



Annual Report 2006
Faculty of Science
University of Ostrava
Czech Republic

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Annual Report 2006 Faculty of Science University of Ostrava



UNIVERSITAS
OSTRAVIENSIS
Facultas Rerum Naturalium

Faculty of Science
University of Ostrava

Annual Report 2006

Edited by Jana Goralová
Translated by Jana Klimánková

June 2007

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1 Introduction

The 2006 annual report is the first annual report issued by the Faculty of Science, University of Ostrava, written in English. As such, there are few possibilities to compare it with previous annual reports written in Czech. This approach is keeping with the trend started by the new faculty management in autumn 2006. The goal is to increase the research activities of staff and students, to evaluate the entire workload of the staff, and to compare the departmental efficiency of the Faculty.

The new organizational structure of the Faculty was established in December 2006. The Project Department was built to better document, coordinate and provide services for both research and commercial projects. The Center for Lifelong Learning was established for educational purposes based on commercial and nonprofit activities in postgraduate study area. The new Public Relations Division of previously “standard” Department of Science was built mainly to better provide information to future students of the Faculty, as well as to monitor similar Faculties and trends throughout university education in Central Europe.

It will be years before the results of these new trends appear and they can be followed retroactively in future annual reports of the Faculty. We believe that the future looks good and our faculty will become not only an educational center but also an important research institution that extends beyond our region.

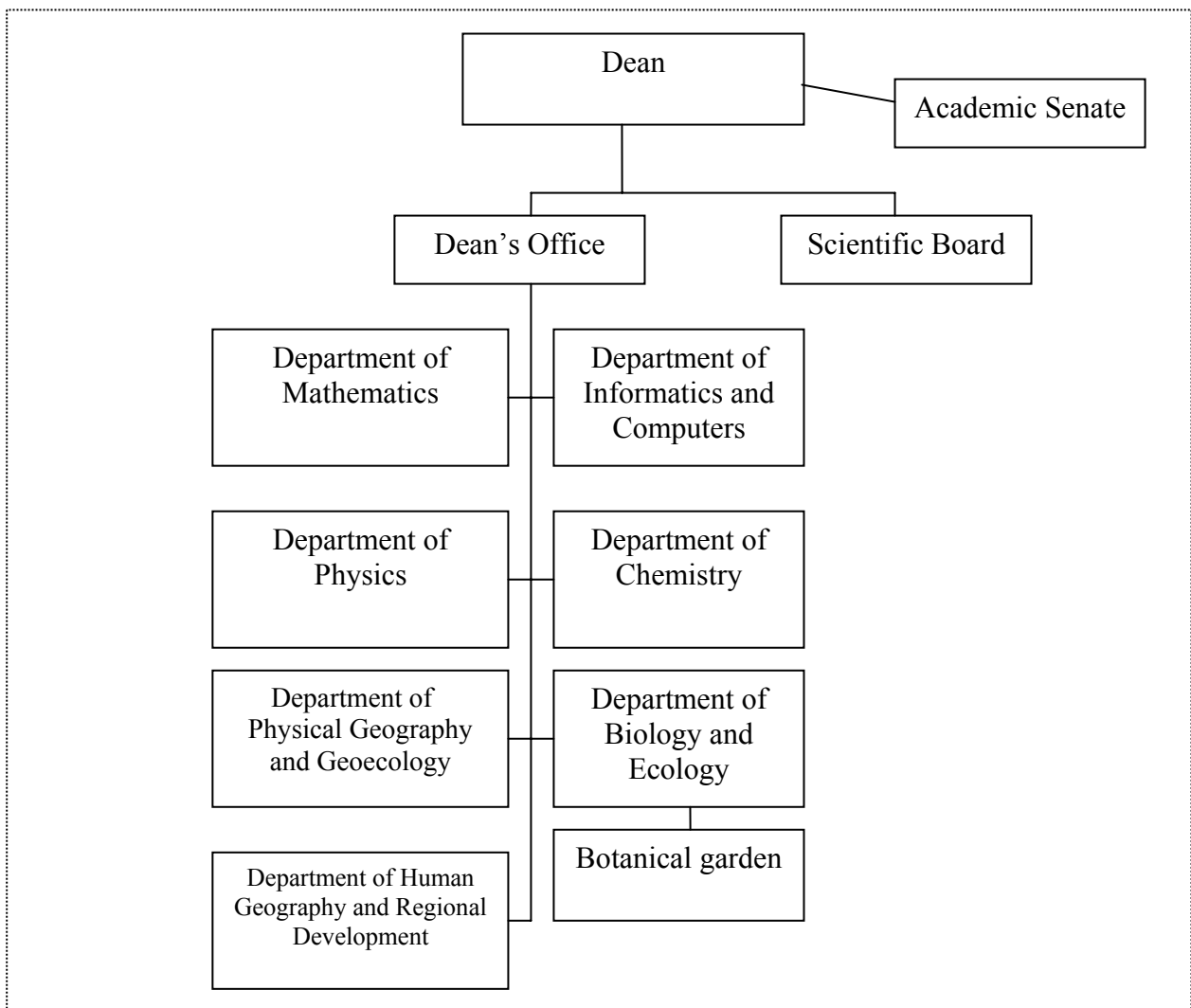
Prof. Jiří Močkoř
Dean of the Faculty of Science

2 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.

2.1 Organization Chart



2.2 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.

Members of the Academic Senate in 2006

Presidium of the Academic Senate

Petra Konečná, PhD.
Chair

Roman Maršálek, PhD.
Chair of the employee part

Chlopčíková Kateřina
Chair of the student part

Jaroslav Knybel
Secretary of the Academic Senate

Members of the employee part of the Academic Senate

Pavel Drozd, PhD.
Radek Dušek, PhD.
Hashim Habiballa, PhD.
Jan Hradecký, PhD.
Ivan Janeček, PhD.
Jiří Kalina, Assoc. Professor
Jaroslav Knybel
Petra Konečná, PhD.
Roman Maršálek, PhD.
Ladislav Mišík, Assoc. Professor
Renáta Sedlářiková
Václav Slovák, Assoc. Professor
Petr Rumpel, PhD.
Eliška Treterová

Members of the student part of the Academic Senate

Kateřina Chopčíková
Jan Kubala
Daniela Kuchařová
Aleš Ottmár
Miroslava Peřinová
Marek Vajgl
Vratislav Vozník

Petra Konečná, PhD.
Chair Academic Senate of the Faculty of Science, University of Ostrava

2.3 Dean

The Dean is the representative of the faculty who manages, represents and acts on behalf of the faculty.

Changes in the Academic Bodies of the Faculty carried out during the course of 2006:

Dean's office board by 30. 9. 2006

Petr Šindler, Assoc. Professor
Dean of the Faculty of Science

Dana Kričfaluši, Assoc. Professor
Vice-Dean for Studies

Vladimír Špunda, Assoc. Professor
Vice-Dean for Science and Research

Dean's office board from 1. 10. 2006

Jiří Močkoř, Professor
Dean of the Faculty of Science

Dana Kričfaluši, Assoc. Professor
Vice-Dean for Study and Lifelong Education

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

Cyril Klimeš, Assoc. Professor
Head of the Department for Support of Projects activities

2.4 Scientific Board of the Faculty

Members of the Scientific Board in 2006

Chair of the Scientific Board

Šindler Petr, Assoc. Professor

Members from the academic community of the Faculty of Science, University of Ostrava

Jaromír Kaňok, Assoc. Professor
Cyril Klimeš, Assoc. Professor
Dana Kričfaluši, Assoc. Professor
Ivan Křivý, Professor
Vladislav Kříž, Professor
Kateřina Malachová, Assoc. Professor
Erika Mechlová, Professor

Jiří Močkoř, Professor
Vilém Novák, Professor
Irina Perfiljeva, Professor
Tadeusz Siwek, Assoc. Professor
Ladislav Sklenák, Assoc. Professor
Vladimír Špunda, Assoc. Professor
Boleslav Taraba, Professor
Milan Turčáni, Professor
Jaroslav Vencálek, Professor
Arnošt Wahla, Professor

External members

Lubomír Dobiáš, Professor
Zdeněk Dostál, Professor
Ivana Horová, Professor
Petr Chalupa, Professor
Jiří Kern, Professor
Anatol Malijevský, Professor
Michal V. Marek, Professor
Luděk Matyska, Assoc. Professor
Jaroslav Michálek, Assoc. Professor
Miroslav Pokorný, Professor
Pavel Prošek, Professor
Jan Vymětal, Assoc. Professor
Kamil Wichterle, Professor

In 2006 the meeting of the Scientific Board was hold once: 25. 4. 2006.

The scientific board of the Faculty of Science, University of Ostrava from December 2006

Chair of the Scientific Board

Jiří Močkoř, Professor

Members from the academic community of the Faculty of Science, University of Ostrava

Vladimír Baar, Assoc. Professor
Cyril Klimeš, Assoc. Professor
Petra Konečná, PhD.
Dana Kričfaluši, Assoc. Professor
Ivan Křivý, Professor
Vladislav Kříž, Professor
Kateřina Malachová, Assoc. Professor
Erika Mechlová, Professor
Monika Mulková
Vilém Novák, Professor
Rudolf Peter

Petr Rumpel, PhD.
Ladislav Sklenák, Assoc. Professor
Petr Šaloun, Assoc. Professor
Boleslav Taraba, Professor

External members

Vojtěch Dirner, Professor
Jiří Doškář, Professor
Pavel Drábek, Professor
Dušan Drbohlav, Assoc. Professor
Robert Ištók, Assoc. Professor
Anatol Malijevský, Professor
Michal V. Marek, Professor
Radko Mesiar, Professor
Tomáš Pitner, Assoc. Professor
Milan Trizna, Assoc. Professor
Milan Turčáni, Professor
Peter Vojtáš, Professor
Jan Vymětal, Assoc. Professor
Kamil Wichterle, Professor

2.5 Dean's Office

1. 1. 2006 - 30. 9. 2006

Iveta Nevludová
Faculty Administrator

Monika Javorská
Secretary to the Dean

Academic Affairs Department:

Natálie Šimonková
Head of the Department

Věra Jandová
Marie Placková
David Kožušník

Science and Research:

Eva Bouřová
Lukáš Straňák

Centre for Lifelong Education:

Eva Burianová, PhD.
Head of the Centre

Šárka Ramíková
Simona Polochová
Centre administrators

Personnel Department:

Zdeňka Pavlíčková

Language Department:

Blanka Novotná
Jana Klimánková
Senior assistants

1. 10. 2006 – 31. 12. 2006

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

Science and Public Relations Department:

Eva Bouřová
Dana Závorková
Jana Goralová

Economics Department:

Pavla Janoschová
Lenka Káňová

Projects Department:

Lenka Káňová
Lukáš Straňák

Centre for Lifelong Education:

Eva Burianová, PhD.
Head of the Centre

Simona Polochová
Centre administrator

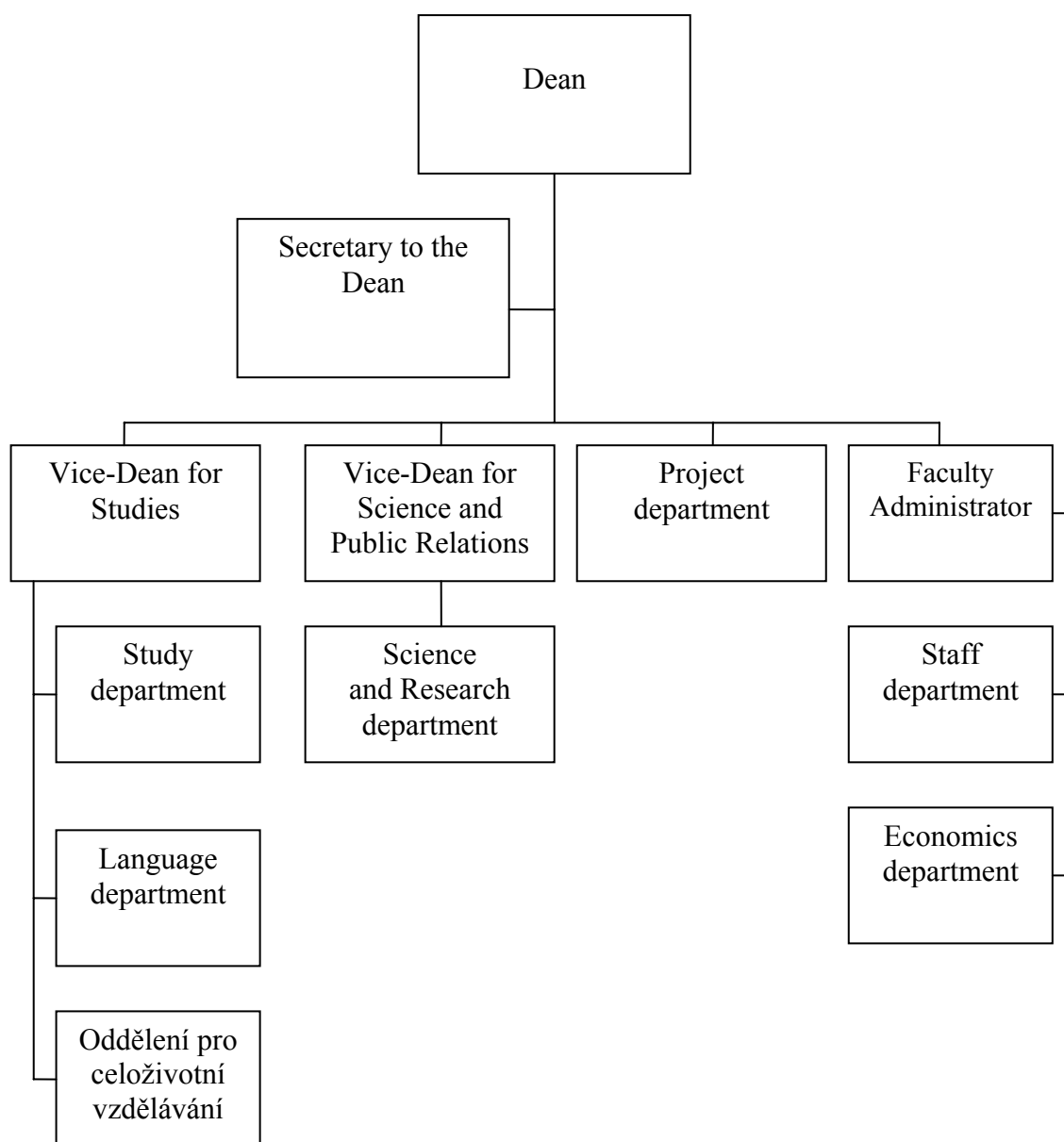
Personnel Department:

Zdeňka Pavlíčková

Language Department:

Blanka Novotná
Jana Klimánková
Senior assistants

2.6 Organization diagram of the Dean's Office



3 Study

In the academic year 2005/2006 **404 students** properly completed their studies at the Faculty of Science, University of Ostrava:

- in bachelor study 226 graduates
- in master non teaching study 127 graduates
- in master study programme following bachelor study programme 41 graduates
- in doctoral study 10 graduates

The acceptance process for the academic year 2006/2007

Entrance exams (PZ) for **bachelor and postgraduate study programmes** took place on 20. 5. 2006 (SCIO) and 29. 5. - 9. 6. 2006, with one makeup term on 19. 6. 2006.

3.1 Admission procedure statistics

Field of study	Number of applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
Bachelor study programmes					
BF	9	0	6	5	5
MPPD	3	0	3	3	0
AI (KS)	73	1	43	44	28
AI (DS)	134	0	80	81	77
AM	27	0	19	15	6
AME	43	0	36	34	6
MPMZI	11	0	9	7	2
AM (KS)	15	15	0	15	14
AME (KS)	12	12	0	12	9
MPMZI (KS)	6	6	6	6	4
AE	97	0	92	54	30
SBE	190	0	178	87	46
EXB	56	0	53	31	14
OTK	224	0	209	53	22
FGG	78	0	74	51	24
KG	77	0	75	52	24
PKG	206	0	196	72	36
SGRR	147	0	139	68	37
CH	50	0	38	31	20
IN	178	0	167	123	56
Total	1 636	34	1 417	844	460
Bachelor study programmes studied in a combination of two subjects					
MA-AJ	4	0	4	2	2
MA-GE	12	0	8	9	4
MA-NJ	4	0	2	1	1

Field of study	Number of applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
GE-AJ	6	0	4	3	1
GE-ČJ	3	0	3	1	1
GE-IN	9	0	8	6	3
GE-NJ	3	0	2	0	0
GE-PJ	2	0	2	0	0
GE-RJ	1	0	1	0	0
CH-AJ	2	0	2	0	0
CH-BI	74	0	69	55	26
CH-ČJ	1	0	1	1	1
CH-GE	6	0	6	3	1
CH-IN	1	0	1	1	0
CH-MA	9	0	6	6	2
CH-NJ	1	0	1	0	0
CH-ŠJ	1	0	1	1	0
BI-AJ	16	0	15	9	7
BI-GE	63	0	55	47	27
BI-IN	12	0	12	7	3
BI-MA	8	0	8	7	3
BI-NJ	5	0	4	3	3
BI-ŠJ	1	0	1	1	1
FY-BI	9	0	9	7	1
FY-GE	1	0	1	1	1
FY-IN	3	0	3	3	2
FY-MA	15	0	11	9	5
IN-AJ	8	0	7	4	3
IN-MA	20	0	13	12	1
IN-NJ	4	0	2	1	0
IN-ŠJ	1	0	1	1	1
Total	305	0	263	201	100
Master study programmes following bachelor study programmes					
BF	9	4	5	9	9
AM	14	9	0	10	10
AME	15	8	0	8	8
MPMZI	3	3	0	3	1
SBE	30	0	27	23	19
OTK	19	0	10	6	4
FGG	26	0	20	18	13
PKG	42	1	38	31	23
SGRR	66	0	53	32	27
IS-two-year study	39	0	38	33	28
IS-three-year study	1	0	1	1	1
IS- three-year study (KS)	22	0	17	16	13
FCHP	2	0	1	3	1

Field of study	Number of applications	Admitted without PZ	Took the PZ	Total admitted *)	Enrolled
Teaching study MA for secondary school	1	0	0	0	0
Teaching study GE for secondary school	3	0	2	0	0
Teaching study CH for secondary school	3	0	2	0	0
Teaching study FY for secondary school	1	0	1	1	1
Total	296	25	215	194	158
Master study programmes following bachelor study programmes studied in a combination of two subjects					
BI-MA	3	0	2	0	0
FY-CH	1	0	1	1	1
FY-MA	1	0	1	1	1
Total	5	0	4	2	2
Master study programmes					
G - FGG	26	0	24	14	6
Total	26	0	24	14	6
TOTAL	2 268	59	1 923	1 255	726

Annotation:

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

Entrance exams (PZ) for **doctoral study programme in Applied Mathematics** took place on 3. 7. 2006 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
Applied Algebra	5	0	4	4	4	4
Fuzzy Modelling	1	0	1	1	1	1
Total	7	0	6	6	6	6

Entrance exams for **doctoral study programme in Geography** took place on 14. 6. 2006 with the following results:

Field of study	Number of applications	Admitted without PZ	Took PZ	Passed PZ	Total admitted	Enrolled
Environmental Geography	8	0	7	6	6	6

Entrance exams for **doctoral study programme in Information Science** took place on 3. 7. 2006 with the following results:

Field of study	Number of applications	Admitted without PZ	Took PZ	Passed PZ	Total admitted	Enrolled
Information Systems	7	0	7	6	6	5

Entrance exams for **doctoral study programme in Specialisation – Pedagogy** took place on 28. 6. 2006 with the following results:

Field of study	Number of applications	Admitted without PZ	Took PZ	Passed PZ	Total admitted	Enrolled
Theory of Education in Physics	6	0	6	6	6	6

Academic year 2006/2007

Number of students enrolled in the Faculty of Science, University of Ostrava in the academic year 2006/2007.

Number of students according to the degree programmes (as of 1.11.2006).

Study programme	Field group code	Degree programme				Total
		Bc.	NMgr.	Mgr.	PhD.	
Mathematics	B1101	6				6
Applied Mathematics	B1103	91				91
Geography	B1301	359				359
Chemistry	B1407	93				93
Biology	B1501	256				256
Ecology and Environmental Protection	B1601	60				60
Physics	B1701	9				9
Applied Physics	B1702	18				18
Information Science	B1801	139				139
Applied Information Science	B1802	190				190
Applied Mathematics	M1103			55		55
Geography	M1301			102		102
Ecology and Environmental Protection	M1601			10		10
Information Science	M1801			39		39
Teaching for Primary Schools	M7503			56		56
Teaching for Secondary Schools	M7504			91		91
Applied Mathematics	N1103		25			25
Geography	N1301		80			80
Chemistry	N1407		3			3
Biology	N1501		39			39
Ecology and Environmental Protection	N1601		8			8
Physics	N1701		3			3
Applied Physics	N1702		13			13
Information Science	N1801		65			65
Applied Mathematics	P1103				29	29
Geography	P1301				31	31
Information Science	P1801				19	19
Specialisation – Pedagogy	P7507				21	21
Total		1 221	236	353	100	1 910

Number of students according to the form of the study (as of 1. 11. 2006).

Form of the study	Study programmes				Total
	Bc.	NMgr.	Mgr.	PhD.	
Full-time	1 006	211	353	34	1 604
Combined	103	25		66	194
Distance	112				112

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

Type of the study programme	Paf
Bachelor	22
Master study programme following bachelor study programme	2
Master	6
Doctoral	3
Total	33

3.2 New study programmes and fields of study

In 2006 following study programmes and fields of study were newly accredited.

Field group code	Title of study programme	Field of the study	Length (in academic years) / form of the study			
			B	MN	P	FS
B1501	Biology	Applied Ecology	3			K
B1301	Geography	Geography and Regional Development	3			P
N1301	Geography	Geography and Regional Development		2		P

3.3 Student Research Conferences and Competitions

No.	Conference	Venue	Date	Number of Participants
1.	16 th Vojtěch Jarník Mathematical Competition	Ostrava	29. 3.	120
2.	Student's scientific competition – section Mathematics: A, P, Z9, B, C	Ostrava	24. 1. 21. 3.	40 21, 107, 37, 39
3.	Environmental Changes and Biological Assessment III.	Ostrava	26. - 28. 4.	10
4.	Student scientific competition – section Physics and Chemistry	Ostrava	4. 5.	10
5.	Student scientific competition – Chemistry and related fields of study	VŠB-TU Ostrava	1. 6.	7

4 Centre for Lifelong Education

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

In 2006 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),
- preparatory courses for students in their first year of study,
- organization of courses within DVPP,
- realization of specialist courses,
- realization of conferences for teachers,
- organization of courses within ESF project – Proposal and realization of the module system in teachers education in the Moravian – Silesian region.

