladimír Baar

- Member of the Academic Council of Faculty of Arts, University of Ostrava
- Member of the Academic Council of Faculty of Science, University of Ostrava

Assoc. Prof. Tadeusz Siwek

- President of the Czech Geographical Society.
- Member of the Czech Demographic Society

Assoc. Prof. Jan Havrlant

- Chairman of the Executive Committee of the Moravian-Silesian Branch of the Czech Geographical Society.

Martin Kovář

- Member of the Executive Committee of the Moravian-Silesian Branch of the Czech Geographical Society.

Kateřina S. Janků

- Magazine FSS MU Brno - Social studies – member of the board for editing the magazine,
- Multifunctional centre Prague – member of the board for the internet portal.

17.10 Publications

ARTICLES IN PERIODICAL PUBLICATIONS

- KRTIČKA, L. *Does Future of Mapping Lies in GNSS?* In: Orientační běh – časopis orientačních sportů. ISSN 1803-7496, pp. 12-16.
- KRTIČKA, L. *Cooking from LIDAR.* In: Orientační běh – časopis orientačních sportů. ISSN 1803-7496, pp. 14-15.

PROCEEDINGS

- SIWEK, T.; BAAR, V. *Globalisation and Its Impact on Localities.* Ostrava: University of Ostrava. pp. 315. ISBN 978-80-7368-452-5.

ARTICLES IN PROCEEDINGS

- BAAR, V. *Globalization and Language Diverzity.* In: Globalisation and Its Impact on Localities. Ostrava: University of Ostrava. ISBN 978-80-7368-452-5, pp. 227-230.
- BAAR, V. *Validity of Internet Sources in Political geography.* In: Miscellanea Geographica Universitatis Bohemiae Occidentalis No. 14. Plzeň: Západočeská univerzita. ISSN 1213-7901, pp. 21-26. (In Czech)
- BEDNÁŘ, P. *Retail Internationalisation and Trends in the Czech Republic.* In: Nákupní řetězce - nové výzvy. Nákupní řetězce - nové výzvy. Brno: NSEH. ISBN 978-80-87217-00-9, pp. 7-13. (In Czech)
- BORUTA, T.; IVAN, I. *Public Transport Services in Region.* In: PhD Workshop Proceedings. Ostrava: Ústav geoniky AV. ISBN 978-80-86407-51-7, pp. 9-14. (In Czech).
- BORUTA, T. *The Role of Integrated Transportation Systems in Polycentric Urban Regions.* In: Sborník příspěvků z XI. mezinárodního kolokvia o regionálních vědách. Brno: Masarykova univerzita. ISBN 978-80-210-4625-2, pp. 244-251. (In Czech)
- DROBÍK, T. *Anti-geo-politics as an Instrument of Islamistic Resistance.* In: Globalisation and Its Impact on Localities. Ostrava: University of Ostrava. ISBN 978-80-7368-452-5, pp. 66-76.
- HAVRLANT, J. *Methodical Approach to Analysis of Reasons of regional Disparities in Tourism.* In: Metodiky identifikace disparit rurálního regionu Jesenicko. Ostrava: University of Ostrava. ISBN 978-80-7368-453-2, pp. 11-12. (In Czech)
- IŠTOK, R. *Inner Geopolitics and its Meaning for Quest of Optimal Spatial-Political Structure of Russia - Selected Aspects.* In: Acta facultatis studiorum humanitatis et naturae universitatis Prešoviensis, Folia Geographica 12. Prešov: Prešovská univerzita. ISSN 1336-6149, pp. 131-144.