Overview of activities realized within lifelong learning including the number of participants in the year 2006 can be found in the following chart.

The name of the activity	Number of participants
Preparatory Course in Mathematics (KMA) ¹	20
Enlargement Diploma Study - Informatics 1st grade (KIP) ²	20
Enlargement Diploma Study - Informatics 2nd grade (KIP)	16
Enlargement Diploma Study - Informatics 3rd grade (KIP)	24
Enlargement Diploma Study - Informatics – graduates (KIP)	14
Enlargement Diploma Study of Biology from ZŠ ⁵ to SŠ ⁶ (KBE) ³	9
Enlargement Diploma Study of Biology from ZŠ to SŠ - graduates	6
Enlargement Diploma Study of Geography from ZŠ to SŠ (KSG) ⁴	17
Enlargement Diploma Study of Geography from ZŠ to SŠ - graduates	15
Coordinator in the Field of ICT	40
Conference for Secondary School Teachers (KMA, KIP)	100
DVPP Course – PowerPoint in Education	15
Course: Introduction to the Study	515
Course: Application of ICT at the University of Ostrava	18
Course: DVPP – ICT in Natural Science and Biology Teaching (KBE)	12
Course: English for Beginners I	16
Course: English for Beginners II	5
ESF Project - Proposal and Realization of the Module System in Teachers Education in the Moravian – Silesian Region	800
CISCO Course	9
Maya Course	15
Course DVPP – Internet to Schools (KSG)	20
Total	1 706

KMA ¹	Department of Mathematics
KIP ²	Department of Informatics and Computers
KBE ³	Department of Biology and Ecology
KSG ⁴	Department of Human Geography and Regional Development
ZŠ ⁵	Primary school
SŠ ⁶	Secondary school

5 ERASMUS

The ERASMUS programme was launched in June 1987 and 3244 participated in its first academic year. Now, more than 150 000 people benefit each year from the programme. The Commission and the 31 participating countries will celebrate its 20th anniversary throughout the year 2007.

The ERASMUS programme, which is arguably one of the best-known Community actions, encourages student and teacher mobility, and promotes transnational cooperation projects among universities across Europe.

5.1 Teacher's mobility under the ERASMUS Programme

Name	Country	University	Date	Length
Bednář, P.	Denmark	Roskilde	19. - 25. 6.	7
Bednář, P.	Denmark	Roskilde	18. - 24. 9.	7
Cimalová, Š.	Poland	Wroclaw	16. 10.	1
Dolný, A.	Poland	Katowice	27. 11. - 1. 12.	5
Drobík, T.	Turkey	Istanbul	8. - 21. 1.	14
Đuriš, Z.	Poland	Bialsko-Biala	6. - 8. 11.	3
Habibala, H.	Slovakia	Nitra	6. - 10. 3.; 3. - 7. 4.; 1. - 5. 5.	15
Hančl, J.	Netherlands	Leiden	6. 2. - 3. 3.	26
Hančl, J.	UK	Liverpool	2. 9. - 8. 10.	32
Hančl, J.	Italy	Udine	16. 1. - 22. 2.	18
Huňka, F.	Spain	Barcelona	24. 4. - 5. 5.	12
Huňka, F.	Ireland	Dublin	8. - 11. 2.	3
Kočárek, P.	Poland	Katowice	27. 11. - 1. 12.	5
Konečná, P.	Greece	Patras	23. 6. - 23. 7.	31
Kostrá, J.	Poland	Katowice	7. - 15. 3.	9
Kostrá, J.	Slovakia	Zvolen	24. 4. - 21. 5.	28
Kostrá, J.	Austria	Graz	5. 1. - 1. 2.	28
Majkus, Z.	Poland	Katowice	22. - 23. 6.; 27. 11. - 1. 12.	7
Malachová, K.	Slovenia	Ljubljana	18. - 27. 9.	10
Malachová, K.	Poland	Bialsko-Biala	6. - 8. 11.	3
Mišík, L.	Poland	Katowice	7. - 15. 3.	9
Mišík, L.	UK	Liverpool	28. 8. - 28. 9.	27
Mišík, K.	Austria	Graz	5. 1. - 27. 1.	23
Mišík, L.	Greece	Heraklion	1. - 14. 5.	14
Mišík, L.	Hungary	Eger	16. - 29. 10.	14
Pavličková, Z.	Slovenia	Ljubljana	18. - 27. 9.	10
Plášek, V.	Poland	Wroclaw	16. 10.	1
Plášek, V.	Poland	Bialsko-Biala	6. - 8. 11.	3
Pomp, M.	Greece	Heraklion	9. 5. - 2. 6.	24
Siwek, T.	Germany	Bonn	9. - 22. 7.	13
Siwek, T.	Germany	Bonn	10. - 22. 7.	13
Tóth, J.	UK	Liverpool	28. 8. - 28. 9.	27
Tóth, J.	Poland	Katowice	7. - 15. 3.	9
Tóth, J.	Greece	Heraklion	1. - 14. 5.	14
Toth, J.	Austria	Graz	5. 1. - 27. 1.	23
Toth, J.	Hungary	Eger	16. - 29. 10.	14
Vencálek, J.	Slovakia	Trenčín	16. - 27. 10.	12
Volná, E.	Germany	Berlin	19. 11. - 2. 12.	14
Žufan, P.	Germany	Bonn	10. - 22. 7.	13

5.2 SOCRATES – ARION, Comenius

Name	Country, organization	Date	Days
Telnarová, Z.	Poland, Olsztyn - Comenius	29. 6. - 2. 7.	4
Volná, E.	Greece, Patras - Grundtvig 2	1. 5. - 8. 5.	8
Volná, E.	Cyprus, Larnaca - Grundtvig 3	7. - 14. 6.	8
Volná, E.	France, Marseilles - Grundtvig 2	23. - 29. 10.	7

5.3 Students mobility during the year 2006

a) Under the SOCRATES – ERASMUS Programme

Summer Semester 2005/2006

Name	Country and Place	Date	Support of the Faculty
Altová Viola	Slovenia, Ljubljana	1. 9. 05 - 28. 2. 2006	10 800
Baar Roman	Spain, Salamanca	1. 9. 05 – 28. 2. 2006	14 400
Bartošová Jana	Germany, Bonn	1. 10. 05 - 31. 7. 2006	12 960
Baxa Václav	Germany, Hanover	1. 10. 05 – 31. 3. 2006	6 480
Belhová Michaela	Greece, Heraklin	16. 2. – 15. 7. 2006	7 200
Borýsková Eva	France, Paris	1. 10. 05 – 30. 6. 2006	12 960
Čepeláková Lucie	Germany, Erlangen	1. 10. 05 – 20. 2. 2006	5 400
Dědková Ilona	France, Tours	25. 9. 05 – 31. 7. 2006	14 400
Francová Kateřina	Germany, Münster	1. 10. 05 - 31. 8. 2006	11 880
Haruda Jan	Spain, Seville	1. 9. 05 – 28. 2. 2006	8 640
Heczko Petr	Germany, Munich	1. 10. 05 – 31. 7. 2006	11 880
Hovoričová, Zuzana	Denmark, Roskilde	1. 9. 05 – 30. 6. 2006	24 000
Jungwirthová Tereza	Denmark, Roskilde	1. 9. 05 – 1. 7. 2006	24 000
Jurková Nikola	Slovenia, Ljubljana	1. 9. 05 - 28. 2. 2006	10 800
Kantor Rostislav	Turkey, Istanbul	13. 2. – 13. 8. 2006	8 640
Kielar Jan	Germany, Münster	1. 10. 05 - 31. 8. 2006	11 880
Kiša Tomáš	Spain, Seville	1. 9. 05 – 28. 2. 2006	8 640
Matal Ondřej	Turkey, Istanbul	13. 2. – 13. 8. 2006	8 640
Němcová Anna	France, Tours	8. 9. 2005 – 8. 3. 2006	8 640
Plachtová Michaela	Austria, Klagenfurt	25. 2. - 30. 8. 2006	6 480
Pokorová Lada	Spain, Salamanca	1. 9. 05 – 30. 6. 2006	14 400
Rončková Eva	Germany, Bonn	1. 10. 05 – 31. 7. 2006	10 800
Rusínská Kateřina	Austria, Klagenfurt	25. 2. - 30. 8. 2006	6 480
Snopková, Kateřina	Germany, Hanover	1. 10. 05 – 31. 8. 2006	11 880
Strážnická Barbora	Germany, Munich	1. 10. 05 – 31. 7. 2006	11 880
Sukenikova Klára	Germany, Bonn	1. 10. 05 – 31. 7. 2006	10 800
Šišková Martina	Germany, Erlangen	1. 10. 05 – 20. 2. 2006	5 400
Vala Jan	Greece, Heraklin	02 – 06 2006	7 200
Vaňous Libor	Germany, Erlangen	1. 3. – 31. 7. 2006	---

Winter Semester 2006/2007

Name	University	Country	Date
Adamcová Kateřina	Würzburg	Germany	10/06 – 02/07
Alblová Michaela	Clermont Ferr.	France	09/06 – 06/07
Barna Lukáš	Ljubljana	Slovenia	09/06 – 06/07
Cvikýřová Vendula	Munich	Germany	10/06 – 03/07
Čapková Lucie	Seville	Spain	09/06 – 02/07
Čechová Ludmila	Paris	France	09/06 – 06/07
Doskočilová Kateřina	Liverpool	UK	09/06 – 06/07
Dvořák Petr	Klagenfurt	Austria	10/06 – 01/07
Egriová Sabina	Freiburg	Germany	09/06 – 02/07
Glovařák Marian	Sakarya	Turkey	09/06 – 01/07
Hýblová Martina	Leeds	UK	09/06 – 01/07
Jindrová Petra	Paris	France	09/06 – 06/07
Kolinek Ondřej	Tours	France	09/06 – 06/07
Kostelníková Veronika	Munich	Germany	10/06 – 03/07
Krajčová Jana	Münster	Germany	10/06 – 03/07
Krsek Petr	Leiden	Netherlands	09/06 – 12/06
Kubincová Libuše	Udine	Italy	10/06 – 12/06
Kubizňák Pavel	Jönköping	Sweden	08/06 – 06/07
Machovičová Renata	Munich	Germany	10/06 – 09/07
Matějková Dagmar	Graz	Austria	09/06 – 02/07
Motyka Oldřich	B.Biala	Poland	10/06 – 01/07
Ottmár Aleš	Istanbul	Turkey	09/06 – 07/07
Povolná Ivana	Roskilde	Denmark	09/06 – 06/07
Rýparová Michaela	Graz	Austria	09/06 – 01/07
Starzyková Lenka	Graz	Austria	09/06 – 06/07
Svoboda Tomáš	Sakarya	Turkey	09/06 – 01/07
Šnajdrová Michaela	Seville	Spain	09/06 – 02/07
Zbránková Veronika	Katowice	Poland	10/06 – 02/07
Židík Miloš	Roskilde	Denmark	09/06 – 02/07

Note: Since the academic year 2004/2005 students can apply for special scholarship to help fund their study abroad within the framework of the Socrates-Erasmus programme (Dean's regulation No. 3/2006). In 2006 28 applicants were granted the special scholarship and the amount of money spent on the support of the study stays abroad was 307 thousand CZK.

b) Others

Name	Dpt	Country	Place	Conference	Date	Days
Dubovský, D.	KMA	Poland	Bedlewo	6th Conf. on Number Theory	12. - 16. 6.	5
Dytrtová, K.	KFG	Slovakia	Nitra	7th Doctoral Students Conf.	5. - 6. 4.	2
Hanzelka, D.	KIP	Slovakia	Bratislava	APLIMAT 2006	9. 2.	1
Kijonka, V.	KMA	France	St. Etienne	Study stay ECO-NET	1. - 30. 6.	30
Miartuš, M.	KSG	Slovakia	Nitra	7th Doctoral Students Conf.	6. 4.	1
Procházka, J.	KIP	Cyprus	Paphos	Enterprise Information Systems	20. - 28. 5.	9
Šustek, J.	KMA	Poland	Bedlewo	6th Conf. on Number Theory	12. - 16. 6.	5
Šustek, J.	KMA	Slovakia	Bratislava	SVOČ	23. - 25. 5.	3
Štěpnička, J.	KMA	Slovakia	Bratislava	SVOČ	23. - 25. 5.	3

Name	Dpt	Country	Place	Conference	Date	Days
Štěpnička, J.	KMA	Poland	Bedlewo	6th Conf. on Number Theory	12. - 16. 6.	5
Zoubková, K.	KMA	Slovakia	Bratislava	APLIMAT 2006	7. - 10. 2.	4
Žižková, B.	FGG	Slovakia	Nitra	7th Doctoral Students Conf.	5. - 6. 4.	2

KMA Department of Mathematics
 KIP Department of Informatics and Computers
 KBE Department of Biology and Ecology
 KSG Department of Human Geography and Regional Development
 KGG Department of Physical Geography and Geoecology
 SVOČ Student Research Competition

5.4 List of Bilateral Agreements – SOCRATES – ERASMUS Programme

Code of university	Place	Country	Coordinator	Department
BG ROUSSE01	Rousse	Bulgaria	Mechlová	KFY
DK ROSKILD 01	Roskilde	Denmark	Drobík	KSG
SF JOENSUU01	Joensuu	Finland	Drobík	KSG
F CLERMON 02	Clermont Ferrand	France	Drobík	KSG
F PARISO 04	Paris	France	Drobík	KSG
F TOURS 01	Tours	France	Drobík	KSG
IRL DUBLIN04	Dublin	Ireland	Huňka	KIP
I CATANIA 01	Catania	Italy	Perfiljeva	KMA
I PISA 01	Pisa	Italy	Hančl	KMA
I UDIN 01	Udine	Italy	Hančl	KMA
I UDIN 01	Udine	Italy	Mechlová	KFY
HU EGER01	Eger	Hungary	Tóth	KMA
NL LEIDEN 01	Leiden	Netherlands	Hančl	KMA
PL BIELSKO02	Bielsko-Biala	Poland	Plášek	KBE
PL KATOWIC 01	Katowice	Poland	Kostrá	KMA
PL KATOWIC 01	Katowice	Poland	Majkus	KBE
PL KRAKOW01	Krakow	Poland	Drobík	KSG
PL WARSZAW31	Warsaw	Poland	Drobík	KSG
P PORTALE 01	Portalegre	Portugal	Sochor	KIP
A GRAZ01	Graz	Austria	Kostrá	KMA
A GRAZ 02	Graz	Austria	Mišík	KMA
A KLAGENF 01	Klagenfurt	Austria	Drobík	KSG
RO ORADEA 01	Oradea	Austria	Drobík	KSG
RO CLUJNAP01	Cluj-Napoca	Romania	Tóth	KMA
G IRAKLIO 01	Heraklion	Greece	Kostrá	KMA
G PATRA 01	Patras	Greece	Močkoř	KMA
SK BANSKO01	Banská Bystrica	Slovakia	Drobík	KSG
SK BRATISL01	Bratislava	Slovakia	Mišík	KMA
SK KOMÁRNO 01	Komárno	Slovakia	Kostrá	KMA
SK NITRA 01	Nitra	Slovakia	Sochor	KIP
SK PRESOV0	Prešov	Slovakia	Drobík	KSG
SK TRENCIN01	Trenčín	Slovakia	Drobík	KSG
SK ZVOLEN 01	Zvolen	Slovakia	Kostrá	KMA
SI LJUBLJA 01	Ljubljana	Slovakia	Drobík	KSG
SI LJUBLJA 01	Ljubljana	Slovakia	Malachová	KBE

Code of university	Place	Country	Coordinator	Department
D AUGSBURG	Augsburg	Germany	Kostrá	KMA
D BERLIN 01	Berlin	Germany	Hančl	KMA
D BONN 01	Bonn	Germany	Drobík	KSG
D ERLANGE 01	Erlangen	Germany	Hančl	KMA
D FREIBUR 01	Freiburg	Germany	Kočárek	KBE
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
TR ISTABUL01	Istanbul	Turkey	Drobík	KSG
TR SAKARYA01	Sakarya	Turkey	Drobík	KSG
UK LIVERPO 01	Liverpool	UK	Hančl	KMA

6 Research programmes

There were no Research Programmes solved in 2006 at the Faculty of Science. Researchers from the Department of Mathematics and Department of Informatics and Computers took part at 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 financed by the Faculty of Science (Internal projects)	5	5 614
Research projects in 2006 (Filed in CEP – Central evidence of projects)	15	4 849
Development projects in 2006 (Except of CEP – Central evidence of projects)		
• Under national budget	14	13 086
• Projects financed by the EU Commission	5	9 512
Commercial contracts	4	949,5
Foreign projects (costs in EUR)	5	44 748

6.2 Research projects financed by the Faculty of Science (Internal projects)

Project No.	Coordinator	Project title	Grant (ths. CZK)
FPP1073	V. Špunda	Start-up project of the research centre in biophysics and chemical physics	2 396
FPP1074	P. Pečinka	Investigation of the molecular genetic mechanisms effect of genotoxic substances	350
FPP1075	T. Pánek	Geomorphological and geoecological aspects of slope deformations in the young orogenic areas	1 633
FPP1076	C. Klimeš	Intelligent information system and knowledge systems and their implementation in portals	400
FPP1077	J. Močkoř	Institute for advanced studies in the field of methods of number theory	835

6.3 Summary of project costs (departments)

Department of Mathematics

Project type	No. of projects	Grant (ths. CZK)
Research projects financed by the Faculty of Science (Internal projects)	1	835
Research projects in 2006 (filed in CEP – Central evidence of projects)	1	515
Development projects in 2006 (except of CEP – Central evidence of projects)		
• Under national budget	1	2 140
• Projects financed by the EU Commission	1	1 305

Department of Informatics and Computers

Project type	No. of projects	Grant (ths. CZK)
Research projects financed by the Faculty of Science (Internal projects)	1	400
Research projects in 2006 (filed in CEP – Central evidence of projects)	2	728
Development projects in 2006 (except of CEP – Central evidence of projects)		
• Under national budget	3	5 540
• Projects financed by the EU Commission	2	7 754
Foreign projects (costs in EUR)	3	32 148

Department of Physics

Project type	No. of projects	Grant (ths. CZK)
Research projects financed by the Faculty of Science (Internal projects)	1	2 396
Research projects in 2006 (filed in CEP – Central evidence of projects)	3	923
Development projects in 2006 (except of CEP – Central evidence of projects)		
• Under national budget	3	2 336
• Projects financed by the EU Commission	1	300
Commercial contracts	1	375
Foreign projects (costs in EUR)	2	12 600

Department of Chemistry

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2006 (filed in CEP – Central evidence of projects)	1	638
Development projects in 2006 (except of CEP – Central evidence of projects)		
• Under national budget	3	2 655
Commercial contracts	1	350

Department of Biology and Ecology

Project type	No. of projects	Grant (ths. CZK)
Research projects financed by the Faculty of Science (Internal projects)	1	350
Development projects in 2006 (except of CEP – Central evidence of projects)		
• Under national budget	3	339

Department of Physical Geography and Geoecology

Project type	No. of projects	Grant (ths. CZK)
Research projects financed by the Faculty of Science (Internal projects)	1	1 633
Research projects in 2006 (filed in CEP – Central evidence of projects)	4	901
Development projects in 2006 (except of CEP – Central evidence of projects)		
• Under national budget	1	76
Commercial contracts	2	224,5

Department of Human Geography and Regional Development

Project type	No. of projects	Grant (ths. CZK)
Research projects in 2006 (filed in CEP – Central evidence of projects)	4	1 144
Development projects in 2006 (except of CEP – Central evidence of projects)		
• Projects financed by the EU Commission	1	153

7 Faculty service

7.1 The libraries and depository and reading rooms of Faculty of Science (FS), UO

The libraries and information services of the Faculty of Science are in two separate locations: the FS -A depository and reading room in the street 30. dubna was added to the University Library on 1. 9. 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 1. 9. 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 2006

Monitored criteria / reading rooms	FS - A	FS - Chit.	Total	OU Total
Attendance				
Total number of visitors in 2006	16 785	8 620	25 405	99 179
Visitors on a daily average	75	38	57	55
Number of study locations	25	20	45	186
Lending services				
Total number of checkouts	50 355	25 361	75 716	299 451
Daily average of checkouts	225	113	169	167
Free selection of stock (library units)				
Non-periodical documents	1 852	3 200	5 052	25 865
Periodical documents	50	83	133	1 869
Number of magazines titles delivered	25	43	68	362
Use of PC				
Total number of PC users in 2006	10 513	4 781	15 294	61 133
Daily average of PC users	45	21	66	271
Number of user PCs	10	6	16	59
Reprography services				
Number of reproductions (copies)	2 209	12 564	14 773	162 819
Number of pages printed using PCs	5 420	2 683	8 103	51 322
Number of scanned pages	342	208	550	10 530
Hours open during the week (during the academic year)	52	34		

Note: The total statistics given are based on the number of copies made in the framework of copying services and recorded on a counter.

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 recently, 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. ENVIRONETBASE
8. ESPM - CSA ENVIRONMENTAL SCIENCES & POLLUTION MANAGEMENT DATABASE
9. GEOBASE
10. GEOREF
11. KLUWER
12. KNOVEL
13. PROQUEST 5000
14. SCIENCE DIRECT
15. SCIFINDER SCHOLAR
16. SPRINGER/LINK
17. WEB OF KNOWLEDGE
18. LAWS IN CR ONLINE
19. ZOOLOGICAL RECORD

8 Department of Mathematics

- 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.

8.1 Staff

Head of the Department

Jiří Močkoř, Professor (by 30. 9. 2006)
Petra Konečná, PhD. (from 1. 10. 2006)

Deputy Head of the Department

Petra Konečná, PhD. (by 30. 9. 2006)
Martin Swaczyna, PhD. (from 1. 10. 2006)

Secretary to the Department

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
Marek Pomp
Martin Swaczyna

Zuzana Václavíková
Martina Daňková
Petr Bulava

PhD. students (staff)

Petr Bulava

Thesis:	Nested simulation of demographic processes
Supervisor:	Evžen Kindler, Professor
End:	2007

Changes carried out during the course of 2006: on 13. 6. David Bartl was awarded the title of PhD., in 2006 Martin Swaczyna was awarded the title of PhD.

8.2 PhD. students

Marian Genčev
Václav Kijonka
Michal Kliment
David Krčmarský
Lenka Kucosová
Vladimír Lazar
Ferdinand Mácha
Radomír Paláček
Monika Pělučová
Dagmar Plšková
Olga Blahutová
Jan Štěpnička
Jan Šustek
Radka Tománková
Kateřina Zoubková
Kateřina Žižková

PhD. students who finished doctoral study in 2006

Luděk Cienciala
Jiří Neubauer
Michal Holčapek
Pavel Jahoda
Ferdinánd Filip
Pavel Rucki

8.3 Study programmes

Code of the study programme ¹⁾	Title of the study programme	Title of the study major ²⁾	Length of the study ³⁾			
			B	MN	P	FS
B 1103	Applied Mathematics	Applied Mathematics for Economics	3			P
B 1103	Applied Mathematics	Applied Mathematics	3			P
B 1103	Applied Mathematics	Mathematical and Computer Methods of Data Processing	3			P
N 1103	Applied Mathematics	Applied Mathematics for Economics		2		P
N 1103	Applied Mathematics	Applied Mathematics		2		P
N 1103	Applied Mathematics	Mathematical and Computer Methods of Data Processing		2		P
M 1103	Applied Mathematics	Applied Mathematics		5		P
M 1103	Applied Mathematics	Applied Mathematics for Economics		5		P
M 1103	Applied Mathematics	Teaching for Secondary Schools - Mathematics *)		5		P
M 7504	Teaching for Secondary Schools	Teaching for Secondary Schools - Mathematics*)		5		P
P 1103	Applied Mathematics	Applied Mathematics			3	P K
P 1103	Applied Mathematics	Applied Algebra			3	P K
P 1103	Applied Mathematics	Fuzzy Modelling			3	P K

8.4 Theses

Bachelor Theses

- BARTÁKOVÁ, Jana: *Convergence and Divergence of Infinite Series*. Supervisor: Mišík Ladislav
- DAREBNÍKOVÁ, Eva: *Completion of a Field by Using Dedekinds Cuts*. Supervisor: Bartl David
- HALADOVÁ, Hana: *Fuzzy Equality over the Algebras of Truth Values*. Supervisor: Novák Vilém
- HOŇÁKOVÁ, Petra: *Extrapolation - The source of historical Discoveries and Mistakes*. Supervisor: Václavíková Zuzana
- HORÁK, Miroslav: *Problems of algebra solved using the computer*. Supervisor: Pomp Marek
- KLÁSEK, Tomáš: *Application of Differential Equations For Solving Chosen Dynamic Models in Economics*. Supervisor: Hruběš Jan
- KLEPKOVÁ, Martina: *Some Aspects of History of Mechanics*. Supervisor: Swaczyna Martin
- KNÁPKOVÁ, Iveta: *Matrix Theory and Their Applications in Economy*. Supervisor: Kostra Juraj

¹⁾ B – bachelor study programme, N – master study programme following bachelor study programme, M – master study programme, P – doctoral study programme.

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

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

- KUCHAROVÁ, Daniela: *The Listeners Satisfaction with the Program's Content of the Radio Station*. Supervisor: Filipczykova Hana
- PUČOK, Libor: *Fuzzy Arithmetic*. Supervisor: Perfiljeva Irina
- ŠIMÍČKOVÁ, Lucie: *Algebraic Aspects in Graph Theory*. Supervisor: Konečná Petra
- ŠVÉDOVÁ, Vendula: *Vector Fields and Differential Equations*. Supervisor: Krupková Olga
- TOMANOVÁ, Iva: *Method of least squares - Approximation of Discrete Data and Judgement of Development*. Supervisor: Václavíková Zuzana
- VARMUŽA, Vladislav: *Market Research*. Supervisor: Svobodová Hana
- VAVŘÍČKOVÁ, Lenka.: *Integral Theory in the Real and the Complex Domain*. Supervisor: Mišík Ladislav
- WRUBLOVÁ, Michaela: *History of Codes and Ciphers*. Supervisor: Konečná Petra

Master Theses

- BABEJOVÁ, Helena: *Application of the theory of distributions at solution of ordinary differential equations*. Supervisor: Swaczyna Martin
- BABEJOVÁ, Irena: *Summation of Divergent Series*. Supervisor: Mišík Ladislav
- BROŽOVÁ, Hana: *Selected Tools and Methods for Solving Combinatorial Tasks*. Supervisor: Křivý Ivan
- GAĐURKOVÁ, Hana: *Methods of Consumers Demands Analysis*. Supervisor: Liška Miroslav
- GREGOR, Michal: *Fuzzy Equality and its Application in Fuzzy Logic*. Supervisor: Novák Vilém
- HEINZOVÁ, Petra: *Application of Mathematics in Criminal Science*. Supervisor: Mišík Ladislav
- KOTAČKA, Martin: *Risk modelling and its Applications in Non-Life Insurance*. Supervisor: Borovcová Martina
- KRČMARSKÝ, David: *Algebraic extension and its application*. Supervisor: Kostra Juraj
- KRESOVÁ, Lenka: *Stochastic Programming Algorithms for Global Optimization*. Supervisor: Tvrdík Josef
- LOKAJOVÁ, Kateřina: *Systems of Linear Inequalities in Infinite-Dimensional Vector Spaces over Linearly Ordered Fields*. Supervisor: Bartl David
- LORENZINIOVÁ, Lucie: *Data analysis by means of fuzzy transform*. Supervisor: Perfiljeva Irina
- MANDERLOVÁ, Lenka: *Application of Fuzzy Modelling in Financial Analysis of the Organization*. Supervisor: Novák Vilém
- MAURER, Pavel: *The Possibilities of Financing of the Long-Term Material Property*.
- PŠENICA, Matej: *Fundamental Analysis of the Enterprise of Ironworks and Wire works Železiarne Podbrezová, a.s.*
- STUDENSKÁ, Hana: *Polyhedral Groups*. Supervisor: Pomp Marek
- SUCHÁNKOVÁ, Romana: *Processes of Optimizing in the Intradepartmental Economic Control*.
- ŠEVČÍKOVÁ, Sandra: *Application of Mathematical Methods for Assessment of Company Economy in Domain of Revenues, Expenses and Profit*. Supervisor: Hrbáč Lubomír
- ŠTĚPNIČKA, Jan: *Irrationality of Infinite Series*. Supervisor: Haněl Jaroslav
- ŠUSTEK, Jan: *Expression of Real Numbers with the Help of Infinite Series*. Supervisor: Haněl Jaroslav

- URBIŠOVÁ, Karolína: *Development Trends in Naval Industry*. Supervisor: Svobodová Hana
- ZIKMUND, Ondřej: *Comparison of classical statistical stances with a fuzzy stance using the AHP method on a given economic problem*. Supervisor: Hrbáč Lubomír

Doctoral theses

- FILIP, Ferdinand: *Block Sequences and (R) - Density*. Supervisor: Tóth János
- JAHODA, Pavel: *Expressibility of Natural Numbers in some Special Forms and Zero Asymptotic Density Sets*. Supervisor: Tóth János
- NEUBAUER, Jiří: *Selected Methods of Statistical Analysis of Stochastic Processes and Applications*. Supervisor: Michálek Jaroslav
- RUCKI, Pavel: *Irrationality, Transcendence and Linear Independence of Infinite Series*. Supervisor: Hančl Jaroslav

8.5 Research projects

Research projects in 2006 (filed in CEP – Central evidence of projects)

Coordinator/ Contractor*	Department	Provider (agency)	Project title	Grant (ths. CZK)
J. Močkoř*	KMA	GAČR 201/04/0381	Methods in number theory	515

Development projects in 2006 (except of CEP – Central evidence of projects)

a) Under national budget

Coordinator	Department	Provider (Agency)	Project title	Grant (ths. CZK) NIV/INV
J. Močkoř	KMA	MŠMT 614/8	Realization of a long-term strategy at the University of Ostrava in the sphere of management development and quality of the educational and research activities	2140/0

b) Projects financed by the EU Commission

Provider	Action	Dpt.	Project title	Duration	Grant (CZK) NIV/INV	2006 Grant (CZK) NIV/INV
OP RLZ	3.2 Support of the tertiary education, research and OP RLZ development	KMA	Modular System of Study Programmes at universities in Moravian – Silesian Region and its Realization	06/2006 – 06/2008	8 228 340/0	1 305 585/0

8.6 Equipment

- 17 PC
- 6 Notebooks

8.7 Conferences and seminars

- The 12th Annual Conference of Secondary School Teachers of Mathematics and Informatics, Faculty of Science OU Ostrava, 3. 1. 2006, 108 participants.
- Vojtěch Jarník International Mathematical Competition 27. - 30. 3. 2006, 100 participants

8.8 Cooperation with Universities and Research Institutes

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

Visitors to the institute

- Prof. Pietro Corvaja from University Udine - 20. 6. 2006
- Prof. Kálman Liptai from University Eger – March 2006, for 2 weeks
- Dr. Nicolas Brisebarre a Dr. Olivier Roberts from University of Jean Monnet in St.Etienne, France - 6. 12. - 15. 12.
- Mesiar Radko from UK Bratislava, Slovakia – 25. 5. 2006

Visits of Staff Members

Conferences

Name	Dpt.	Country	Place	Name of Conference	Date
Bartl, D.	MA	Spain	Barcelona	2nd Czech-Catalan Conference in Mathematics	20. - 24. 9.
Bartl, D.	MA	France	St. Etienne	Arithmetics and Combinatorics	28. 6. - 1. 7.
Hančl, J.	MA	Poland	Bedlewo	6th Polish Slovak and Czech Conference on number theory	13. - 16. 6.
Hančl, J.	MA	Spain	Malaga	Conference	12. - 16. 9.
Kindler, E.	MA	Germany	Bonn	Conference	28. - 31. 5.
Konečná, P.	MA	Poland	Bedlewo	6th Polish, Slovak and Czech Conference on number theory	13. - 16. 6.
Mišík, L.	MA	Slovakia	Bratislava	Seminar on Fuzzy Relations	29. 5. – 3. 6.
Mišík, L.	MA	Spain	Malaga	Conference	12. - 16. 9.
Mišík, L.	MA	Slovakia	Liptovský Ján	8th Conference on Fuzzy Set Theory and Applications	30. 1. - 3. 2.
Mišík, L.	MA	Poland	Bedlewo	6th Polish, Slovak and Czech Conference on number theory	13. - 16. 6.

Name	Dpt.	Country	Place	Name of Conference	Date
Močkoř, J.	MA	Japan	Nagasaki, Fukuoka	Seminar on Data Analysis and Decision Making under Uncertainty	14. - 27. 8.
Močkoř, J.	MA	Germany	Dortmund	9th Fuzzy Days 2006	17. - 21. 9.
Močkoř, J.	MA	Poland	Bedlewo	6 th Polish, Slovak and Czech Conference on number theory	14. - 15. 6.
Novák, V.	MA	Slovakia	Liptovský Ján	8th Conference on Fuzzy Set Theory and Applications	30. 1. - 3. 2.
Novák, V.	MA	France	Paris	IPMU2006	2. - 8. 7.
Novák, V.	MA	Canada	Montreal	NAFIPS2006	1. - 8. 6.
Perfiljeva, I.	MA	France	Paris	IPMU2006	2. - 8. 7.
Perfiljeva, I.	MA	Canada	Montreal	NAFIPS2006	1. - 8. 6.
Perfiljeva, I.	MA	Russia	Moscow	Discrete Models in Control Systems Theory	1. - 6. 3.
Swaczyna, M.	MA	Spain	Barcelona	2nd Czech-Catalan Conference in Mathematics	20. - 24. 9.
Tóth, J.	MA	Poland	Bedlewo	6 th Polish Slovak and Czech Conference on number theory	13. - 16. 6.
Tóth, J.	MA	Slovakia	Liptovský Ján	8th Conference on Fuzzy Set Theory and Applications	30. 1. - 3. 2.
Tóth, J.	MA	Spain	Malaga	Conference	12. - 16. 9.

Short stays abroad 2006 (less than 10 days)

Name	Dpt.	Country	Place	Action	Date	Days
Kindler, E.	MA	Slovakia	Žilina	Member of opponent commission	12. - 13. 1.	2
Močkoř, J.	MA	Austria	Linz	Organisation of Double Diploma	8. - 10. 3.	3
Močkoř, J.	MA	Greece	Athens, Patras	Organisation of Double Diploma	1. - 5. 4.	5
Močkoř, J.	MA	Italy	Udine	Management of the quality of the research	7. - 10. 7.	4
Novák, V.	MA	Italy	Trento	Study stay, lecture	8. - 11. 3.	4
Paulík, T.	MA	Slovakia	Bratislava	Opponent process	8. - 9. 11.	2
Perfiljeva, I.	MA	Italy	Trento	Study stay, lecture	8. - 11. 3.	4
Swaczyna, M.	MA	Slovakia	S.S.Ves	Summer School	30. 7. - 5. 8.	7
Tóth, J.	MA	Hungary	Eger	Research and lecture stay	22. 5. - 31. 5.	10

Long time stays abroad 2006 (more than 10 days)

Name	Dpt.	Country	Place	Action	Date	Days
Bartl, D.	MA	France	St. Etienne	Study stay Eco-Net	15. 6. - 2. 7.	17
Hančl, J.	MA	Italy	Udine	Research	5. 1. - 15. 1.	11
Hančl, J.	MA	UK	Bristol	Research	11. 4. - 14. 5.	35
Hančl, J.	MA	Italy	Udine	Research	22. 6. - 23. 7.	32
Mišík, L.	MA	France	St. Etienne	Research and lecture stay	22. 6. - 9. 7.	18
Močkoř, J.	MA	Italy	Salerno	Research and lecture stay	19. 6. - 1. 7.	13
Novák, V.	MA	France	Toulouse	Research and lecture stay	27. 4. - 14. 5.	18
Novák, V.	MA	Belgium	Gent	Contact	20. 6. - 22. 7.	33
Novák, V.	MA	Thailand	Bangkok	KONTAKT	1. - 16. 12.	16

Name	Dpt.	Country	Place	Action	Date	Days
Perfiljeva, I.	MA	France	Toulouse	Research and lecture stay	27. 4. - 14. 5.	18
Perfiljeva, I.	MA	Thailand	Bangkok	Research and lecture stay	1. - 16. 12.	16
Tóth, J.	MA	France	St.Etienne	Research and lecture stay	23. 6. - 9. 7.	18

8.9 Student research activity

- SVOČ-2006, University students competition in research technical activity in mathematics Bratislava - Budměřice, May 23 - 25, 2006, competitors: Jan Šustek - 2., Jan Štěpnička - 6.

8.10 Membership in Professional Organisations

Prof. Vilém Novák, Prof. Irina Perfiljeva, Martin Štěpnička, Martina Daňková, PhD., Dagmar Plšková:

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

Prof. Irina Perfiljeva:

- Member of EUSFLAT board, scientific secretary.

Petr Bulava:

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

8.11 Publications

Monographic publication

- NOVÁK, V., PERFILJEVA, I., MOČKOŘ, J.: *Mathematical Principles of Fuzzy Logic*. 1st issue. Moscow: Fizmatlit, 2006. 347 pp. mathematical literature. ISBN 5-9221-0399-7.

Parts of monographic publications, articles

- PERFILJEVA, I.: *Fuzzy Transforms and Their Applications to Image Compression*. In Fuzzy Logic and Applications. LNAI . 3849. Publisher: Heidelberg: Springer, 2006. ISBN 3-540-32529-8. pp. 19 - 31.
- PERFILJEVA, I.: *Fuzzy IF-THEN Rules from Logical Point of View*. In Computational Intelligence, Theory and Applications. 1st issue. Heidelberg: Springer, 2006. ISBN 1615-3871. pp. 691 - 697.
- MOČKOŘ, J.: *Fuzzy Sets in Categories of Sets with Similarity Relations*. In Computational Intelligence, Theory and Applications. 1st issue. Heidelberg: Springer, 2006. ISBN 978-3-540-34780-4. pp. 677 - 682.
- SVOBODOVÁ, H. *Modern marketing research*. In Prague: Grada Publishing 2006. Grada Publishing, 2006. ISBN 80-247-0966-X.

Articles in proceedings (proceedings of conferences or institutions)

- NOVÁK, V.: *Fuzzy Logic Theory of Evaluating Expressions and Comparative Quantifiers*. In IMPU'06. 2. 7. 2006 - 5. 7. 2006 Paris. Paris: Editions EDK, 2006. pp. 1572 - 1579. ISBN 2-84254-112-X.
- MOČKOŘ, J.: *Error functions of locally linear functions derived from input-output data*. In International Symposium on Management Engineering. 10. 3. 2006 - 13. 6. 2006 Kitakyushu. Japan : Waseda University, Japan, 2006. pp. 1 - 8.
- KINDLER, E.: *Object-oriented simulation of simulating anticipatory systems*. In International Conference on Bioengineering, Technology, Computer Science, Knowledge Mining. 24. 2. 2006 - 26. 2. 2006 Prague. Ankara : Informatics, 2006. pp. 67 - 73. ISBN 975-00803-0-0.
- KŘIVÝ, I., KINDLER, E.: *Reflective Simulation of In-Patients Dynamics*. In 5th International Conference Aplimat. 7. 2. 2006 - 10. 2. 2006 Bratislava. Bratislava : Slovak University of Technology, 2006. pp. 613 - 617. ISBN 80-967305-4-1.
- DVOŘÁK, A., NOVÁK, V.: *A Fuzzy Logic Model of Detective Reasoning*. In IMPU'06. 2. 7. 2006 - 5. 7. 2006 Paris. Paris : Editions EDK, 2006. pp. 1572 - 1579. ISBN 2-84254-112-X.
- KINDLER, E., KŘIVÝ, I.: *Computer Simulation of Anticipatory Artificial Systems*. In 21st European Conference on Operational Research. 3. 7. 2006 - 5. 7. 2006 Reykjavik. Reykjavik: Icelandic Operations Research Society, 2006. pp. 98 - 98.
- KŘIVÝ, I., KINDLER, E.: *Terminology of Nested Simulation Models*. In International Conference on Computer Systems and Technologies. 15. 6. 2006 - 16. 6. 2006 Veliko Turnovo. Veliko Turnovo: Bulgarian Union of Automation and Informatics, 2006. pp. 51 - 56. ISBN 954-9641-46-5.
- MOČKOŘ, J.: *Fuzzy logic models in a category of sets with similarity relations*. In Czech-Japan Seminar on Fuzzy Systems and Inovational Computing. 18. 8. 2006 -22. 8. 2006 Fukuoka, Japan. Fukuoka: Waseda University, 2006. pp. 58 - 64.
- KINDLER, E., KŘIVÝ, I.: *Nesting Intelligent Agents-Simulators*. In 40th Spring International Conference on Modelling and Simulation of Systems. 24. 4. 2006 - 27. 4. 2006 Přerov. Ostrava: MARQ, 2006. pp. 23 - 30. ISBN 80-86840-21-2.
- KINDLER, E.: *Object-oriented representations of formal theories as tools for simulation of anticiopatory systems*. In Computing Anticipatory Systems '05. 8. 8. 2005 - 15. 8. 2005 Liege (Belgium). Melville, New York: American Institute of Physics, 2006. pp. 253 - 259. ISBN 0-7354-0331-7.
- KINDLER, E.: *Nesting simulating agents in SIMULA*. In European conference on modelling and simulating. 27. 5. 2006 - 31. 5. 2006 Bonn (SRN). Dudweiler (SRN): European council for modelling and simulation, 2006. pp. 527 - 531. ISBN 0-9553018-0-7.
- KINDLER, E., KŘIVÝ, I.: *Mathematics and Computer Simulation*. In CIEAEMS8 Congress - changes in society - a challenge for mathematics. 9. 7. 2006 - 15. 7. 2006 Srní. Pilsen: University of West Bohemia in Pilsen, 2006. pp. 127 - 133. ISBN 80-7043-478-3.
- KINDLER, E.: *Agent-Based Simulation of Simulating Anticipatory Systems - Classification*. In 14th International Enformatika Conference. 25. 8. 2006 – 27. 8. 2006 Prague. Istanbul: Enformatika, 2006. pp. 1 - 6. ISBN 1305-5313.
- KINDLER, E., KŘIVÝ, I.: *Through Agents to Automatic Generating Reflective Models*. In 28th International Autumn Colloquium ASIS 2006. 12. 9. 2006 - 14. 9. 2006 Vranov u Brna. Ostrava: MARQ, 2006. pp. 195-200. ISBN 80-86840-26-3.

- BARTL, D.: *Some Notes on Simplex Method*. In Mathematical Methods in Economics 2006. 13. 9. 2006 - 15. 9. 2006 Pilsen. Pilsen: University of West Bohemia in Pilsen, 2006. pp. 12 - 12. ISBN 80-7043-479-1.
- PERFILJEVA, I.: *Semilinear Spaces - Basic Structures for Fuzzy Systems*. In Information Processing and Management of Uncertainty in Knowledge-based Systems. 2006-07-02-2006-07-07 Paris, France. Paris: Editions E.D.K., 2006. pp. 1580 - 1587. ISBN 2-84254-112-X.
- HANČL, J., MIŠÍK, L., TÓTH, J.: *Fuzzy rational numbers and approximation of irrationals*. In Workshop of the ERCIM working group on Soft Computing. 13. 9. 2006 - 15. 9. 2006 Malaga. Malaga: University Malaga, 2006. pp. 5 - 8.
- MIŠÍK, L., TÓTH, J.: *On asymptotic behaviour of universal fuzzy measures*. In Workshop of the ERCIM working group on Soft Computing. 13. 9. 2006 - 15. 9. 2006 Malaga. Malaga: University Malaga, 2006. s. 1 - 4.
- NOVÁK, V.: *EQ-algebras: primary concepts and properties*. In Czech-Japan Seminar on Data Analysis & Decision Making under Uncertainty - Ninth Meeting. 18. 8. - 20. 8. Kitakyushu & Nagasaki. Japan: Waseda University, 2006. pp. 219 - 223.
- PERFILJEVA, I.: *Fuzzy Relation Equations in Semilinear Space*. In Czech-Japan Seminar on Data Analysis & Decision Making under Uncertainty - Ninth Meeting. 18. 8. - 20. 8. Kitakyushu & Nagasaki. Japan: Waseda University, 2006. pp. 146 - 155.
- PERFILJEVA, I.: *Fuzzy Transform --- a Powerful Tool in Modelling*. In East West Fuzzy Colloquium. 13. 9. - 15. 9. Zittau. Zittau: (FH) - Univ. of Applied Sciences, 2006. pp. 2 - 3. ISBN 3-9808089-8-X.
- HANČL, J., MIŠÍK, L., TÓTH, J.: *Fuzzy rational numbers and approximation of irrationals*. In Eight International Conference on Fuzzy Set Theory and Applications FSTA 2006. 30. 1. - 3. 2. Liptovský Ján. Liptovský Ján: 2006. pp. 51-51. ISBN ISBN 80-8040-284-1.
- MIŠÍK, L., TÓTH, J.: *On asymptotic behaviour of universal fuzzy measures*. In Fuzzy Set Theory and Applications FSTA 2006. 30. 1. - 3. 2. Liptovský Ján. Liptovský Ján: 2006. pp. 81 - 81. ISBN 80-8040-284-1.
- SCISKALOVÁ, M.: *Procedural administrative law and enterprise*. In Obchodné podnikanie v podmienkach teórie a praxe znalostnej ekonomiky. Bratislava: OF, EkU, 2006: 2006. pp. 723 - 727. ISBN 80-225-2227-9.
- BULAVA, P.: *Demographic study using discreet simulation*. In ASIS 2006. 12. 9. 2006 - 14. 9. 2006 Vranov u Brna. Ostrava : MARQ, 2006. pp. 53 - 56. ISBN 80-86840-26-3.