- ISTOK, R., KOZIAK, T. (2008): *Geopolitical Context of Issues Connected with Water Resources*. In: Globalisation and Its Impact on Localities. Ostrava: University of Ostrava. ISBN 978-80-7368-452-5, pp. 287-294.
- KOPEČEK, V. *Self-Declared States in the Globalising World: The Case of the Nagorno-Karabakh Republic*. In: Globalisation and its Impact on Localities. Ostrava: University of Ostrava. ISBN 978-80-7368-452-5, pp. 77-87.
- KOVÁŘ, M. *Geography on the Virtual Universities*. In: Information and Communication Technology in Education 2008. Rožnov p. R. ISBN 978-80-7368-577-5, pp. 29-32.
- KOVÁŘ, M. *Motivation of Teachers of Geography for Implementation of e-Learning*. In: Silesian Moodle Moot 2008 aneb E-Learning jako nástroj ke zvyšování kvality vzdělávání. Ostrava: VŠB-TU. ISBN 978-80-248-1859-7, pp. 65-70. (In Czech)
- KOVÁŘ, M. *Czech Virtual Tutorial Materials at Education of Geography*. In: Alternativní metody výuky 2008. Praha: Univerzita Karlova. ISBN 978-80-7041-454-5. (In Czech)
- KOVÁŘ, M.; PASEČNÁ, M. *Reflection of Professional Preparedness of Future Teachers of Geography on the e-Learning Education after Graduation of the University of Ostrava*. In: Nová role učitele - budoucnost učitelů ve světě práce v Moravskoslezském kraji. Ostrava: University of Ostrava. ISBN 978-80-7368-517-1, pp. 365-372. (In Czech)
- KOVÁŘ, M. *Geography as Educational Branch on the Grammar-School in Teschen's Silesia - Possibilities of Progress of Discipline after Implementation RVP*. In: Od Rámcového vzdělávacího programu ke Školnímu vzdělávacímu programu - idea a realita? Ostrava: Repronis. ISBN 978-80-7368-563-8. pp. 95-99. (In Czech)
- MÁCHA, P. *When Malinche Dances with Montezuma. Religion, Ethnicity and Cultural Change in New Mexico*. In: KIAS Papers Yearbook 2008. Hradec Králové: University of Hradec Králové. ISSN 1802-1565, pp. 20-27.
- MÁCHA, P. *Purhepechan Social Movements and the Forging of the Purhepechan National Consciousness. Some General Observations*. In: Globalisation and its Impact on Localities. Ostrava: University of Ostrava. ISBN 978-80-7368-452-5, pp. 4-13.
- NOVÁK, D. W. *Organizational forms of rural development management on the example of selected Irish regions*. In: XI. mezinárodní kolokvium o regionálních vědách. Brno: Masarykova univerzita, 2008. s. 380-386. ISBN 978-80-210-4625-2. (In Czech)
- SIWEK, T. *Demography in the Age of Globalization*. In: Globalisation and its Impact on Localities. Ostrava: University of Ostrava. ISBN 978-80-7368-452-5, pp. 262-265.
- SIWEK, T.; BOGDOVÁ, K. *Research of territorial identity in the Czech Republic*. In: Kulturowy aspekt badań geograficznych. Studia teoretyczne i regionalne V. Wrocław: Uniwersytet Wrocławski. ISBN 978-83-914459-6-9, pp. 45-56. (In Polish)
- SLACH, O.; BORUTA, T. *The Importance of Flagship Projects on Regional Development*. In: Nadregionálna spolupráca Trnavska. Sládkovičovo: Vysoká škola v Sládkovičove. ISBN 978-80-89267-14-9, pp. 77-84. (In Czech)

- SLACH, O. *Creative Industries and its Spatial Organization*. In: Nadregionálna spolupráca Trnavska. Sládkovičovo: Vysoká škola v Sládkovičove. ISBN 978-80-89267-14-9, pp. 85-93. (In Czech)
- SLACH, O., RUMPEL, P., KOUTSKÝ, J. *The Changing Significance of Soft and Hard Factors of Regional Development*. Brno: Masarykova univerzita, 2008. s. 15-24. ISBN 978-80-210-4625-2. (In Czech)
- VENCÁLEK, J. *Genius Loci as a Keystone of Past and Future Societal Imprints in the Landscape*. In: Geography in Czechia and Slovakia. Brno: Masarykova univerzita. ISBN 978-80-210-4600-9, pp. 144-147.
- VENCÁLEK, J. *Fractal Conception of a New European Dimension and Genius Loci*. In: Kognice 2008. Hradec Králové: Univerzita Hradec Králové. ISBN 978-80-7041-023-3, pp. 50-59. (In Czech)
- VENCÁLEK, J. *Genius of a Crossborder Slovak Republic – Czech Republic Region as a Phenomenon of the Supraregional Cooperation*. In: Nadregionálna spolupráca Trnavska. Sládkovičovo: Vysoká škola v Sládkovičove. ISBN 978-80-89267-14-9, pp. 71-76. (In Czech)
- VENCÁLEK, J. *Teacher's New Role in Supporting of Development of Human Life as the Highest Global Value*. In: Nová role učitele - budoucnost učitelů ve světě práce v Moravskoslezském kraji. Ostrava: University of Ostrava. ISBN 978-80-7368-517-1, pp. 75-85. (In Czech)

MONOGRAPHIC PUBLICATIONS

- SLACH, O.; RUMPEL, P.; KOUTSKÝ, J. *Soft Factors of Regional Development*. Ostrava: Repronis. pp. 186. ISBN 978-80-7368-435-8. (In Czech)
- STOJANOV, R.; NOVOSÁK, J.; OPINIANO, J. M.; FRANCOIS, G.; SIWEK, T. *Development, Environment and Migration*. Olomouc: Univerzita Palackého. ISBN 978-80-244-1966-4. pp. 221.