Articles in serial publications (newspapers, magazines)

- HANČL, J., RUCKI, P.: *A Generalisation of Sándor's Theorem*. In Commentarii Mathematici Universitatis Sancti Pauli. 2nd issue. 2006, Vol. 55, No. 2, pp. 97 - 111, ISSN 0010-258X.
- KONEČNÁ, P.: *Polynomial orbits in finite commutative rings*. In Czechoslovak Mathematical Journal. Vol. 56, No. 2 (2006), pp. 711 - 719, ISSN 0011-4642.
- HANČL, J., ŠUSTEK, J., NAIR, R.: *On the Lebesgue Measure of the Expressible Sets of Certain Sequences*. In Indag. Math. (N.S.). Vol. 17, No. 4 (2006), pp. 567 - 581, ISSN 0019-3577.
- HANČL, J., ŠUSTEK, J., RUCKI, P.: *A Generalisation of Sandor's Theorem Using Iterated Logarithms*. In Kumamoto J. Math. Vol. 19, No. 1 (2006), pp. 25 - 36, ISSN 0914-675X.

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- NOVÁK, V., LEHMKE, S.: *Logical Structure of Fuzzy IF-THEN Rules*. In Fuzzy Sets and Systems. Vol. 157, No. 1 (2006), pp. 2003 - 2029, ISSN 0165-0114.
- NOVÁK, V.: *Which logic is the real fuzzy logic?* In Fuzzy Sets and Systems. 2006, Vol. 157, No. 5, pp. 635 - 641, ISSN 0165-0114.
- MIŠÍK, L., TÓTH, J.: *On asymptotic behaviour of universal fuzzy measures*. In Cybernetics. Vol. 42, No. 3 (2006), pp. 379 - 388
- MOČKOŘ, J.: *Covariant functors in categories of fuzzy sets over MV-algebras*. In Advances in Fuzzy Sets and Systems (accepted). Vol.1 (2), No. 2, (2006), pp. 83 - 109, ISSN 0973-421X .
- PERFILJEVA, I.: *Logical Foundations of Rule-Based Systems*. In Fuzzy Sets and Systems. Vol. 157, No. 5 (2006), pp. 615 - 621, ISSN 0165-0114.
- GIULIANO-ANTONINI, R., GREKOS, G., MIŠÍK, L.: *On weighted densities*. In Czechoslovak Mathematical Journal. 2006,
- HANČL, J., ŠUSTEK, J., RUCKI, P., BODIAGIN, D.: *Summing to Arbitrary Real Numbers*. In Elemente der Mathematik (to appear). 2006, pp. 1 - 10, ISSN 0013-6018 .
- PERFILJEVA, I.: *Fuzzy Transforms: Theory and Applications*. In Fuzzy Sets and Systems. FSTA 2006. Vol. 157 (2006), pp. 993 - 1023, ISSN 0165-0114.
- KINDLER, E.: *Object-oriented simulation of simulating anticipatory systems*. In International Journal of Computer Science. Vol. 3, No. 1 (2006), pp. 163 - 171, ISSN 1306-4428.
- KINDLER, E.: *Conference Eurosis on modelling and simulation in Portugal*. In AUTOMA. Vol. 1, No. 12 (2006), pp. 9 - 9, ISSN 1210-9592.
- KINDLER, E.: *Almost hidden conference on computing technique in Prague*. In AUTOMA. 2006, Vol. 12, No. 4 (2006), pp. 61 - 61, ISSN 1210-9592.
- HANČL, J., ŠUSTEK, J., SCHINZEL, A.: *On Expressible Sets of Geometric Sequences*. In Acta Arithmetica. 2006, pp. 11 - 21
- KŘIVÝ, I., KINDLER, E.: *Synthesis of Two Anticipatory Models in Design and Life-Cycle of Hospitals*. In International Journal of Anticipatory Systems. 2006, Vol. 2006, No. 18 (2006), pp. 75 - 85, ISSN 1373-5411.
- HANČL, J., MIŠÍK, L., TÓTH, J.: *Fuzzy rational numbers and approximation of irrationals*. In Fuzzy sets and Systems. 2006, pp. 1 - 11
- HANČL, J., RUCKI, P.: *A note to the transcendence of special infinite series*. In Mathematica Slovaca. Vol. 56, No. 4 (2006), pp. 409 - 414, ISSN 0139-9918.
- HANČL, J., SOBKOVÁ, S.: *Special linearly unrelated sequences*. In J. Math. Kyoto Univ. Vol. 46, No. 1 (2006), pp. 31 - 45, ISSN 0023-608X.
- HANČL, J., RUCKI, P.: *Certain Liouville series*. In An. Univ. Ferrara Sci. Math. . Vol.52, No. 1, pp. 35 - 48, ISSN 6628-3342.
- PERFILJEVA, I.: *Functional system of BL-algebra with infinite formulas*. In Int. Journal of Many-Valued Logic. 2006, No. 12, pp. 183 - 200, ISSN 1542-3980.
- PERFILJEVA, I., LEHMKE, S.: *Correct Models of Fuzzy If--Then Rules are Continuous*. In Fuzzy Sets and Systems. FSTA 2006, Vol. 157, No. 24 (2006), pp. 3188 - 3197, ISSN 0165-0114.
- PERFILJEVA, I., NOSKOVÁ, L.: *System of fuzzy relation equations with $\inf$ composition in semi-linear spaces: maximal solutions*. In Fuzzy Sets and Systems. FSTA 2006. Vol. 157, ISSN 0165-0114.
- MIŠÍK, L., TÓTH, J., GREKOS, G.: *Density sets of sets of positive integers*. In Density sets of sets of positive integers. 2006, pp. 1 - 12

- TÓTH, J., MIŠÍK, L., FILIP, F.: *Dispersion of ratio block sequences and asymptotic density*. 2006, pp. 1 - 10
- KRUPKOVÁ, O.: *Partial differential equations with differential constraints*. In J. Differential Equations. Vol. 220 (2006), pp. 354 - 395
- KRUPKOVÁ, O., VOLNÝ, P.: *Differential equations with constraints in jet bundles: Lagrangian and Hamiltonian systems*. In Lobachevskii Journal of Mathematics. Vol. 23 (2006), pp. 95 - 150, ISSN 1818-9962.
- KRUPKOVÁ, O., SARLET, W., PRINCE, G.: *Contact symmetries of the Helmholtz form*. In Diff. Geom. Appl. 2006,
- TÓTH, J., FILIP, F., LIPTAI, K.: *On prime divisors of remarkable sequences*. In Annals Math. et Inf.. Vol.33 (2006), pp. 45 - 56

Magazines

- Acta Mathematica Universitatis Ostraviensis 13/2005/1, pp. 82, 300 pieces, Repronis Ostrava. (80-7368-260-5, 1214-8148)
- Acta Mathematica Universitatis Ostraviensis 14/2006/1, pp. 74, 300 pieces, Repronis Ostrava. (80-7368-263-X, 1214-8148)

9 Department of Physics

- Biophysics (application of the optical spectroscopy in the analysis of structure and function of the biological systems in vivo, biophysics and ecophysiology of the photosynthesis of higher plants, the mechanisms of adaptation of assimilatory apparatus of economically and ecologically important plant species to the global climate changes),
- Theoretical Physics (non-equilibrium thermodynamics and stability, chemical physics of molecular clusters – computer modelling of structures and dynamics),
- Experimental physics (low temperature physics – transport properties of high temperature superconductors, electronics – field of temperature sensors and photodetectors),
- Theory of Education in Physics (Information and communication technology in physics teaching and learning, science teacher education, on-line learning in physics, multimedia programmes).

9.1 Staff

Head of the Department

Ladislav Sklenák, Assoc. Professor

Deputy Head of the Department

René Kalus, Assoc. Professor

Secretary to the Department

Jana Janošcová

Teaching staff

Professor

Erika Mechlová

Assoc. Professors

Ladislav Sklenák
René Kalus
Dalibor Dvořák
Jiří Kalina
Vladimír Špunda

Assistant Professors

Martin Čajánek
Daniel Hrivňák
Ivan Janeček
František Karlický
Libor Koníček

Researchers

Irena Kurasová, PhD.
 Martin Navrátil
 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)

Martin Navrátil

Branch of study: Biophysics
 Thesis: Spectral characteristics of solar radiation within plant canopies
 Supervisor: Prof. Jan Nauš
 End: 2007 (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 2006: on 29. 6. Libor Koníček was awarded the title of PhD. in Theory of teaching physics at Matej Bel University in Banská Bystrica, on 25. 8. Irena Kurasová, PhD., returned from maternity leave, on 1. 9. František Karlický was reclassified as a senior assistant, on 1. 9. Jana Podolinská became a full-time teacher, on 1. 9. Aleš Vítek became a full-time teacher, on 20. 10. Michal Štroch was awarded the title of PhD. in Biophysics at UP in Olomouc.

9.2 PhD. students

Libuše Kubincová
Veronika Mazurová

9.3 Study programmes

Code of the study programme ⁴⁾	Title of the study programme	Title of the study major ⁵⁾	Length of the study ⁶⁾			
B 1501	Biology	Experimental Biology	3			P
B 1702	Applied Physics	Biophysics	3			P
B 1702	Applied Physics	Measurement and Computer Presentation of Data	3			P
N 1501	Biology	Systematic Biology and Ecology		2		P
M 7503	Teaching for Primary Schools	Teaching for Primary Schools - Physics *)		4		P
M 7504	Teaching for Secondary Schools	Teaching for Secondary Schools - Physics*)		5		P
P 7507	Specialisation - Pedagogy	Theory of Education in Physics			3	P K

9.4 Theses

Bachelor theses

- BĚČÁKOVÁ, Jana: *Representation of deciduous and coniferous tree species in the Czech Republic and European Union*. Supervisor: Čajánek Martin
- BORSKÁ, Šárka: *Composition of plant pigments (carotenoids, chlorophylls) in selected plant species in relation to environmental effects*. Supervisor: Navrátil Martin
- CHOVANCOVÁ, Blanka: *Types of grasses and cereals in the Czech Republic and the European Union*. Supervisor: Čajánek Martin
- ČERVENĚ, Jiří: *Optimization of methodology of measuring LRC and CRC using gazometrical system Ciras 2 for plants acclimated to different range of irradiances*. Supervisor: Kalina Jiří
- JANČÍKOVÁ, Hana: *Using the photochemical reflectance index in plant physiology*. Supervisor: Navrátil Martin
- KOVÁČ, Daniel: *Daily and seasonal dynamics of xanthophyll cycle activity for chosen plant species*. Supervisor: Štroch Michal
- LEVÁKOVÁ, Veronika: *The importance of photorespiration in protection of the assimilatory apparatus against environmental stresses*. Supervisor: Štroch Michal
- LIŠKOVÁ, Barbora: *The possibilities to use plants in power industry*. Supervisor: Kalina Jiří

⁴⁾ B – bachelor study programme, N – master study programme representing a continuation of bachelor study programme, M – master study programme, P – doctoral study 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 – combination of these;

Master theses

- ČUPEROVÁ, Zuzana: *Study of spectral and optical properties of various species of higher plants*. Supervisor: Čajánek Martin
- JIRKALOVÁ, Pavlína: *Thermal power stations and their impact on the factors effecting the environment*. Supervisor: Mechlová Erika
- KOŠMIDROVÁ, Ivana: *Regulation of the excitation energy transfer and its utilization in the photosynthetic apparatus of barley mutants lacking specific light-harvesting complexes*. Supervisor: Čajánek Martin
- MLČOUŠKOVÁ, Jarmila: *Physical properties of scintigraphic imaging*. Supervisor: Ullmann Vojtěch
- MLEJNECKÁ, Lucie: *Theoretical study of collisions between ions and rare gas clusters*. Supervisor: Janeček Ivan
- PODOLINSKÁ, Jana: *The dynamics of utilization of absorbed excitation energy in photosystem II for Norway spruce during a day in laboratory conditions modelling different degree of stress*. Supervisor: Štroch Michal
- VAŠKOVÁ, Martina: *Utilization of spectral-optical properties to study chosen physiological parameters in higher plants*. Supervisor: Navrátil Martin
- VÍTEK, Aleš: *Thermodynamics of rare gases clusters*. Supervisor: Kalus René
- VRÁBL, Daniel: *The dynamics of changes of Norway spruce photosynthetic activity under controlled microclimatic conditions and within crown of Norway spruce in situ*. Supervisor: Kalina Jiří
- ZELENÁ, Soňa: *Educational programme for pupils at secondary schools - the ozone hole*. Supervisor: Mechlová Erika

9.5 Research projects

Research projects in 2006 (filed in CEP – Central evidence of projects)

Coordinator/ Contractor*	Department	Provider (agency)	Project title	Grant (ths. CZK)
Kalus, R.	KFY	GAČR 203/04/2146	Modelling of helium ionic clusters: structure, spectra, thermodynamics, and dynamics	485
Kalus, R.	KFY	MSM 1N04125	Centre of numerically demanding computations of the University of Ostrava	186
Kalina, J.*	KFY	GAČR 522/06/0930	Changes in Rubisco amount and activity under the impact of elevated CO ₂ concentration	252

Development projects in 2006 (except of CEP – Central evidence of projects)

a) Under national budget

Coordinator	Department	Provider (Agency)	Project title	Grant (ths. CZK) NIV/INV
Dvořák, D.	KFY	MŠMT 501/4/b	Cooperation of higher education institutions in creation of Standardized Multimedia Educational Tools (SMVP)	2 000/0
Kalus, R.	KFY	FRVŠ 1895/F6/b	Computer modelling in physics and chemistry	249/0
Janeček, I.	KFY	FRVŠ 2310/F6/d	Multimedia course of nuclear physics	87/0

b) Projects financed by the EU Commission

Provider	Action	Department	Project title	Duration	Grant (CZK) NIV/INV	2006 Grant (CZK) NIV/INV
OP RLZ	3.1 Improving the quality of education in schools and educational institutions and development of support services	KFY	Information and communication technology as a tool for development of system, structure and quality of education	09/2005 – 09/2007	700 000/0	300 000/0

c) Commercial contracts

Coordinator	Department	Provider	Project title	Grant (CZK)
Špunda, V.	KFY	ISBE AS CR	Evaluation, verification and interpretation of the environmental loads of the Czech Republic	375 000

Foreign projects in 2006

Coordinator/Contractor*	Department	Provider	Project title	Grant (EUR)
Mechlová, E.	KFY	Leonardo	SuperComet2	2 400
Mechlová, E.	KFY	Leonardo	ComLab2	10 200

9.6 Equipment

- The laboratory of the heat and temperature measurement. (The Standard equipment),
- School experiments laboratory (equipment for school experiment of 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),
- Laboratories for biophysics (equipment for spectroscopic and analytical methods),
- Laboratory for microscopic techniques, culture room (microscopes, growing chambers),
- 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 on field of mathematics, physics and chemistry),
- Laboratory of Optics (lasers, standard school optical equipment, PC – internet),
- Electricity and Magnetism Laboratory (measuring instruments, IP-Coach systems).

9.7 Conferences and seminars

- 5. 9. - 7. 9. 2006, ICTE – Information and Communication Technology in Education, 88 participants, international,
- 7. 4. 2006, Workshop VIRTUNIV, 30 participants, national.

9.8 Cooperation

Research institutes and universities 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.

Research institutes and universities abroad

- Institutes of Plant Biology and Biophysics, Biological Research Centre, Hungarian Academy of Sciences, P.O. Box 521, H-6701 Szeged, Hungary (Dr. Gyözö Garab).
- Institute of Botany II (Plant Molecular Biology and Biochemistry), University of Karlsruhe, Kaiserstraße 12, D-76128 Karlsruhe, Germany (Dr. Claus Buschmann, Prof. H. Lichtenthaler).
- Centre for Geo-Information, Wageningen University, Droevendaalsesteeg 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

- Susan M. Zvacek from University of Kansas, USA, 7. 4. 2006.
- Nadezhda Nancheva from University of Rousse, Bulgaria, 25. 5. - 3. 6. 2006.
- Marian Glowacki from WSP, Czestochova, Poland, 29. 8. 2006.
- Marian Glowacki from WSP, Czestochova, Poland, 6. 11. 2006.

Visits of Staff Members

Conferences

Name	Country	Place	Name of Conference	Date
Hrivňák, D.	Poland	Zakopane	CESTC 2006	24. - 27. 9.
Janeček, I.	Poland	Zakopane	CESTC 2006	24. - 27. 9.
Kalus, R.	Poland	Zakopane	CESTC 2006	24. - 27. 9.
Kalus, R.	Cuba	Habana	4th Meeting on Photodynamics	4. - 12. 2.
Karlický, F.	Poland	Zakopane	CESTC 2006	24. - 27. 9.
Koníček, L.	Netherlands	Amsterdam	GIREP 2006	20. - 25. 8.
Koníček, L.	Spain	Barcelona	Leonardo da Vinci ComLab 2	30. 3. - 2. 4.
Koníček, L.	Slovakia	Račková D.	DIDFYZ 2006	11. - 15. 10.
Mechlová, E.	Slovakia	Račková D.	DIDFYZ 2006	11. - 15. 10.
Mechlová, E.	Netherlands	Amsterdam	GIREP 2006	20. - 25. 8.
Mechlová, E.	Spain	Barcelona	Leonardo da Vinci ComLab 2	30. 3. - 2. 4.
Navrátil, M.	Germany	Ebernburg	Leaf Optics	8. - 12. 10.
Špunda, V.	Germany	Ebernburg	Leaf Optics	8. - 12. 10.
Štroch, M.	Germany	Ebernburg	Leaf Optics	8. - 12. 10.

Short stays abroad 2006 (less than 10 days)

Name	Dpt.	Country	Place	Action	Date
Karlický, F.	FY	France	Toulouse	Study stay	27. 11. - 5. 12.
Koníček, L.	FY	Slovakia	B. ystrica	Defence of PhD. theses	29. 6.
Mechlová, E.	FY	UK	Durham	Consultation	9. - 12. 4.
Mechlová, E.	FY	Slovakia	B.Bystrica	Defence of PhD. theses	29. 6.

Name	Dpt.	Country	Place	Action	Date
Sklenák, L.	FY	Slovakia	B.Bystrica	Defence of PhD. theses	29. 6.
Špunda, V.	FY	Slovakia	Nitra	Working meeting	22. - 23. 3.
Špunda, V.	FY	Germany	Karlsruhe	Cooperation of VV	11. - 15. 7.

Long time stays abroad 2006 (more than 10 days)

Name	Dpt.	Country	Place	Action	Date
Hrivňák, D.	FY	France	Toulouse	Research	4. - 15. 9.
Karlický, F.	FY	France	Toulouse	Research	4. - 15. 9.
Kalus, R.	FY	France	Toulouse	Research	4. - 15. 9.
Navrátil, M.	FY	Germany	Karlsruhe	Study stay	30. 5. - 3. 8.

9.9 Student research activity

- Student scientific competition (section physics and chemistry), 4. 5. 2006, 10 students,
- Student scientific competition (chemistry and related fields of study), 1. 6. 2006, 7 students.

9.10 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.

9.11 Publications

Articles in proceedings (proceedings of conferences or institutions)

- MECHLOVÁ, E., MALČÍK, M.: *Tendencies of ICT applications in education*. In Information and Communication Technology in Education. 5. 9. 2006 -7. 9. 2006 Rožnov pod Radhoštěm. Ostrava: University of Ostrava, 2006. pp. 32 - 42. ISBN 80-7368-199-4.
- KALINA, J., URBAN, O., BUKOVSKÁ, R.: *Rubisco – one of many enzymes*. In 58th Meeting of Associations of the Czech and Slovak Chemical Societies. 2006-09-04-2006-09-08 Ústí nad Labem, Czech Republic. Prague: Czech Chemical Society, 2006. pp. 700 - 700. ISBN 0009-2770.
- KALINA, J., BUKOVSKÁ, R., URBAN, O.: *Estimation of CO₂ assimilation rate on a basis of chlorophyll and Rubisco enzyme content*. In 15 Years of EU Supported

- Ecophysiological Research in the Czech Republic. 2006-09-18-2006-09-21 Olomouc, Czech Republic. Institute of Systems Biology and Ecology, Academy of Sciences of the Czech Republic, 2006.
- KOŠVANCOVÁ, M., KALINA, J., URBAN, O.: *Daily course of the maximum rate of in vivo Rubisco carboxylation in beech leaves exposed to ambient and elevated CO₂ concentration.* In 15 Years of EU Supported Ecophysiological Research in the Czech Republic. 2006-09-18-2006-09-21 Olomouc, Czech Republic. Institute of Systems Biology and Ecology, Academy of Sciences of the Czech Republic, 2006.
 - NAVRÁTIL, M., VAŠKOVÁ, M., ŠPUNDA, V.: *Differentiation of selected photosynthetic parameters of Norway spruce needles and their relation with reflectance spectra.* In 15 Years of EU Supported Ecophysiological Research in the Czech Republic. 2006-09-18-2006-09-21 Olomouc, Czech Republic. Institute of Systems Biology and Ecology, Academy of Sciences of the Czech Republic, 2006.
 - ŠPUNDA, V., ŠTROCH, M., VRÁBL, D., PODOLINSKÁ, J., KALINA, J.: *Acclimation of the Norway spruce seedlings to combined high irradiance and elevated temperature regimes simulating the summer conditions.* In 15 Years of EU Supported Ecophysiological Research in the Czech Republic. 2006-09-18-2006-09-21 Olomouc, Czech Republic. Institute of Systems Biology and Ecology, Academy of Sciences of the Czech Republic, 2006.
 - ŠTROCH, M., LENK, S., NAVRÁTIL, M., ŠPUNDA, V., BUSCHMANN, C.: *The response of wild type and chlorina f2 mutant of barley to increased PAR and UV radiation upon transfer from greenhouse to outdoor conditions.* In 15 Years of EU Supported Ecophysiological Research in the Czech Republic. 2006-09-18-2006-09-21 Olomouc, Czech Republic. Institute of Systems Biology and Ecology, Academy of Sciences of the Czech Republic, 2006.
 - URBAN, O., KOŠVANCOVÁ, M., ŠPUNDA, V., MAREK, M.: *Carbon metabolism in spruce trees cultivated under the impact of elevated CO₂.* In 15 Years of EU Supported Ecophysiological Research in the Czech Republic. 2006-09-18-2006-09-21 Olomouc, Czech Republic. Institute of Systems Biology and Ecology, Academy of Sciences of the Czech Republic, 2006.
 - DVOŘÁK, D.: *Example of Utilization of ICT for Explanation of the Second Principle of Thermodynamics.* In Information and Communication Technology in Education 2006. 5. 9. 2006 - 7. 9. 2006 Rožnov pod Radhoštěm. Ostrava: University of Ostrava, Faculty of Science, 2006. pp. 100 - 104. ISBN 80-7368-199-4.

Articles in serial publications (newspapers, magazines)

- KALUS, R., HRIVŇÁK, D., VÍTEK, A.: *Modelling of Krn⁺ clusters IV: Structural changes in Kr₃⁺ and Kr₄⁺.* In Chemical Physics. 2006, Vol. 325, pp. 278 - 290, ISSN 0301-0104.
- JANEČEK, I., HRIVŇÁK, D., KALUS, R., GADÉA, F.: *Theoretical modelling of post-ionization fragmentation of rare-gas trimer cations.* In Journal of Chemical Physics. 2006, Vol. 125, pp. Art. No. 104314 - Art. No. 104314, ISSN 0021-9606 .
- URBAN, O., KALINA, J., POKORNÝ, R., ŠPUNDA, V., MAREK, M.: *Forest ecosystems as a source of CO₂.* In EKO - ecology and society. 2006, Vol. 17, No. 6, pp. 16 - 19, ISSN 1210-4728.

10 Department of Informatics and Computers

- Methods of modelling and computer simulation (object oriented simulation of logistic, processing and environmental systems, methodology of reflective simulation),
- Artificial intelligence and logic, decision support systems (neural networks, deductive databases),
- Information and communication technologies in education,
- Stochastic algorithms, statistic software, application of statistical methods.

10.1 Staff

Head of the Department

Cyril Klimeš, Assoc. Prof.

Deputy Head of the Department

Eva Burianová, PhD.

Secretary to the Department

Simona Polochová

Teaching staff

Professor

Ivan Křivý

Associate Professors

František Huňka
Cyril Klimeš
Alena Lukasová
Petr Šaloun
Josef Tvrdlík

Assistant Professors

David Bražina
Eva Burianová
Rostislav Fojtík
Hashim Habiballa
Jaroslav Knybel
Alexej Kolcun
Miroslav Liška
Jaroslav Procházka
Tomáš Sochor
Zdeňka Telnarová

Eliška Treterová
Eva Volná

Technical Staff

Michal Kusýn

Project Manager

Lenka Káňová

External Teachers

Jiří Ivánek, PhD.
Radim Jiroušek, Professor
Petr Kucharčík
Pavla Lokajová
Ivo Martiník, PhD.
Viktor Pavliska
Miroslav Pokorný, Professor
Pavel Smolka
Jiří Šimonek

Changes carried out during the course of 2006: on 31. 5. Šárka Ramíková left her post as a full-time secretary of the department, on 1. 6. Simona Polochová returned from maternity leave, on 20. 6. Rostislav Fojtík was awarded the title of PhD. in the Theory of teaching informatics in Nitra, Constantine the Philosopher University in Nitra, on 1. 7. Lenka Káňová moved from the Dean's office and took up the post of a project manager, on 1. 9. Jaroslav Procházka became a full-time teacher, on 1. 9. Assoc. Prof. Petr Šaloun became a full-time employee.

10.2 Study programmes

Code of the study programme ⁷⁾	Title of the study programme	Title of the study major ⁸⁾	Length of the study ⁹⁾			
B 1801	Information Science	Information Science	3			P
B 1802	Applied Information Science	Applied Information Science	3			K
B 1802	Applied Information Science	Applied Information Science	3			D
N 1801	Information Science	Information Systems		2		P
N 1801	Information Science	Information Systems		3		P
N 1801	Information Science	Information Systems		3		K
N 1801	Information Science	Mathematical Information Science		3		P

⁷⁾ B – bachelor study programme, N - master study programme following bachelor study programme, M - master study programme, P - doctoral study programme.

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

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

Code of the study programme ¹⁰⁾	Title of the study programme	Title of the study major ¹¹⁾	Length of the study ¹²⁾			
M 1801	Information Science	Information Science and Computer Technology - Information Systems		5		P
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 Sciences*)		5		P
P 1801	Information Science	Information Systems			3	P K

10.3 Theses

Bachelor Theses

- BARTOŇ, Pavel: *Employing software to simulate networks in the computer networks classes*. Supervisor: Sochor Tomáš
- BECKE, Pavel: *Usage of ID cards with PKI*. Supervisor: Hasník Martin
- BEITEL, David: *Modularity in neural networks*. Supervisor: Volná Eva
- BLAŽEK, Jan: *Tools for online computer network communication (chat)*. Supervisor: Sochor Tomáš
- BOHDALOVSKÝ, Martin: *Tutorial material for programming dynamic data types and structures*. Supervisor: Treterová Eliška
- BOUZEK, David: *Differential calculus - vivid solutions of tasks*. Supervisor: Habiballa Hashim
- BUJOK, Petr: *Comparison of programming languages Java and C Sharp*. Supervisor: Fojtík Rostislav
- ČERVENÝ, Michal: *Rough sets - definition and improvement of this method*. Supervisor: Knybel Jaroslav
- ČOPJAK, Jakub: *The usage of theoretical informatics in practical informatics*. Supervisor: Habiballa Hashim
- DORAZIL, Ondřej: *Collection of problems for Linux*. Supervisor: Knybel Jaroslav
- DUROŇ, Pavel: *Practical computer problems - principles of text typing supported by computers*. Supervisor: Habiballa Hashim
- DVOŘÁKOVÁ, Petra: *Comprehensible solution to the problems in the field of informatics - spreadsheet programs*. Supervisor: Habiballa Hashim
- FIALA, Tomáš: *Security mechanisms in wireless networks*. Supervisor: Sochor Tomáš
- FICENC, Tomáš: *Comprehensible solution of the mathematical tasks - logic*. Supervisor: Habiballa Hashim
- FOLWARCZNY, Jakub: *Spyware and Spam*. Supervisor: Kusýn Michal
- FRANEK, Tomáš: *Recording, compression and archiving of audio signal*. Supervisor: Fojtík Rostislav
- GAŽÁK, Jan: *Testing program for mobile device*. Supervisor: Fojtík Rostislav

¹⁰⁾ B – bachelor study programme, N – master study programme following bachelor study programme, M – master study programme, P – doctoral study programme.

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

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

- GILL, Aleš: *Application of Socket Interface and Indy components as tool to interconnect a Win32 application to TCP/IP protocol suite*. Supervisor: Sochor Tomáš
- HEINC, Dalibor: *Visual task solutions in computer science- algorithmization*. Supervisor: Habiballa Hashim
- HIPÍK, Dalibor: *Usage of XML for creating technical documentation*. Supervisor: Procházka Jaroslav
- JANDA, Martin: *Guides for Java object - oriented programming under eclipse environment*. Supervisor: Vaněk Vladimír
- JUŘICA, Tomáš: *Automated conversion of description logic formulas into predicate logic*. Supervisor: Habiballa Hashim
- KOŠAŘ, Radim: *Designing a supporting application for conference organisation*. Supervisor: Sochor Tomáš
- KOTYRBA, Martin: *Self-organization in AI*. Supervisor: Volná Eva
- KOVAŘÍK, Josef: *Students web*. Supervisor: Knybel Jaroslav
- KREJČÍ, Jan: *Basics of computer graphics education support in Java environment*. Supervisor: Kolcun Alexej
- LANÍKOVÁ, Monika: *Web database application in MS Office*. Supervisor: Liška Miroslav
- LIŠKA, Petr: *Visual solutions of mathematical tasks - derivation*. Supervisor: Habiballa Hashim
- LIŠKOVÁ, Eva: *Visual solutions of mathematical tasks - integrals*. Supervisor: Habiballa Hashim
- MARCINISZYNOVÁ, Eva: *Principles of search algorithms*. Supervisor: Habiballa Hashim
- MEDLEN, Igor: *Types and characteristics of memory devices for mobile digital devices*. Supervisor: Fojtík Rostislav
- MELICHÁREK, Kamil: *Designing the Physical data Model for Information System of the Czech School Inspectorate*. Supervisor: Klimeš Cyril
- MICHNIK, Tomasz: *Context-free grammars transformation into Q-grammars and their parsing*. Supervisor: Habiballa Hashim
- MIK, Tomáš: *Using the PHP language for internet presentation*. Supervisor: Fojtík Rostislav
- MOJŽÍŠ, Lubomír: *Comparison of object programming languages (C++, Java, Beta)*. Supervisor: Huňka František
- NEKULA, Jan: *Proposal methodology of creation Internet application focusing on presentation of grant projects including internal communication between project's problemists*. Supervisor: Telnarová Zdeňka
- NEUMANN, Petr: *Design patterns and their utilization in graphics application interface in Java packages*. Supervisor: Huňka František
- NEUMANNOVÁ, Markéta: *Visual solution of mathematical tasks: Algebra of real numbers*. Supervisor: Habiballa Hashim
- NOVÁK, Jan: *Demonstration of sorting algorithms*. Supervisor: Fojtík Rostislav
- NOVOTNÝ, Jiří: *Comprehensible solution to the problems in mathematics – linear algebra*. Supervisor: Habiballa Hashim
- OBLUK, Michal: *Business process modelling with UML*. Supervisor: Lukáš Petr
- PAVLOSEK, Přemysl: *ISP network monitoring and administration based on OS Linux*. Supervisor: Lokajová Pavla
- POBUCKÝ, Michal: *Collection of Assembles examples*. Supervisor: Klimeš Cyril

- POLACHOVÁ, Petra: *Evaluation of suitability of integrated development environment BlueJ, Eclipse, JBuilder, JCreator and jGRASP for instruction OOP in Java*. Supervisor: Huňka František
- RAMÍK, Dominik: *Modular neural networks*. Supervisor: Volná Eva
- RICHTER, Martin: *Communication between operating systems Linux and Windows*. Supervisor: Bražina David
- RIEDEL, Petr: *Creating a multidimensional data warehouse*. Supervisor: Telnarová Zdeňka
- SEHNAL, Petr: *Monitoring of servers and network devices*. Supervisor: Sochor Tomáš
- SIKORA, David: *Web browsers*. Supervisor: Kusýn Michal
- SKLÁŘ, Petr: *Artificial immune systems and their application*. Supervisor: Volná Eva
- SKULINA, Rostislav: *Microsoft. NET web applications - programming*. Supervisor: Bražina David
- SUDOLSKÝ, Lukáš: *Visualisation of colour models and their transformation*. Supervisor: Kolcun Alexej
- SZKANDERA, Pavel: *Types and characteristics of optical storage*. Supervisor: Fojtík Rostislav
- ŠTELCL, Václav: *4D objects manipulation with help of OpenGL*. Supervisor: Kolcun Alexej
- TROJANEC, Marek: *Comprehensive proposal and realization of computer network case study*. Supervisor: Sochor Tomáš
- TVRZ, Stanislav: *The fastest itinerary search, design of itinerary search system*. Supervisor: Volná Eva
- VÍZDAL, Aleš: *Real-time voice transfers over networks based on the TCP/IP protocol*. Supervisor: Sochor Tomáš
- VOITLE, Marek: *Visual problem solution in mathematics - set theory*. Supervisor: Habiballa Hashim
- ŽÁČEK, Martin: *Authentication protocols in wireless networks*. Supervisor: Bražina David
- ŽUFAN TICHÝ, Radek: *Electronic management of business agenda*. Supervisor: Fojtík Rostislav

Master Theses

- BRODACKÝ, Lukáš: *The compression possibility and variability of digital formats*. Supervisor: Bražina David
- DVOŘÁKOVÁ, Eva: *Automated system of integrated processing of agility competitions results*. Supervisor: Klimeš Cyril
- HOLUŠA, Jan: *Possibilities and characteristics of online courses creation*. Supervisor: Fojtík Rostislav
- HYVNAROVÁ, Stanislava: *The principles of creating information databases on the internet and searching information publicised by WWW service and other electronic information services*. Supervisor: Sochor Tomáš
- KALUŽA, Radovan: *Internet applications - implementation and optimization*. Supervisor: Knybel Jaroslav
- LUKÁŠ, Stanislav: *Utilise environment J-Sim to simulation*. Supervisor: Huňka František
- MIARKA, Rostislav: *Programming of WEB information system*. Supervisor: Klimeš Cyril
- MOŠKOR, Jakub: *Information system of trustee in bankruptcy*. Supervisor: Knybel Jaroslav

- MRUZEK, Martin: *Evaluating queries using views*. Supervisor: Telnarová Zdeňka
- NEKULA, Tomáš: *Application Tools for on-line communication in e-learning sphere*. Supervisor: Sochor Tomáš
- NĚMEC, Miloš: *Possibilities of object modelling and object editing*. Supervisor: Bražina David
- ORZELOVÁ, Lenka: *Application of e-learning for the purpose of qualification improvement in the field of computer networks*. Supervisor: Sochor Tomáš
- POLOCH, Michal: *Non-monotonic logical systems representation of knowledge*. Supervisor: Lukasová Alena
- ŘEHÁNEK, Petr: *Security and efficiency of web content management*. Supervisor: Knybel Jaroslav
- SCHWAN, Daniel: *Formal ontology and semantic web*. Supervisor: Lukasová Alena
- STOJOVÁ, Kateřina: *Information system for educational evaluation*. Supervisor: Huňka František
- SVITANEK, Martin: *The portal application development for content management support*. Supervisor: Šimonek Jiří
- SVOBODA, Jiří: *3D position monitoring of selected points using digital camera*. Supervisor: Kolcun Alexej
- ŠAMONIL, Petr: *Stream video for utilization in online education*. Supervisor: Fojtík Rostislav
- ŠPALEK, Vít: *Design and implementation of the CRM system project*. Supervisor: Klimeš Cyril
- TURJAP, Vladimír: *Creating dynamic educational web sites with focus on physics of atomic nucleus*. Supervisor: Liška Miroslav
- TVRDÝ, Michal: *Simulator of physical processes and events for utilization at primary school - mechanics*. Supervisor: Burianová Eva
- VANĚK, Martin: *Query languages of relational, object and deductive data models*. Supervisor: Telnarová Zdeňka
- VANÍČEK, Jaromír: *Programming dynamics web applications*. Supervisor: Liška Miroslav

10.4 Research projects

Research projects in 2006 (filed in CEP – Central evidence of projects)

Coordinator	Dpt.	Provider (Agency)	Project title	Grant (ths. CZK) NIV/INV
Telnarová, Z.	KIP	MŠMT 160/5/a	Integration of disabled students into University of Ostrava study branches	700/500
Klimeš, C.	KIP	MŠMT 163/8/a	Project of manager excellency of the executives of University of Ostrava	2 600
Klimeš, C.	KIP	FRVŠ 2500/A/b	Classroom specialised for training and solving projects in computer networks	0/1 740

Development projects in 2006 (except of CEP – Central evidence of projects)

a) Under national budget

Coordinator	Department	Provider (Agency)	Project title	Grant (ths. CZK) NIV/INV
Tvrđík, J.	KIP	GAČR 201/05/0284	Evolutionary algorithms with competing and cooperating heuristics	386
Křivý, I.	KIP	GAČR 201/06/0612	Computer simulation of anticipatory systems	342

b) Projects financed by the EU Commission

Provider	Action	Dpt.	Project title	Duration	Grant (CZK) NIV/INV	Grant (CZK) NIV/INV
OP RLZ	3.2 Support of tertiary education, research and development of OP RLZ	KIP	System and realization of further education of research workers in the Moravian-Silesian Region	09/2005 – 08/2007	8 613 600/0	4 953 000/0
OP RLZ	3.2 Support of tertiary education, research and development of OP RLZ	KIP	Design and realization of the system of further education of teachers in the Moravian-Silesian Region	09/2005 – 08/2007	4 491 000/0	2 801 000/0

International projects in 2006

Coordinator/ Contractor*	Department	Provider	Project title	Grant (EUR)
Volná, E.	KIP	Gruntvig2	Distance/flexible forms of teaching	4 718
Telnarová, Z.	KIP	Comenius	SEDEC_Comenius	7 230
Telnarová, Z.	KIP	Comenius	Development and introduction CVO system with hard of hearing	20 200

10.5 Equipment

- Auditorium – Multimedia presentations – 1 x PC P2 Celeron 800 MHz, 512 MB RAM, 17' CRT, Projector, projecting screen, audio system,
- Computer classroom – 23 x PC P4 3.2 GHz, 1 GB RAM, 19' LCD, Printer, server,
- Computer classroom – 16 x PC AMD Sempron 1.8 GHz, 1 GB RAM, 17' LCD, Projecting screen,
- Computer classroom – 17 x PC P4 2.84 GHz, 512 MB RAM, 17' CRT,
- Computer classroom – Classroom Specialised to Computer Networks – 14 x PC AMD Sempron 1.8 GHz, 1 GB RAM, 17' LCD, 802.11 b/g card, Interactive projecting screen, 4 x switch Cisco, 5 x router Cisco, 2 x IP phone Cisco, 2 x PIX Firewall Cisco,

Set of Cisco 802.11 b/g Access Points and bridges Equipment for measuring of metallic, optical and wireless network characteristics,

- Computer classroom – Classroom Specialised to Computer Graphics – 17 x PC P4 2.4 GHz, 512 MB RAM, 17" CRT,
- Computer classroom – Lifelong Learning Centre – 15 x PC 2.4 GHz, 256 MB RAM, 17" CRT, Projector, projecting screen, printer, 2 x whiteboard.

10.6 Conferences and seminars

- The Tutorial of Mathematics and Computer Science Teaching for Secondary Schools Teachers, 2. 2. 2007,
- Software Development 2006, 33rd National Conference with International Participation, in cooperation with VSB-Technical University Ostrava, Masaryk's University Brno and Czech Society for System Integration.

10.7 Contacts and Cooperation

Cooperation with Universities and Research Institutes in the Czech Republic

- Charles University in Prague, Faculty of Mathematics and Physics.
- Charles University in Prague, Faculty of Education.
- 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.
- University of Economics, Prague Faculty of Informatics and Statistics.
- Silesian University in Opava, Faculty of Philosophy and Science.
- Brno University of Technology, Faculty of Information Technology.

International Cooperation with Universities and Research Institutes

- Universidad de Cordoba (Spain).
- Blaise Pascal University of Clermond-Ferrand (France).
- Lulea University of Technology (Sweden).
- University of Zilina (Slovakia).
- Constantine the Philosopher University in Nitra (Slovakia).
- Vytautas Magnus University of Vilnius (Lithuanian).
- University Wroclaw (Poland).
- Technical University of Kosice, Faculty of Electrical Engineering and Informatics (Slovakia).
- Matej Bel University in Banska Bystrica, Faculty of Science (Slovakia).
- Dublin City University (Ireland).
- University of Liege (Belgium).
- Lester Laboratories University of Southern Bretagne Lorient (France).

Visits of Staff Members

Conferences

Name	Dpt.	State	Place	Name of Conference	Date
Bražina, D.	IP	Slovakia	Nitra	Doctoral Student Research Conference	6. 4.
Burianová, E.	IP	Slovakia	Nitra	Doctoral Student Research Conference	6. 4.
Burianová, E.	IP	Slovakia	Nitra	UNINFOS & DIVAI	30. 5. - 2. 6.
Habiballa, H.	IP	Slovakia	Bratislava	APLIMAT	8. 2.
Habiballa, H.	IP	Italy	Bologna	ITIOSE	25. 6. - 1. 7.
Habiballa, H.	IP	Slovakia	Nitra	4th Mathematics Conference	12. - 13. 9.
Huňka, F.	IP	Germany	Bonn	20th SCS-ESM	28. - 31. 5.
Huňka, F.	IP	Bulgaria	V.Tarnovo	CompSysTech 06	13. - 17. 6.
Huňka, F.	IP	Iceland	Reykjavik	21st EC on Operational Research	1. - 6. 7.
Klimeš, C.	IP	Slovakia	Nitra	Doctoral Student Research Conference	6. 4.
Klimeš, C.	IP	Slovakia	Nitra	UNINFOS & DIVAI	30. 5. - 2. 6.
Knybel, J.	IP	Slovakia	Nitra	Doctoral Student Research Conference	6. 4.
Knybel, J.	IP	Cyprus	Paphos	ICEIS 2006	20. - 28. 5.
Kolcun, A.	IP	Slovakia	Čistá P.	SCCG Spring	20. - 22. 4.
Křivý, I.	IP	Slovakia	Bratislava	APLIMAT	7. - 10. 2.
Křivý, I.	IP	Iceland	Reykjavik	21st EC on Operational Research	1. - 6. 7.
Křivý, I.	IP	Italy	Rome	COMPSTAT 2006	26. 8. - 2. 9.
Sochor, T.	IP	Slovakia	St.Lesná	Cisco Networking Academy	20. - 22. 4.
Šaloun, P.	IP	Slovakia	Bratislava	WIKT2006	27. - 29. 11.
Šaloun, P.	IP	Greece	Athens	SMAP 06	2. - 5. 12.
Tvrđík, J.	IP	Slovakia	Bratislava	APLIMAT	7. - 10. 2.
Tvrđík, J.	IP	Italy	Rome	COMPSTAT 2006	26. 8. - 2. 9.
Tvrđík, J.	IP	Poland	Wisla	AAIA 2006	6. - 9. 11.
Volná, E.	IP	UK	Canterbury	RASC 2006	9. - 12. 7.