18 Financial Results for the Year 2008

Total income of the faculty in 2008 was 120 827 (in ths. CZK)

- Principal activity: 92 370 (in ths. CZK),
- Funding for specific research: 3 223 (in ths. CZK),
- Operating funding for OP RLZ: 2 638 (in ths. CZK),
- Operating funding for grants activities: 3 375 (in ths. CZK),
- Operating funding for projects LEONARDO, PHARE etc.: 859 (in ths. CZK),
- Operating funding from GACR: 5 058 (in ths. CZK),
- Operating funding from other projects: 6 007 (in ths. CZK),
- Income from supplementary activities: 1 220 (in ths. CZK),
- Income from paid study: 1 779 (in ths. CZK),
- Other income: 1 837 (in ths. CZK),
- Drawing funds: 685 (in ths. CZK),
- Scholarship fund: 1 181 (in ths. CZK),
- Other revenue: 595 (in ths. CZK),

Total expenditure of the faculty in 2008 was: 119 676 (in ths. CZK)

- Consumption of material: 5 345 (in ths. CZK),
- Consumption of books and magazines: 623 (in ths. CZK),
- Repairs and maintenance: 885 (in ths. CZK),
- Travel expense: 3 442 (in ths. CZK),
- Other services: 8 832 (in ths. CZK),
- Wages and salaries: 69 844 (in ths. CZK),
- Mandatory insurance: 23 877 (in ths. CZK),
- Graduate scholarships: 2 130 (in ths. CZK),
- Scholarships for the other students: 1 515 (in ths. CZK),
- Fees for co-managers: 1 539 (in ths. CZK),
- Other costs: 1 644 (in ths. CZK).

At the end of the year 2008 1 151 (in ths. CZK) were transferred to the fund of operating costs at disposal in the year 2009.

Elaborated by: Iveta Nevludová

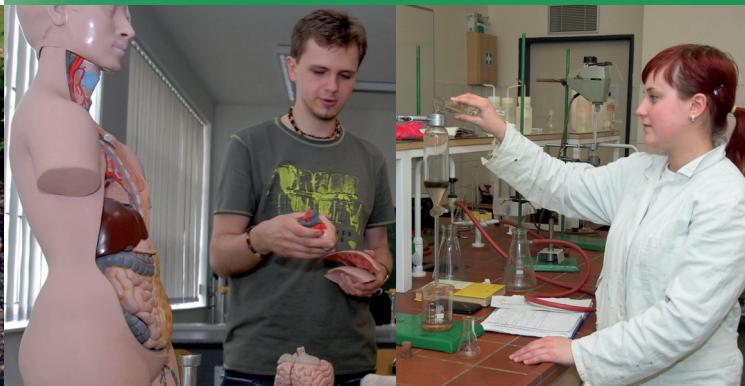
**19 Faculty of Science Personnel
(by December 31, 2008)**

Surname	Firstname	Title
Adamec	Martin	Mgr.
Baar	Vladimír	prof. RNDr., CSc.
Balonová	Pavlína	
Bartl	David	RNDr., Ph.D.
Bartošová	Radka	Mgr.
Bednář	Pavel	Mgr.
Bohdálková	Jana	Mgr.Ph.D.
Boruta	Tomáš	Mgr.
Bouřová	Eva	
Bradáč	Vladimír	Mgr.
Bražina	David	Ing.
Bulava	Petr	Mgr., Ph.D.
Burianová	Eva	Ing., Ph.D.
Burianová	Gabriela	Bc.
Bystroň	Josef	
Cimalová	Šárka	Mgr.
Čajánek	Martin	RNDr., Ph.D.
Čechová	Irena	
Červeň	Jiří	Mgr.
Dolný	Aleš	RNDr., Ph.D.
Drobík	Tomáš	Mgr.
Drobíková	Ludmila	Mgr.
Drozd	Pavel	Mgr., Ph.D.
Ďuriš	Zdeněk	doc. RNDr., CSc.
Dušek	Radek	Ing., Ph.D.
Dvořák	Dalibor	doc. RNDr., CSc.
Fičerová	Milena	
Filipczyková	Hana	doc. Dr. Ing.,
Fojtík	Rostislav	Mgr., PhD.
Gáper	Ján	prof. RNDr., CSc.
Gazdová	Šárka	
Greplová	Petra	
Habiballa	Hashim	RNDr. PaedDr., PhD, Ph.D.
Haluzík	Michal	Mgr., Ph.D.
Hančl	Jaroslav	doc. RNDr., CSc.
Havelková	Martina	
Havrlant	Jan	doc. RNDr., CSc.
Horká	Ivona	Mgr.
Hradecký	Jan	RNDr., Ph.D.
Huňka	František	doc. Ing., CSc.
Ištok	Robert	prof. RNDr., CSc.
Jandová	Věra	

Surname	Firstname	Title
Janeček	Ivan	Ing., CSc.
Janíková	Pavla	
Janoschová	Pavla	
Janošcová	Jana	
Javorská	Monika	
Kabieszová	Kateřina	Mgr.
Kalina	Jiří	doc. RNDr., Ph.D.
Kalus	René	doc. RNDr., Ph.D.
Káňová	Lenka	Ing.
Karlický	František	Mgr.
Klimánková	Jana	RNDr.
Klimeš	Cyril	doc. Ing., CSc.
Kočárek	Petr	RNDr., Ph.D.
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