Short stays abroad 2006 (less than 10 days)

Name	Dpt.	State	Place	Name of Conference	Date
Burianová, E.	IP	Slovakia	Nitra	Prepar. of the conf. UNINFOS	22. - 24. 2.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	12. - 13. 1.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	26. - 27. 1.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	22. - 24. 2.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	22. - 24. 3.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	19. - 21. 4.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	23. - 24. 5.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	28. 6.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	19. - 22. 9.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	18. - 20. 10.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	22. - 24. 11.
Klimeš, C.	IP	Slovakia	Nitra	Lecturer in residence	19. - 22. 12.
Křivý, I.	IP	Slovakia	Bratislava	Appointment process	7. 3.
Křivý, I.	IP	Bulgaria	V.Tarnovo	Socrates_TN DEC	12. - 17. 6.
Křivý, I.	IP	Portugal	Coimbra	Socrates_TN DEC	5. - 9. 9.
Telnarová, Z.	IP	Poland	Olsztyn	Comenius	29. 6. - 2. 7.

Name	Dpt.	State	Place	Name of Conference	Date
Volná, E.	IP	Greece	Patras	Grundtvig 2	1. 5. - 8. 5.
Volná, E.	IP	Cyprus	Larnaca	Grundtvig 3	7. - 14. 6.
Volná, E.	IP	France	Marseille	Grundtvig 2	23. - 29. 10.

10.8 Membership in Professional Organisations

Assoc. Prof. Petr Šaloun:

- ACM - Association for Computing and Machinery,
- Program Committee of international conference ISIM, workshops – WFM, TPEV,
- Coorganizer of Czech ACM Coolegiate Programming Contest and ACM Student Research Competition.

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 – member,
- International Association for Statistical Computing – member,
- Board of Advisors of American Biographical Institute – member,
- Association of Simula Users – executive committee.

10.9 Publications

Parts of monographic publications, articles

- HUŇKA, F. *Anticipation Models in BETA*. In Computing Anticipatory Systems. 839. Melville, New York, USA: AIP - American Institute of Physics, 2006. ISBN 0-7354-0331-7. pp. 354 - 360.

Articles in proceedings (proceedings of conferences or institutions)

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- HABIBALLA, H.: *Resolution Based on Reasoning in Description Logic*. In ZNALOSTI 2006. 1. 2. 2006 - 3. 2. 2006 Hradec Králové. Hradec Králové: FIM UHK, 2006. pp. 106 - 117. ISBN 80-248-1001-8.
- HABIBALLA, H.: *Non-clausal Resolution Theorem Proving for Fuzzy Description Logic*. In SOFSEM 2006. 21. 1. 2006 - 27. 1. 2006 Měříň. Prague: Institute of Computer Science, Czech Academy of Sciences, 2006. pp. 1 - 12. ISBN 80-903298-4-5.

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- KŘIVÝ, I., KINDLER, E.: *Reflective Simulation of In-Patients Dynamics*. In 5th International Conference Aplimat. 7. 2. 2006 - 10. 2. 2006 Bratislava. Bratislava: Slovak University of Technology, 2006. pp. 613 - 617. ISBN 80-967305-4-1.
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- KLIMEŠ, C., BALOGH, Z.: *Modelling of pedagogical processes at university using Petri nets*. In UNINFOS 2006. 31. 5. 2006 - 2. 6. 2006 Nitra. Nitra: Constantine the Philosopher University in Nitra, 2006, pp. 229 - 234. ISBN 80-8050-976-X.
- KLIMEŠ, C.: *E-learning in skills teaching*. In DIVAI 2006. 1. 6. 2006 - 1. 6. 2006 Nitra. Nitra: Department of informatics FPV UKF in Nitra, 2006. pp. 14 - 19. ISBN 80-8050-975-1.
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- KLIMEŠ, C., BALOGH, Z.: *Fuzzy Petri networks in modelling educational processes in e-learning*. In eLearn2006. 8. 2. 2006 - 9. 2. 2006 Žilina. Institute of Continuing Education, University of Žilina, 2006. pp. 12 - 17. ISBN 80-8070-505-4.
- ZAJÍCOVÁ, P.: *Learning language by reading a text from the point of view of the student of teaching studies of German language*. In Autonomy in the process of learning and teaching foreign language. 1. 6. 2006 - 2. 6. 2006 Brno. Brno: Masaryk University, Faculty of Education, 2006. pp. 265 - 274. ISBN 80-210-4164-1.
- PROCHÁZKA, J., KNYBEL, J., KLIMEŠ, C.: *Various Process Wizard for Information Systems*. In Proceedings of the 8th International Conference on Enterprise Information Systems. Portugal: Institute for Systems and Technologies of Information, Control and Communication, 2006. ISBN 972-8865-42-2.
- PROCHÁZKA, J.: *Automatic code generation*. In 7th International Conference of Young Researchers. Nitra. Nitra: FPV UKF Nitra, 2006. ISBN 80-8050-960-3.
- PROCHÁZKA, J.: *Modelling tool for processes and algorithms with a guidebook*. In 6th International Conference of PhD students IMEA. University in Hradec Králové: Gaudeamus, 2006. pp. 116 - 123. ISBN 80-7041-164-3.

Articles in serial publications (newspapers, magazines)

- HABIBALLA, H., KMEŤ, T.: *Logic (part I.)*. In Mathematics-Physics-Informatics. Vol. 15, No. 7 (2006), pp. 424 - 433, ISSN 1210-1761.
- HABIBALLA, H., KMEŤ, T.: *Logic (part II.)*. In Mathematics-Physics-Informatics. Vol. 15, No. 8 (2006), pp. 491 - 498, ISSN 1210-1761.
- HABIBALLA, H., KMEŤ, T.: *Logic (part III.)*. In Mathematics-Physics-Informatics. Vol. 15, No. 9 (2006), pp. 559 - 564, ISSN 1210-1761.
- BLAHETA, R., BYCZANSKI, P., JAKL, O., KOHUT, R., KOLCUN, A., KREČMER, K., STARÝ, J.: *Large-scale parallel FEM computations of far/near stress field changes due to mining*. In Future generation Computer Systems. Vol. 2006, No. 22 (2006), pp. 449 - 459
- FOJTÍK, R.: *Problems of didactic tests in e-learning*. In Technológia vzdelávania. Vol. 14, No. 4 (2006), pp. 10 - 12, ISSN 1335-003X.
- KLIMEŠ, C.: *E-learning in knowledge teaching*. In Technológia vzdelávania. Vol. 14, No. 4 (2006), pp. 3 - 6, ISSN 1335-003X.
- KLIMEŠ, C., HABIBALLA, H.: *Flexible computer science university studies*. In ACM SIGCSE Bulletin. Vol. 38, No. 3 (2006), pp. 338 - 338, ISSN 0097-8418.
- GAL-EZER, J., HABIBALLA, H.: *Unique HS computer science curricula in Israel*. In Mathematics-Physics-Informatics. Vol. 16, No. 2 (2006), pp. 104 - 113, ISSN 1210-1761.
- KŘIVÝ, I., KINDLER, E.: *Synthesis of Two Anticipatory Models in Design and Life Cycle of Hospitals*. In International Journal of Anticipatory Systems. 2006, Vol. 2006, No. 18, pp. 75 - 85, ISSN 1373-5411.
- TVRDÍK, J.: *Differential Evolution with Self-adaptive Control-Parameter Setting*. In Soft Computing. 2006, ISSN 1432-7643.
- KLIMEŠ, C., PROCHÁZKA, J.: *New approaches in software development*. In Acta Electrotechnica et Informatica. Vol. 2, No. 2 (2006), pp. 21 - 26, ISSN 1335-8243.
- TVRDÍK, J.: *Differential Evolution: Competitive Setting of Control Parameters*. In Proceeding of the International Multi-conference on Computer Science and Information Technology. Vol. 22, No. 1 (2006), pp. 207 - 213, ISSN 1896-7094.
- BURIANOVÁ, E.: *Module system for further teacher education*. In Technology of Education - Teacher. Vol. 14, No. 4 (2006), pp. 6 - 8, ISSN 1335-003X.
- KLIMEŠ, C.: *Model of the decision support system under condition of non determination*. In Acta Electrotechnica et Informatica. Vol. 6, No. 6 (2006), pp. 28 - 37, ISSN 1335-8243.
- KINDLER, E.: *Agent-Based Simulation of Simulating Anticipatory Systems - Classification*. In IJIT - International Journal of Intelligent Technology. Vol. 1, No. 4 (2006), pp. 281 - 287, ISSN 1305-6417.
- HABIBALLA, H., LUKASOVÁ, A., TELNAROVÁ, Z.: *Fuzzy deductive databases*. In Acta Fac. Paed. Univ. Tyrnaviensis. Ser. C, Vol. 2006, No. 9 (2006), pp. 3 - 12
- KINDLER, E.: *Conference on systems simulation in Bonn*. In AUTOMA. Vol. 12, No. 10 (2006), pp. 59 - 59, ISSN 1210-9592.
- KINDLER, E.: *14th conference of Informatics association*. In AUTOMA. Vol. 12, No. 12 (2006), pp. 68 - 68, ISSN 1210-9592.

11 Department of Chemistry

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

11.1 Staff

Head of Department

Rudolf Peter, PhD.

Deputy Head of Department

Roman Maršálek, PhD.

Secretary

Jarmila Schmidtová

Teaching staff

Professor

Boleslav Taraba

Associate Professors

Dana Kričfaluši
Zuzana Navrátilová
Václav Slovák
Marie Solárová

Assistant Professor

Michal Haluzík

Laboratory Technician

Dagmar Ryšková

PhD. student (staff)

Michal Haluzík

Branch of study: Normal and pathological physiology
 Thesis: Adipose tissue as an endocrine organ: its role in the etiopathogenesis of insulin resistance and diabetes
 Supervisor: Prof. Vratislav Schreiber
 End: 2008 (1st Faculty of Medicine UK Prague)

Changes carried out during the course of 2006: Zuzana Navrátilová full time teacher, on 4. 3. 2006 Irena Klusáková left her post as a full-time laboratory technician, on 1. 11. 2006 Zuzana Navrátilová was awarded the scientific title of Associate Professor of Analytical Chemistry at the University of Pardubice.

11.2 Study programmes

Code of the study programme ¹³⁾	Title of the study programme	Title of the study major ¹⁴⁾	Length of the study ¹⁵⁾			
B 1407	Chemistry	Chemistry	3			P
N 1407	Chemistry	Physical Chemistry of Surfaces		2		P
M 7503	Teaching for Primary Schools	Teaching for Primary Schools - Chemistry *)		4		P
M 7504	Teaching for Secondary Schools	Teaching for Secondary Schools - Chemistry*)		5		P

11.3 Theses**Bachelor Theses**

- IZRAELOVÁ, Alexandra: *Interaction of singlet oxygen with organic matter*. Supervisor: Peter Rudolf
- KOCUROVÁ, Sandra: *Spectrophotometric determination of copper in clay minerals extracts*. Supervisor: Navrátilová Zuzana
- KUBÍČKOVÁ, Marcela: *Calorimetric investigation of temperature dependence of coal oxidation kinetics*. Supervisor: Taraba Boleslav
- MARTINÍKOVÁ, Iva: *Nitrification and denitrification in municipal waste water*. Supervisor: Slovák Václav
- MOJŽÍŠKOVÁ, Jana: *Pulse flow calorimetric study of the changes in coal caused by its aerial oxidation*. Supervisor: Taraba Boleslav
- MORYSOVÁ, Kateřina: *Singlet oxygen*. Supervisor: Peter Rudolf

¹³⁾ B – bachelor study programme, N - master study programme representing a continuation of bachelor study programme, M - master study programme, P - doctoral study programme.

¹⁴⁾ Study programmes marked with an asterisk can (usually) be studied only in a chosen study programme in pairs.

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

- OROŠOVÁ, Lenka: *Preparation and testing of modified carbon paste electrodes*. Supervisor: Navrátilová Zuzana
- PETŘÍKOVÁ, Marie: *The adsorption of lead using altered coal - column studies*. Supervisor: Maršálek Roman
- PIECHOVÁ, Jana: *Studies of low-temperature oxidation of coal using water-vapour adsorption method*. Supervisor: Taraba Boleslav
- POLČÁK, Petr: *The influence of the oxygen salts of metals of the second group on the kinetics of graphite oxidation*. Supervisor: Slovák Václav
- SENAJOVÁ, Jana: *Research on coal changes during oxidation by air using method of dynamic desorption of nitrogen*. Supervisor: Taraba Boleslav
- ŠANDO VÁ, Pavlína: *The influence of surfactants on the zeta potential of carbonaceous particle*. Supervisor: Maršálek Roman
- TURKOVÁ, Michaela: *Using thermal analysis to monitor ageing process of pharmaceuticals*. Supervisor: Slovák Václav
- VOLDÁNOVÁ, Dagmar: *Termoanalytical characterisation of wood growing at increasing CO₂ concentration*. Supervisor: Slovák Václav
- VONDALOVÁ, Denisa: *Research on coal changes during oxidation by air using method of immersing calorimetry thesis*. Supervisor: Taraba Boleslav
- ZAORALOVÁ, Dana: *The influence of alkali metals halogenides on kinetics of graphite oxidation*. Supervisor: Slovák Václav

Master Theses

- GVOŽDÍKOVÁ, Karina: *The possibilities of applying the self - education of pupils in chemistry education at the primary school*. Supervisor: Solárová Marie
- JANIŠOVÁ, Jiřina: *Interdisciplinarity in the education of chemistry at secondary school*. Supervisor: Solárová Marie
- MANÍK, Zdeněk: *Software for calculation of kinetic parameters from thermogravimetric data by direct non-linear regression*. Supervisor: Slovák Václav
- POLEDNOVÁ, Monika: *The learning styles of schoolchildren and the ways of solution to chemical problems in chemistry education at the primary schools*. Supervisor: Solárová Marie

11.4 Research projects

Research projects in 2006 (filed in CEP – Central evidence of projects)

Coordinator/ Contractor*	Department	Provider (agency)	Project title	Grant (ths. CZK)
Taraba, B.	KCH	GAČR 105/06/0630	Modelling the distribution of the coal oxidation heat in the heterogenous porous surroundings	638

Development projects in 2006 (except of CEP – Central evidence of projects)

a) Under national budget

Coordinator	Department	Provider (Agency)	Project title	Grant (ths. CZK) NIV/INV
Kričfaluši, D.	KCH	MŠMT 157/2	Support for development of teacher education at University of Ostrava in Ostrava	2 000/0
Kričfaluši, D.	KCH	MŠMT 615/1/9	Support of the pupils' interest in studying the natural sciences	500/0
Solárová, M.	KCH	FRVŠ 1950/B/g	Implementation of interdisciplinary linkage of the educational field Man and nature to pre-graduate training of natural science teachers	155/0

b) Commercial contracts

Coordinator	Department	Provider	Project title	Grant (CZK)
Taraba, B.	KCH	OKD, DPB, a.s.	Processing the critical analysis of endogenic fires, project documentation and realization of measures for prevention of their emergence	350 000

11.5 Equipment

- Measurement of zeta potential – DELSA 440 SX,
- Thermal analysis (NETZSCH STA 449 C, Germany),
- Calorimeter Setaram C80,
- Mercury porosimeter Carlo Erba 2000,
- Sorptomatic Carlo Erba 1810 (measuring of surface area and pore distribution),
- Gas chromatographic devices Carlo Erba Mega 5120 a Chrom 5.

11.6 Conferences and Seminars

- Contemporary Aspects of Undergraduate Training and Postgraduate Education of Chemistry Teachers, 21. – 23. 6. 2006, Ostrava, international, 60 visitors.

11.7 Cooperation**Cooperation with Universities and Colleges and Research Institutions 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.

International Cooperation with Universities and Colleges and Research Institutions

- 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 (Ukraina).

Visitors to the institute

- Malgorzata Nodzynska from Akademia Pedagogiczna, Poland – 1. – 11. 10 2006.

Visits of Staff Members

Conferences

Name	Dpt.	State	Place	Name of Conference	Date
Kričfaluši, D.	CH	Slovakia	Donovaly	Present and future prospects of didactics of chemistry	11. - 13.10.
Taraba, B.	CH	Slovakia	Hriňová	Calorimetric seminary	22. - 25. 5.
Solárová, M.	CH	Slovakia	Donovaly	Present and future prospects of didactics of chemistry	11. - 13. 10.

Short stays abroad 2006 (less than 10 days)

Name	Dpt.	State	Place	Name of Conference	Date
Solárová, M.	CH	Slovakia	B. Bystrica	Opponent	15. 2.

11.8 Student research activity

- Student Research Competition (physics – chemistry), Faculty of Science OU, 4th May 2006, 10 participants.

11.9 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.

11.10 Publications

Articles in proceedings (conference or institution proceedings)

- SOLÁROVÁ, M.: *Interdisciplinary utilization of notions in education of natural science subjects at primary and secondary schools*. In Conference on didactics of chemistry. 15. 5. 2005 - 18. 5. 2005 Trnava. Trnava: Supplementum, 2006. pp. 69 - 73. ISBN 8082-049-X.
- MARŠÁLEK, R.: *Nature coal as an adsorption material for removing heavy metals from waste water*. In Recycling of metal and metallic waste. 5. 4. 2006 - 6. 4. 2006 Ostrava. VŠB-TU, Ostrava: 2006. ISBN 80-248-1070-0.
- MARŠÁLEK, R.: *pH - the main factor impacting the zeta potential*. In 7th scientific conference of doctoral students and young scientists. 6. 4. 2006 - 6. 4. 2006 Nitra. Nitra: FPV UKF in Nitra, 2006. p. 27. ISBN 80-8050-960-3.
- TARABA, B.: *Flow calorimetric study of water vapour sorption on coal*. In 28th International Slovak and Czech Calorimetric seminary. 22. 5. 2006 - 26. 5. 2006 Polana hotel, Hrinová, SR. Pardubice: University of Pardubice, 2006. pp. 49 - 52. ISBN 80-7194-859-4.
- MARŠÁLEK, R., SLOVÁK, V.: *The influence of oxygen content on zeta potential of carbonaceous materials*. In 10th Conference on Environment and Mineral Processing. 22. 6. 2006 - 24. 6. 2006 Ostrava. VŠB-TU: Publishing services department, VŠB-TU, 2006. pp. 361 - 365. ISBN 80-248-1088-3.
- SLOVÁK, V., MARŠÁLEK, R., TARABA, B.: *Changes on the surface of coal particle during low temperature oxidation*. In 58th meeting of chemical associations. 4. 9. 2006 - 8. 9. 2006 Ústí n. L. Prague: Czech chemical society, 2006. pp. 579 - 579. ISBN 0009-2770.
- LIPTÁKOVÁ, M., SLOVÁK, V.: *Effect of CuCl₂ on the kinetics of oxidation of oxidative altered coal*. In 58th meeting of chemical associations. 4. 9. 2006 - 8. 9. 2006 Ústí n. L. Prague: Czech chemical society, 2006. pp. 642 - 642. ISBN 0009-2770.
- TARABA, B., PETER, R., SLOVÁK, V., MARŠÁLEK, R.: *Interaction of the oxygen with coal in view of the chemist. (Contribution of members of the department of chemistry OU to the cognition of the process of oxidation and spontaneous ignition of coal)*. In Contribution of universities to the transformation of regions. 20 September 2006 Ostrava. Ostrava: University of Ostrava, 2006. pp. 149 - 152. ISBN 80-7368-225-7.
- TARABA, B., PETER, R., SLOVÁK, V., JANEK, J., DUŠKOVÁ, A.: *Study of the coal oxidation temperature dynamics*. In 6th Czech-Polish conference. 11. 10. -13. 10. 2006 Institute of geonics AS CR. Ostrava: Institute of geonics AS CR, 2006. pp. 163 - 168. ISBN 80-86407-10-1.

- SOLÁROVÁ, M.: *Pregradual preparation of future teachers for chemistry popularization*. In Present and future prospects of didactics of chemistry. 11. 10. 2006 - 13. 10. 2006 Donovaly. Banská Bystrica: UMB, 2006. pp. 92 - 97. ISBN 80-8083-286-2.
- KRIČFALUŠI, D., SOLÁROVÁ, M.: *Increasing computer literacy in pregradual preparation of future teachers of chemistry*. In Present and future prospects of didactics of chemistry. 11. 10. 2006 - 13. 10. 2006 Donovaly. Banská Bystrica: FPR University of Matej Bel, 2006. pp. 54 - 57. ISBN 80-8083-286-2.
- KRIČFALUŠI, D.: *Structured teaching study at Faculty of Science, OU*. In Actual aspects of pregradual preparation and postgraduate education of teachers of chemistry. 21. 6. 2006 - 23. 6. 2006 Ostrava. Ostrava: University of Ostrava, Faculty of Science, 2006. ISBN 90-7368
- TARABA, B., VORÁČEK, V., ZAHRADNÍČEK, V.: *Possibilities of evaluating spontaneous combustion risk of coal in longwalls*. In The 4th school of mine ventilation. 10. 10. 2006 - 13. 10. 2006 Krakow, AGH PAN. Katowice: EMAG Katowice, 2006. pp. 151 - 155. ISBN 83-913109-7-3.
- TARABA, B.: *The possibilities of the coal and cokes examinations using immersing and pulse flow calorimetric techniques*. In The 31st international cokemaking conference. 25. 10. 2006 - 26. 10. 2006 Malenovice. Ostrava: Czech cokemaking society, 2006. pp. 91 - 94. ISBN missing.
- SOLÁROVÁ, M.: *Curricular transformation in CR*. In Wstępne zgłoszenie udziału w II Międzynarodowej Konferencji. 29. 6. 2006 - 1. 7. 2006 Krakow. Krakow: Jaxa, 2006. pp. 175 - 180. ISBN 83-85886-12-5.
- SOLÁROVÁ, M.: *Stages and assessment of pedagogical practice*. In Problems of students assessment during continuous pedagogical practice. 29. 11. 2006 - 29. 11. 2006 Brno. Brno: KPdMU Brno, 2006. pp. 137 - 143. ISBN 80-86633-67-5.

Articles in serial publications (newspapers, magazines)

- PASTOREK, R., KAMENÍČEK, J., VRBOVÁ, H., SLOVÁK, V., PAVLÍČEK, M.: *Ni (II) complexes of unsymmetrical phenyl and phenethyl dithiocarbamates and triphenylphosphine*. In Journal of coordination chemistry. 2006, Vol. 59, No. 4, pp. 437 - 444, ISSN 0095-8972.
- PASTOREK, R., KAMENÍČEK, J., CVEK, B., SLOVÁK, V., PAVLÍČEK, M.: *Symmetric Ni (II) dithiocarbamates with bidentate phosphines ligands*. In Journal of coordination chemistry. 1st issue. Vol. 59, No. 8 (2006), pp. 911 - 919, ISSN 0095-8972.
- MARŠÁLEK, R.: *The zeta potential of clays*. In Chemical Papers. Vol. 8, No.100 (2006), pp. 594 - 594, ISSN 0009-2770.
- HALUZÍK, M., LACINOVÁ, Z., DOLÍNKOVÁ, M.: *Improvement of insulin sensitivity after peroxisome proliferator-activated receptor-alpha agonist treatment is accompanied by paradoxical increase of circulating resisting levels*. In Endocrinology. Vol. 147, No. 9 (2006), pp. 4517 - 4524
- NAVRÁTILOVÁ, Z.: *Electrodeposition of mercury film on electrodes modified with clay minerals*. In Chemical Papers. Vol. 60, (2006), pp. 348 - 352
- TARABA, B.: *Analysis of the cases of spontaneous ignition of coal at OKR mines - Part I: New method of coal self- ignition risk assessment at longwall faces*. In Coal, ore, geological study. Vol. 13, No. 11 (2006), pp. 34 - 37, ISSN 1210-7697.
- TARABA, B.: *Analysis of the cases of spontaneous ignition of coal at OKR mines - Part II: In Coal, ore, geological study*. Vol. 13, No. 12, (2006), pp. 28 - 31, ISSN 1210-7697.

- HALUZÍK, M.: *Peroxisome proliferator-activated receptors (PPAR) and insulin sensitivity -experimental study*. In Czech and Slovak physiology. Vol. 55, No. 4 (2006), pp. 21 - 26

Conference proceedings

- Actual aspects of pregraduate preparation and postgraduate education of teachers of chemistry. Collection of lectures 21. – 23. 6. 2006. 292 pages, 80 pieces, Publishing centre at OU, 200, - CZK (80-7368-244-3)

12 Department of Physical Geography and Geoecology

- Hydrology (anthropogenic changes of hydrological regime, hydrology of urban areas, modelling of hydrological processes, map creation with hydrological content with a view on the upper river Odra basin),
- Geomorphology and geoecology (geomorphological and geoecological aspects of slope deformations, fluvial geomorphology, geomorphological development of the young orogenic areas),
- Cartography, GIS and remote sensing (mapping and monitoring of physical geographic components by means of remote sensing, GPS and geodetic methods, atlas creation of small areas by means of GIS technology, remote sensing – multitemporal analysis of aerial photographs, mathematical cartography and geodetic methods; hydrological modelling by means of GIS).

12.1 Staff

Head of Department

Monika Mulková

Deputy Head of Department

Jana Bohdálková

Secretary to the Department

Pavlína Balonová

Teaching staff

Professors

Vladislav Kříž
Jozef Minár

Assoc. Professor

Milan Trizna

Assistant Professors

Martin Adamec
Radka Bartošová
Jana Bohdálková
Radek Dušek
Jan Hradecký
Monika Mulková
Lubomír Müller
Tomáš Pánek
Tomáš Rozehnal
Renata Sedlářiková

External teachers

Libor Černíkovský
Kamil Drabina
Otakar Holuša, PhD.
Karel Hrnčíř
Karel Kirchner, PhD.
Eva Kolčáková
Jarmila Krkošková
Karel Kupec
Jan Prášek
Jaroslav Rožnovský, PhD.
Tomáš Řehánek, PhD.
Miroslav Řepka
Jan Sviták
Radim Tolasz
Jan Unucka

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)

Monika Mulková

Major subject: Cartography, geoinformatics and remote sensing
 Thesis: Using aerial photography for anthropogenic landscape changes in undermine areas.
 Supervisor: Assoc. Prof. Milan Konečný
 End: 2007 (Faculty of Science MU Brno)

Renata Sedlářiková

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)

Changes carried out during the course of 2006: Monika Mulková was appointed head of the department, Assoc. Prof. Milan Trizna became a full-time teacher, Assoc. Prof. Jozef Minár became a full-time teacher, on 31. 8. Assoc. Prof. Jaromír Kaňok left his post as a full time teacher, on 1. 10. Radka Bartošová was reclassified as a senior assistant, on 2. 11. Assoc. Prof. Jozef Minár was awarded the title of professor in Physical Geography and Geoecology at Comenius University in Bratislava.

12.2 PhD. students

Viola Altová
 Karolína Dytrtová
 Milada Lažová
 Igor Pelíšek
 Veronika Smolková
 Karel Šilhán
 Barbara Žižková

12.3 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 1301	Geography	Cartography and Geoinformatics	3			P
B 1301	Geography	Physical Geography and Geoecology	3			P
B 1601	Ecology and Environmental Protection	Landscape Protection and Formation	3			P

¹⁶⁾ B – bachelor study programme, N – master study programme following bachelor study programme, M – master study programme, P – doctoral study 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, D – distance form of study, K – combination of these;

Code of the study programme ¹⁹⁾	Title of the study programme	Title of the study major ²⁰⁾	Length of the study ²¹⁾			
N 1301	Geography	Physical Geography and Geoecology		2		P
N 1601	Ecology and Environmental Protection	Landscape Protection and Formation		2		P
P 1301	Geography	Environmental Geography			3	P K

12.4 Theses

Bachelor theses

- ALBRECHT, Jan: *Watercourses- A comparison of the basic map 1:10 000 and reality*. Supervisor: Dušek Radek
- CHLEBKOVÁ, Michaela: *The hydrological survey of the Červík river basin*. Supervisor: Bohdálková Jana
- ČMIELOVÁ, Eva: *Geomorphological assessment of real state of the Kopytna River*. Supervisor: Hradecký Jan
- DRASTICH, Lukáš: *The hydrological survey of low flow of the river Olše*. Supervisor: Bohdálková Jana
- FOJTÍK, Bronislav: *Possibilities of digital terrain model processing in various software products*. Supervisor: Adamec Martin
- HORÁK, Jaroslav: *Creation of thematic layer: Monumental trees in the district Nový Jičín, for GIS AOPK*. Supervisor: Dušek Radek
- HRBÁČ, Jan: *The digital terrain model of a specific area*. Supervisor: Mulková Monika
- INSPEKTOR, Tomáš: *Atlas of the Environment in Ostrava - part Landscape*. Supervisor: Adamec Martin
- KAŇOKOVÁ, Monika: *Incidence of Reynoutria japonica in the defined area of the Ostravice river*. Supervisor: Adamec Martin
- KRATOCHVÍLOVÁ, Lenka: *Hydrological survey of the Senice river*. Supervisor: Kříž Vladislav
- KROKEROVÁ, Kateřina: *Atlas of the Environment in Ostrava - part Water*. Supervisor: Adamec Martin
- KŘESINA, Jiří: *Eudontomyzon mariae biotope changes in time and space in the Račí brook*. Supervisor: Hradecký Jan
- LANDOVÁ, Veronika: *Small locations of Stramberg limestone*. Supervisor: Rozehnal Tomáš
- MAJVALD, Jan: *Verification of exactness of acceptor GPS Garmin eTrex for geographic mapping*. Supervisor: Dušek Radek
- MIČULKOVÁ, Jana: *Atlas of the Environment in Ostrava - part Air*. Supervisor: Adamec Martin
- OVČÁČÍK, Martin: *The digital terrain model of a specific area*. Supervisor: Mulková Monika

¹⁹⁾ B – bachelor study programme, N – master study programme following bachelor study programme, M – master study programme, P – doctoral study 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 – combination of these;

- PASTORKOVÁ, Barbora: *Incidence of tornadoes in the Czech Republic*. Supervisor: Adamec Martin
- PODZIMKOVÁ, Jana: *The use of historical maps for the physical-geographic purposes*. Supervisor: Dušek Radek
- SOUŠKOVÁ, Petra: *The nitrate content in groundwater from the City of Albrechtice withdrawal area*. Supervisor: Rozehnal Tomáš
- SVOBODOVÁ, Lucie: *Boundary map of the Czech Silesia transferred from old maps to a map 1: 300 000*. Supervisor: Kaňok Jaromír
- ŠAFFEROVÁ, Jana: *Selected stage of the Bečva river and mapping its present situation and monitoring the development of bed after the floods in 1997*. Supervisor: Sedlářiková Renáta
- ŠKARPICH, Václav: *Atlas of the Environment in Ostrava - part the Old ecological burdens*. Supervisor: Adamec Martin
- ŠKOCH, Jakub: *Short description and maps of new tunnels in the Czech Republic after the year 1980*. Supervisor: Rozehnal Tomáš
- ŠPUNDOVÁ, Lucie: *Output of layers for GIS of municipal office Brodek near Přerov*. Supervisor: Adamec Martin
- ŠTĚPÁN, Jakub: *Analysis of spatial dislocation of the precipitation amount on territory in the Moravian-Silesian Beskid Mts. in period 1961-2005*. Supervisor: Bohdálková Jana
- VÍCH, Jan.: *Development of chosen air pollution indicators in connection with the economic development in the area of Hranice na Moravě*. Supervisor: Müller Lubomír
- VITÁSKOVÁ, Simona: *The hydrological survey of the Ostravická Datýňka river basin*. Supervisor: Bohdálková Jana
- ZVOLÁNKOVÁ, Tereza: *The Digital terrain model of a specific area*. Supervisor: Sedlářiková Renáta

Master theses

- BYRTUS, Wladyslaw: *Method of large-scale mapping by the GPS receiver using Kokeš and ArcMap programs*. Supervisor: Dušek Radek
- CHUCHMA, Filip: *Morphometric and statistical analysis of digital elevation model of Crimean mountains*. Supervisor: Pánek Tomáš
- ČERNOCH, David: *Notions "centre" and "central" in geography*. Supervisor: Dušek Radek
- DROZDEK, Marek: *Application of the close-range photogrammetry methods at observation of river basin changes in CHKO Poodří*. Supervisor: Dušek Radek
- FRIEDRICH, Daniel: *Relief of Velký and Malý Roudný - geomorphological mapping*. Supervisor: Pánek Tomáš
- GOLDMAN, Ondřej: *Spatial analysis of selected invasive plant species in protected landscape area (CHKO) Pálava*. Supervisor: Adamec Martin
- HARABIŠ, Jakub: *Mapping of vegetation cover on the northern part of the Skřečůň territory and monitoring the changes of vegetation cover in a selected part of the river basin Olše*. Supervisor: Sedlářiková Renáta
- HENNIG, Antonín: *Proposal for practical revitalization procurement on renewal of ecological landscape stability in land register Bolatice*. Supervisor: Hradecký Jan
- JURČÍK, Michal: *Conflicts of interests in CHKO Poodří - Northeast*. Supervisor: Hradecký Jan
- JURKOVÁ, Nikola: *Atlas of the Czech Part of the Silesian Beskydy Mts*. Supervisor: Dušek Radek

- KLEINER, Martin: *Atlas of Mauritius*. Supervisor: Dušek Radek
- KUBENKOVÁ, Veronika: *Landscape Ecological Study of the Natural Preserve of the Oder Basin - landscape character*. Supervisor: Hradecký Jan
- MIKULÁŠKOVÁ, Lucie: *Influence of land consolidation in 19th century on the present landscape*. Supervisor: Dušek Radek
- MOTL, Vojtěch: *Assessment of erosion processes in the protected area Praděd*. Supervisor: Hradecký Jan
- NALEVAJKA, David: *Mapping of vegetation cover on cadastral territory Kopytov and monitoring the changes of vegetation cover in a selected part of the river-basin Olše*. Supervisor: Sedlářiková Renáta
- NEČAS, Aleš: *Monitoring changes of the landscape horizontal structure in the mining territory quarry Louky using Geoinformation technology system*. Supervisor: Sedlářiková Renáta
- NĚMCOVÁ, Jana: *Boundary watercourses of the Czech Republic*. Supervisor: Dušek Radek
- PASEKA, Pavel: *An environmental geomorphological map of surroundings of Lysá hora Mountain in the Moravian-Silesian Beskydy Mountains (Part 1)*. Supervisor: Pánek Tomáš
- PILKOVÁ, Irena: *European tripoints*. Supervisor: Dušek Radek
- PLEŠKOVÁ, Zuzana: *Environmental geomorphological map of Lysá hora Mountain and its surroundings in the Moravian-Silesian Beskydy (Part 2)*. Supervisor: Pánek Tomáš
- POPELOVÁ, Monika: *Cartographic processing of the geomorphological locality - northern slope of Mt. Smrk (the valley of the Bučací brook)*. Supervisor: Dušek Radek
- PTAŠEK, Petr: *Landscape ecological study of CHKO Poodří - protected landscape area: landscape potential*. Supervisor: Hradecký Jan
- PUDÍKOVÁ, Lenka: *Geodetic survey of geomorphological locality - northern slope of Mt. Smrk (the valley of the Bučací brook)*. Supervisor: Dušek Radek
- ŘONDÍKOVÁ, Lenka: *Landscape ecological study of CHKO Poodří protected landscape area - carrying capacity*. Supervisor: Hradecký Jan
- SOJKOVÁ, Věra: *Slope deformations of the Jablunkovské mezihoří Mts*. Supervisor: Pánek Tomáš
- ŠILHÁN, Karel: *Geomorphological analysis of debris flows in the mountain group of Lysá hora in the Moravian-Silesian Beskydy mountains*. Supervisor: Pánek Tomáš
- UCHYTILOVÁ, Kateřina: *Disturbance signification of geomorphological processes in the area of the Western Beskydy mountains*. Supervisor: Hradecký Jan
- VÁVRA, Jiří: *Channel changes of the Odra River in CHKO Poodří (km 44,2 - 31,4)*. Supervisor: Hradecký Jan
- VAVŘÍN, Jan: *Geomorphological Mapping of the Novohradská Stupňovina Region*. Supervisor: Pánek Tomáš
- WAWRZYCZKOVÁ, Markéta: *Methods of detailed mapping with the usage of Kokes and ArcMap programs*. Supervisor: Dušek Radek

Doctoral Thesis

- NAVRÁTIL, Josef: *Waters as a part of the Třeboň region landscape in relationship to the development of specific recreational activities*. Supervisor: Kříž Vladislav

12.5 Research projects

Research projects in 2006 (filed in CEP – Central evidence of projects)

Coordinator/ Contractor*	Dpt.	Provider (agency)	Project title	Grant (ths. CZK)
Pánek, T.	KFG	KJB3018705 01	Quaternary geochronology of slope deformations of the culmination part of the Western Beskydy Mts: absolute and relative dating of landforms	285
Kaňok, J.*	KFG	GAČR 205/06/0965	Visualization, interpretation and perception of spatial information in thematic maps	197
Hradecký, J.	KFG	GAČR 205/06/P131	Geomorphic response of water streams to human disturbance in the area of Western Beskydy Mts	166
Pánek, T.	KFG	GAČR 205/06/P185	Comparison of morphotectonics and geomorphic effect of surface uplift in the culmination part of flysch Western Carpathians and the Crimean Mountains	253

Development projects in 2006 (except of CEP – Central evidence of projects)

a) Under national budget

Coordinator	Dpt.	Provider (Agency)	Project title	Grant (ths. CZK) NIV/INV
Müller, L.	KFG	FRVŠ 2950/F6/c	Lecture stays of foreign visiting professors at the Department of Physical Geography and Geoecology, Faculty of Science, University of Ostrava.	76/0

b) Commercial contracts

Coordinator	Department	Provider	Project title	Grant (CZK)
Adamec, M.	KFG	Ekoservis	Analysis of anthropic effects in the most valuable parts of Jeseníky PLA	144 000
Bartošová, R.	KFG	Czech geological survey	Documentation and mapping of slope movements in the Czech Republic	80 500

12.6 Equipment

- L003 Geologic laboratory - (Electric water-stage indicator, sensor PH, sensor for conductivity measurement, sensor for temperature measurement, geologic compasses, geologic hammers, petrographic microscope),
- L204 Pedology laboratory - (granulometry equipment, software AUTOSIEB, 1 PC, geophysical set ARES, drilling rig Eijkelkamp),

- L205 Digital photogrammetry laboratory - (1 PC, software MicroStation, Z/I Imaging),
- L303 Digital cartography laboratory - (Plotter HP DesignJet 800 ps A1, printer HP DeskJet 1220C, digitizer Summagraphics A0-Mikrogrid III, 2 PC, ArcInfo 9.0),
- L304 – Map archive - Surveying instruments: levels, theodolites, hand held distance measure, 2x total station Topcon, GPS instruments: 4x navigation receiver Garmin, 2x geodetic receiver Topcon,
- L305 GIS laboratory - (16 PC, dataprojector, software ArcGis 9.2, MicroStation v. 8 – 5 licences, Gramis 6, Corel Draw 12),
- L403 Remote sensing laboratory - (21 PC, dataprojector BENQ, PCI Geomatica 9.1, TopoL Remote Sensing 8.0),
- L404 Preparatory room DPZ - (Scanner Umax PowerLock 2100 XL, 1 PC, software PCI Geomatica 9.1)

12.7 Conferences

- GIS Day, 220 participants (students and teachers from secondary schools), on 16. 11. 2006, Ostrava region and its neighbourhood.

12.8 Contacts and Cooperation

Cooperation with Universities and Colleges and Research Institutions 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.

International cooperation with Universities and Colleges and Research Institutions

- 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).

Visits of Staff Members

Conferences

Name	Dpt.	State	Place	Name of Conference	Date
Hradecký, J.	FGG	Brazil	Goiania	Conference on Geomorphology	29. 8. - 20. 9.
Hradecký, J.	FGG	Slovakia	St.Lesná	Symposium on Landscape Ecology	4. - 7. 10.
Müller, L.	FGG	Slovakia	B.Bystrica	14th Congress on SGS	11. - 13. 9.
Pánek, T.	FGG	Slovakia	St.Lesná	Symposium on Landscape Ecology	4. - 7. 10.
Pánek, T.	FGG	Brazil	Goiania	Conference on Geomorphology	29. 8. - 20. 9.
Sedlářiková, R.	FGG	Slovakia	St.Lesná	Symposium on Landscape Ecology	4. - 7. 10.

Short stays abroad 2006 (less than 10 days)

Name	Dpt.	State	Place	Name of Conference	Date
Hradecký, J.	FGG	Germany	Tübingen	Research	2. - 3. 7.
Pánek, T.	FGG	Germany	Tübingen	Research	2. - 3. 7.

Long time stays abroad 2006 (more than 10 days)

Name	Dpt.	State	Place	Name of Conference	Date
Hradecký, J.	FGG	Ukraine	Crimea	Field research	19.5. - 10.6.
Pánek, T.	FGG	Ukraine	Crimea	Field research	19.5. - 10.6.

12.9 Membership in Professional Organisation

Jan Hradecký, PhD.:

- Czech Association of Geomorphologists,
- Czech Geographic 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 Geographic Society.

Monika Mulková:

- Czech Society for Photogrammetry and Remote Sensing.

Lubomír Müller, PhD.:

- Czech geographical Society,
- Czech statistical Society,
- Czech Society for Operation Research.

Tomáš Pánek, PhD.

- Czech Association of Geomorphologists,
- Czech Geographical Society.

Tomáš Rozehnal

- Czech geological Society,
- Czech geographical Society,
- Czech Association of Hydrogeology.

12.10 Publications

Monographic publications

- MINÁR, J., TRIZNA, M., BARKA, I., BONK, R.: *Floodwater potential in the territory of the Slovak Republic*. 1st edition. Bratislava, Slovak Republic: Geo-grafika, Ipeľská 5, 821 07 Bratislava, 2006. pp. 126, ISBN 80-968146-5-6.
- PÁNEK, T.: *Javorníky – the Moravian-Silesian Beskydy Mountains*. 1st edition. Bratislava: Dajama, 2006. pp. 158, Across Slovakia with a rucksack

Articles in proceedings (proceedings of conferences or institutions)

- ŽÁRNÍK, M.: *Remarks on edaphic category F (slope, fern)*. Prague: Czech University of Life Sciences Prague. Faculty of Forestry and Environment. Department of Dendrology and Forest Tree breeding, 2006.
- MÜLLER, L.: *Unemployment: A Global Problem and Threat*. In Globalisation and its Impact to Society, Regions and States. 11. 10. 2005 - 12. 10. 2005 Ostrava. Ostrava: University of Ostrava, 2006. pp. 213 - 217. ISBN 80-7368-256-7.
- PÁNEK, T., HRADECKÝ, J.: *Rockslides in the Crimean Mountains (Ukraine)*. In Regional Conference on Geomorphology. 6. 9. - 10. 9. Goiania. Goiania: Goiania, 2006. pp. 88 - 88. ISBN 551.4:061.3.
- DUŠEK, R., DROZDEK, M.: *Modelling the accuracy of geomorphological data*. In Technical Computing Prague 2006. Prague. Prague: Humusoft, 2006. pp. 31 - 31. ISBN 80-7080-616-8.
- PÁNEK, T., HRADECKÝ, J.: *Large-scale landslides in the culmination part of the Czech flysch Carpathians*. In Regional Conference on Geomorphology. 6. 9. 2006 - 10. 9. 2006 Goiania, Brazil. Goiania: International Association of Geomorphologists, 2006. pp. 84 - 84. ISBN CDU: 551.4:061.3.
- HRADECKÝ, J.: *Principal Changes in Channel Morphology Induced by Man in the Czech Carpathians*. In Regional Conference on Geomorphology. 6. 9. 2006 - 10. 9. 2006 Goiania, Brazil. Goiania: International Association of Geomorphologists, 2006. pp. 66 - 66. ISBN CDU: 551.4:061.3.
- PÁNEK, T., HRADECKÝ, J., SMOLKOVÁ, V.: *Megaslides on the outer cuesta range of the Crimean Mountains (Ukraine): predisposition, age and relation to quaternary development of the relief*. In Kvartér [Quaternary] 2006. 30. 11. 2006 - 30. 11. 2006 Brno. Brno: Czech Geographic Society, 2006. pp. 20 - 20.
- ADAMEC, M., BŘEZKOVÁ, L., HANZLOVÁ, M., HORÁK, J., UNUCKA, J.: *Modelling the impact of land use on waste relation with the support of GIS*. In Říční krajina. Olomouc. Olomouc: Palacky University in Olomouc, 2006.
- PÁNEK, T., HRADECKÝ, J., SMOLKOVÁ, V.: *Quaternary development of landforms on the outer cuesta range of the Crimean Mountains*. In Czech Geography in European Region 30. 8. 2006 - 2. 9. 2006 České Budějovice. České Budějovice: University of South Bohemia in České Budějovice, 2006. pp. 78 - 78. ISBN 80-7040-879-0.

- PÁNEK, T., SMOLKOVÁ, V., HRADECKÝ, J.: *Megaslides on the outer cuesta range of the Crimean Mountains*. Contribution of universities to transformation of regions. 19. 9. 2006 - 19. 9. 2006 Ostrava. Ostrava: Repronis, 2006. pp. 115 - 119. ISBN 80-7368-225-7.
- HRADECKÝ, J.: *Principals of transformation of geomorphic regime of water streams in the area of flysch Carpathians in CR*. In Geomorphological research in 2006. 10. 4. 2006 - 12. 4. 2006 Faculty of Science, UP in Olomouc. Olomouc: Publisher-UP in Olomouc, 2006. pp. 50 - 55. ISBN 2222-36-12X.
- HRADECKÝ, J., PELÍŠEK, I.: *Definition scope of the parameters for the evaluation of restoration effect*. In Geomorphological research in 2006. 10. 4. 2006 - 12. 4. 2006 Faculty of Science, UP in Olomouc. Olomouc: Publisher-UP in Olomouc, 2006. pp. 219 - 224. ISBN 2222-36-12X.
- MÜLLER, L.: *The Floods - a New Economical Problem*. In Mathematical Methods in Economics 2006. Plzeň. Plzeň: Czech Society for Research, Czech Econometric Society, 2006. pp. 54 - 62. ISBN 80-7043-479-1.
- MÜLLER, L.: *Some possibilities of geographical modelling using fuzzy sets*. In Meeting of Slovak geographic society, September- Presov. Presov: University of Presov in Presov, 2006.
- MÜLLER, L.: *Same ways of analysis of the Regional Potential with the help of Multifactorial Analysis. /is being published/*. In Meeting of Slovak geographic society, September – Presov. Presov: University of Presov in Presov, 2006.
- MÜLLER, L.: *Fuzzy sets as a tool for geographic modelling / is being published /*. In 21st meeting of Czech geographic society. August –September, České Budějovice. České Budějovice, University of South Bohemia: Czech geographic society, University of South Bohemia 2006. 145ISBN 80-7040-879-0.
- PÁNEK, T., HRADECKÝ, J., SMOLKOVÁ, V.: *Predisposition, structure and geochronology of slope failures in the highest parts of the Western Beskydy Mountains*. In Geomorphological research in 2006. 10. 4. 2006 - 12. 4. 2006 Faculty of Science, UP in Olomouc. Olomouc: Publisher - UP in Olomouc, 2006. pp. 208 - 213. ISBN 2222-36-12X.
- PÁNEK, T., ŠILHÁN, K.: *Debris flows in the highest parts of the Moravian-Silesian Beskydy Mountains: preliminary results of geomorphological and sedimentological analysis*. Geomorphological research in 2006. 10. 4. 2006 - 12. 4. 2006 Faculty of Science, UP in Olomouc. Olomouc: Publisher-UP in Olomouc, 2006. pp. 260 - 265. ISBN 2222-36-12X.
- SEDLÁRIKOVÁ, R.: *Development of aerial photography and its utilization for monitoring mining of mineral resources in the Jeseníky mountains region*. In 6th Saint Wenceslas Czech-Polish-German meeting in Jeseník. 2006. pp. 126 - 139. ISBN 80-86388-44-1.

Articles in serial publications (newspapers, magazines)

- PÁNEK, T.: *Java*. In Geography. 2006, issue 1, No. 14, pp. 4 - 8, ISSN 1335-9258.
- ŽIŽKOVÁ, B., PÁNEK, T.: *The geomorphological transformation of the Hodoslavický Javorník brachysyncline (The Moravian-Silesian Beskydy Mountains, Czech Republic)*. In Moravian Geographical Reports. Vol. 14, No. 3 (2006), pp. 9 - 18, ISSN 1210-8812.
- SMOLKOVÁ, V., PÁNEK, T.: *Landslide dammed lakes*. In Geography. Vol. 14, No. 2 (2006), pp. 52 - 55, ISSN 1335-9258.
- MENTLÍK, P., JEDLIČKA, K., MINÁR, J., BARKA, I.: *Geomorphological information system: physical model and options of geomorphological analysis*. In Geography -

Journal of Czech Geographic Society. Vol. 111, No. 1 (2006), pp. 15 - 32, ISSN 1212-0014.

- TRIZNA, M., MINÁR, J., BARKA, I., URBÁNEK, J., STANKOVIANSKY, M., JAKÁL, J.: *Geomorphological Hazards in Slovakia*. In *Studia geomorphologica Carpatho-Balkanica*. No. 11 (2006), pp. 61 - 78, ISSN 0081-6434.
- MINÁR, J.: *Fuzzy approach in geomorphological mapping*. In *Geomorphologia Slovaca*. Vol. 6, No. 1 (2006), pp. 8 - 13, ISSN 1335-9541.
- KALVODA, J., MINÁR, J.: Prologue: *Progress in methods of geomorphological research*. In *Geomorphologia Slovaca*. Vol. 6, No.1 (2006), pp. 5 - 7, ISSN 1335-9541.
- MÜLLER, L.: *Comparison of mathematical modelling using fuzzy approximation and Runge-Kutt method*. In *Geographic Review*. Vol. 2, No. 1 (2006), pp. 680 - 696, ISSN 1336-7072.

13 Department of Biology and Ecology

- Human impact on the environment in industrial landscape – biological assessment of key anthropogenic factors,
- Genotoxicity and acute toxicity of xenobiotics in environment and detection of toxic changes during biodegradation process; mutagenicity detection by means of plasmid topology changes,
- Distribution and ecology of bryophytes,
- Evolutionary ecology of phytophagous insects in temperate and tropic ecosystems,
- Population ecology of fishes in rivers and freshwater bodies,
- Ecology and distribution of selected invertebrates groups (Aranea, Odonata, Coleoptera, Orthoptera, Decapoda).

13.1 Staff

Head of Department

Kateřina Malachová, Assoc. Professor

Deputy Head of Department

Pavel Drozd, PhD.

Secretary to the Department

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
 Tomáš Tureček
 Michal Živný

Others:

Ludmila Drobíková
 Ivona Horká
 Eva Martinkovská

Changes carried out during the course of 2006: on 1. 2. 2006 Petr Pečínka, PhD. became a full-time teacher, on 31. 8. 2006 Denisa Lednická, PhD. left her post as a full-time teacher.

13.2 Study programmes

Code of the study programme ²²⁾	Title of the study programme	Title of the study major ²³⁾	Length of the study ²⁴⁾			
B 1501	Biology	Systematic Biology and Ecology	3			P
B 1501	Biology	Applied Ecology	3			P
N 1501	Biology	Systematic Biology and Ecology		2		P
M 7503	Teaching for Primary Schools	Teaching for Primary Schools - Biology *)		4		P
M 7504	Teaching for Secondary Schools	Teaching for Secondary Schools - Biology*)		5		P

13.3 Theses

Bachelor theses

- BALÁŽ, Marian: *The growth of perch (Perca fluviatilis Linnaeus, 1758) in Kružberk water-supply reservoir*. Supervisor: Lojkásek Bohumír
- BIELSKÁ, Silvie: *Influence of visitor presence on the behaviour of captive lion-tailed macaques (Macaca silenus) housed in ZOO Ostrava*. Supervisor: Majkus Zdeněk
- BRŠŤÁKOVÁ, Zdeňka: *Dragonflies (Odonata) at selected peat bogs of Hruby Jeseník with focus on tyrphobiont species of genus Somatochlora*. Supervisor: Dolný Aleš
- CVOLIGOVÁ, Martina: *Ecological analysis of the arachnocenoses of the chosen places on the territory of Grygov hills*. Supervisor: Majkus Zdeněk
- ČTVRTNÍČKOVÁ, Klára: *The surface representation of the wood and its threat in the chosen part of landscape Přerov*. Supervisor: Krpeš Václav

²²⁾ B – bachelor study programme, N – master study programme following bachelor study programme, M – master study programme, P – doctoral study programme.

²³⁾ Study programmes marked with an asterisk can (ordinarily) be studied only in a chosen study programme in pairs.

P – full time study, D – distance form of study, K – combination of these;

- DLABOVÁ, Hana: *Ecologically unexceptionable ways of liquidation of medical waste*. Supervisor: Malachová Kateřina
- FAJKUSOVÁ, Lucie: *Possibilities of air pollution by pollen in the city borough of Bohumín*. Supervisor: Saganová Ladislava
- GBELCOVÁ, Alena: *Expansion and ecobiology of Tephroseris longifolia subsp. moravica in the White Carpathians*. Supervisor: Cimalová Šárka
- HANIČINCOVÁ, Ivana: *Evaluation of toxicity of heavy metals by bioluminous assay*. Supervisor: Malachová Kateřina
- HAVLÍČKOVÁ, Kateřina: *Winter distribution of the dipper (Cinclus sinclus) in Kralický Sněžník*. Supervisor: Lojkásek Bohumír
- HLAVÁČOVÁ, Zuzana: *Evolution of the wolf population on the Czech Republic territory - history and present*. Supervisor: Lojkásek Bohumír
- HLINKA, Tomáš: *Comparative Study of Quarries Vegetation in the Žulová Region*. Supervisor: Cimalová Šárka
- INDROVÁ, Lenka: *Population of blackbird, thrush and finch and the connection with tawny owl*. Supervisor: Lojkásek Bohumír
- JANOVÁ, Kateřina: *The influence of foxes vaccination on hydrophobia appearance*. Supervisor: Lojkásek Bohumír
- JAŠÍK, Martin: *Influence of moss layer presence on composition of epigeic beetles taxocoenosis*. Supervisor: Drozd Pavel
- KADLECOVÁ, Hana: *Hydric regime of South Moravian flood plain forest in its border high-rise gradients*. Supervisor: Krpeš Václav
- KAMARÁDOVÁ, Jana: *Aranea of National natural monument Váté písky near Bzenec*. Supervisor: Majkus Zdeněk
- KORČÁKOVÁ, Veronika: *Copepoda of Plumlov dam reservoir in Prostějov*. Supervisor: Ďuriš Zdeněk
- KOSCHATZKÁ, Andrea: *Dragonflies on chosen locations in Osoblaha (Silesian lowland)*. Supervisor: Dolný Aleš
- KOVÁŘOVÁ, Anežka: *Aquatic and wetland phytocenoses in a coal mining – affected region of Karviná – Darkov and Louky nad Olší*. Supervisor: Cimalová Šárka
- KOZÁKOVÁ, Jana: *The ecotoxicity of the industrial wastewaters in the North Moravia and Silesia*. Supervisor: Soldán Přemysl
- KRÁLÍKOVÁ, Alena: *Occurrence of geohelminths toxocara spp. in Karvina town*. Supervisor: Dolný Aleš
- KVITOVÁ, Eliška: *Cultivars evaluation of Tagetes L. genus usable in decorative horticulture*. Supervisor: Tureček Tomáš
- LAKOMÁ, Martina: *Cladocera at Plumlov dam reservoir in Prostějov*. Supervisor: Ďuriš Zdeněk
- MAKOVÍČKOVÁ, Petra: *The downhill courses in the territory of Protected area of the Beskydy Mountains in relation to nature protection*. Supervisor: Lojkásek Bohumír
- MATULOVÁ, Kateřina: *Evalutation of health situation of Norwegian spruce using histological methods*. Supervisor: Krpeš Václav
- MĚRÁKOVÁ, Eva: *Population structure of water frogs (Rana esculenta complex) in a range of the Nízký Jeseník: morphology, ploidy investigations, population density*. Supervisor: Lojkásek Bohumír
- MIČKOVÁ, Petra: *Inventory botanical research of natural sanctuary Kamenná u Staříče*. Supervisor: Cimalová Šárka
- MOTYKA, Oldřich: *Ecology of genus orthotrichum species in meandry Lučiny reserve and their importance for bioindication*. Supervisor: Plášek Vítězslav

- OBRAZOVÁ, Martina: *Arachnofauna in chosen locality of the Hostýn hills*. Supervisor: Majkus Zdeněk
- PALOUŠOVÁ, Dita: *Spatial differences of predation risk for insects communities on genus acer*. Supervisor: Drozd Pavel
- PAPÁNKOVÁ, Andrea: *The ecological requirements of european silver fir (abies alba mill) and possible reasons of the lack of its natural regeneration in national nature reserve Salajka*. Supervisor: Krpeš Václav
- PAZDEROVÁ, Barbora: *Dragonflies ecological-faunistical characteristics of Osoblažsko (Silesian lowland)*. Supervisor: Dolný Aleš
- PETŘÍKOVÁ, Michaela: *Odonatofauna of selected localities of Uherskohradištsko*. Supervisor: Dolný Aleš
- PLASGUROVÁ, Lucie: *The influence of Morávka dam on benthic macroinvertebrates species composition and on water quality*. Supervisor: Ďuriš Zdeněk
- PLUHÁČEK, David: *The selected characters of gudgeon Gobio gobio Linnaeus, 1758 population in the Morávka valley reservoir*. Supervisor: Lojkásek Bohumír
- ŘEZNÍČKOVÁ, Jana: *Field survey and marking methods of amphibians: theory and practice*. Supervisor: Lojkásek Bohumír
- ŠEVČÍK, Karel: *Brachiopods in limestone and accessory rocks of Štramberk, N.E. Czechia*. Supervisor: Ďuriš Zdeněk
- ŠUHAI, Jaromír: *Araneae of gravel-silts in Starý Bohumín and Věřňovice with intent on the occurrence of genus arctosa in the Czech republic*. Supervisor: Majkus Zdeněk
- VESELKOVÁ, Zuzana: *The utilization of SOS Chromotest for the assessment of genotoxicity of pesticides*. Supervisor: Malachová Kateřina
- VICHOVÁ, Veronika: *The Italian politic system (the reform of election system)*. Supervisor: Šumberová Monika
- VÍCHOVÁ, Jana: *Occurrence of tick-borne encephalitis in Opava district during the years 1993 – 2004*. Supervisor: Dolný Aleš
- VÖLKL, Pavel: *Modern data analysis trends in nature conservation*. Supervisor: Drozd Pavel
- VONDŘEJC, Tomáš Ernest: *Recapture methods testing for monitoring of migration using epigeical beetles*. Supervisor: Drozd Pavel

Master theses

- ADAMIČKOVÁ, Veronika: *Growth of bream Abramis brama (Linnaeus, 1758) in water reservoir Kružberk*. Supervisor: Lojkásek Bohumír
- BŘEZINOVÁ, Pavla: *Population of roach Rutilus rutilus (Linnaeus, 1758) in the water reservoir Morávka*. Supervisor: Lojkásek Bohumír
- BUMBALA, Václav: *An analysis of spider communities in the area of Zoo Ostrava*. Supervisor: Majkus Zdeněk
- FIŠEROVÁ, Andrea: *The introduction of the methodology for the assessment of genotoxicity of contaminated water*. Supervisor: Malachová Kateřina
- FRÝDOVÁ, Ivana: *A proposal of an educational PowerPoint program for primary schools and grammar schools concerning beasts*. Supervisor: Majkus Zdeněk
- HERDOVÁ, Zuzana: *Backbone moveability of children living in different environments*.
- HRACHOVINOVÁ, Kateřina: *Analysis of the occurrence and ecology of dragonfly of Cordulegaster genus*.

- KLEIN, Petr: *Biology teachers' attitude towards the introduction of the Frame Education Programme to Practice*. Supervisor: Kubicová Svatava
- KLVAŇOVÁ, Hana: *Selected parameters of the population of common perch *perca fluviatilis linnaeus*, 1758 in the water-supply reservoir Morávka*. Supervisor: Lojkásek Bohumír
- KOUDELKOVÁ, Tereza: *Exploiting herbicides in mixed summer annuals flowerbeds*. Supervisor: Tureček Tomáš
- KRAJČOVÁ, Petra: *Use of computers in human biology teaching at grammar schools*. Supervisor: Kubicová Svatava
- KRAMNÁ, Lucie: *Synthesis and degradation of the selected photosynthetic pigments in needles of *picea abies* (L.) Karst*. Supervisor: Krpeš Václav
- MIŠAN, Martin: *Dry rots in the green foliage in Krnov and surroundings*. Supervisor: Gáper Jan
- NOVÁKOVÁ, Daniela: *Using computers in plant biology teaching at grammar school*. Supervisor: Kubicová Svatava
- PIŠTĚLKOVÁ, Dana: *Biology teachers' attitude towards the introduction of the Frame Education Programme to Practice*. Supervisor: Kubicová Svatava
- POLÁCHOVÁ, Andrea: *Natural renewal of beeh woods in the Písek mountains*. Supervisor: Cimalová Šárka
- PŘIBYLOVÁ, Jana Romská: *Senior school children of the Romany population and possibilities of their education in biology in the region of Ostrava*. Supervisor: Kubicová Svatava
- SEDLÁČKOVÁ, Pavlína: *Multimedia aid for teaching thematic complex Amphibians*. Supervisor: Majkus Zdeněk
- SLÁDKOVÁ, Jana: *Biology and distribution of the freshwater amphipod *Gammarus fossarum* (Crustacea: Amphipoda) on selected localities in the Odra River basin, the Czech Republic*. Supervisor: Ďuriš Zdeněk
- SOUKUPOVÁ, Lucie: *Analysis of norway spruce growth (*Picea abies* L./KARST./) under mountain condition in the Moravian-Silesian Beskydy mountains*.
- TESARČÍK, Tomáš: *Application of the 1D-SDS PAGE electrophoresis method to *Picea abies* (L.): KARST*. Supervisor: Krpeš Václav
- TOMALÍK, Pavel: *Birds in the region of Albrechtice ponds*. Supervisor: Lojkásek Bohumír

13.4 Research projects

Development projects in 2006 (except of CEP – Central evidence of projects)

a) Under national budget

Coordinator	Department	Provider (Agency)	Project title	Grant (ths. CZK) NIV/INV
Z. Pavlíčková	KBE	FRVŠ 105/F4/a	Improving and innovation of education. Laboratory experiments in molecular biology.	142/0
V. Krpeš	KBE	FRVŠ 2360/F4/a	Innovation in education of physiology and ecophysiology of plants.	79/0
V. Plášek	KBE	FRVŠ 2370/F4/a	Collection of bryophytes - unique educational exhibition of bryophytes	118/0

13.5 Equipment

- C608 Laboratory for Ecological (Environmental) Plant Physiology and Plant Anatomy - Protein Electrophoresis type Biometry (Germany), cooling system HETO CBN 8 - 30 (Denmark), Power supply SEBIA MG 300 (France), Muffle furnace (Germany), Drying boxes HS 62A (Czech Republic), Thermostats TS 200 (Czech Republic), Microscopes Zeiss, Axiostar plus (Germany), Rotation Microtome (HS 325 (Germany), Centrifuge, Suction-pump Spectrophotometer Zeiss (Germany),
- C705, C705a Laboratory of Microbiology and Molecular Biology - (Incubators, sterilizers, centrifuges, shaking devices, microscopes, scales, stirrers, water bath, distilling apparatus),
- C706 Laboratory of Toxicology and Genotoxicology - (Lumistox 300, incubator, water bath, analytical scales, sterilizer, distilling apparatus, spectrophotometer, vacuum evaporator, stirrer RZR 2020),
- C712 Laboratory of Molecular Biology - (Centrifuges, power supply, electrophoresis, thermomixer comfort, pipettes, vortexes, PCR-cycler),
- C713 Laboratory of Molecular Biology - (Centrifuge, spectrophotometer, analytical scale, electrophoresis, BIOHAZARD box),
- I2 Botanical laboratory - (Stereomicroscopes, laboratory equipment, GPS units),
- L244 Laboratory of Biostatistics - (15 PC, dataprojector),
- L338 Laboratory of Zoology of Invertebrates, incl. Preparation room - (Local digestory for every working place – suction of air, video-stereo microscopic equipment, stereo-microscopes, microscopes, desktop computer, analytical scales),
- L337 Lecture room - (dataprojector, desktop computer),
- L341 Laboratory of Zoology - (Microfiche leader Meoflex RI 21 P, bicameral caquarium for aquatic organism breeding, glass case for prepared vertebrates, water flow filter, aerator),
- L429 Laboratory of Zoology - (14 microscopes, videocamera + microscope, TV),
- L431 Provisional laboratory for animal physiology, biology of man and anthropology - (Sterilizer, thermostat, personal scales, microscopes Olympus and Laboval, stereomicroscopes Meopta, distillation apparatus, centrifugal machine, prescription

balances, scale desk, spirometres, water bath, mixer, antropometers, pelvimeters, cephalometers, tonometers, other minute equipment (metronomes, Burkner cellulas, etc.),

- L432 Laboratory of Ecology - Optics – stereomicroscopes, the university insect collection, collecting and preserving insects tools (Malaise traps, light traps, separators and extractors - Berlese or Tullgren funnel etc.), notebook, computer.

13.6 Conferences and seminars

- Environmental Changes and Biological Assessment III., 26. - 28. 4. 2006, 31 foreign and 63 domestic participants, place: Polský dům, Ostrava, international committee and foreign participants,
- International Bryological Meeting, 20th - 23th of April 2006, 42 participants, conference venue: Bílé Karpaty Landscape Protection Area.

Workshops

- Astacological workshop, February 9 - 10, 2006, 12 participants, co-organizer from University of Ostrava – Z. Ďuriš, place – Department of Hydrobiology, Fac. Nat. Sci., Charles University, Prague,
- ICT for biology teachers, 2. 2. 2006, participants: 12, lecturers: Svatava Kubicová, Pavel Drozd, place: Department of Biology and Ecology (Chittussiho),
- ICT for biology teachers - 17. 11. 2006, participants: 14, lecturers: Svatava Kubicová, Pavel Drozd, place: Department of Biology and Ecology (Chittussiho),
- Modern educational methods in teaching of biology, 22. 11. 2006, participants: 11, lecturer: Svatava Kubicová, place: Department of Biology and Ecology (Chittussiho),
- Modern educational methods in teaching of biology, 29. 11. 2006, participants: 20, lecturer: Svatava Kubicová, place: Department of Biology and Ecology (Chittussiho),
- Exhibition days at Botanical Garden, 26. 6. - 1. 7. 2006, Supervisor: Tureček, 250 Visitors,
- Presentation at the Tropic 2006 exhibition, 21. - 23. 4. 2006, Supervisor: Tureček, Cultural Centre of City of Ostrava,
- Earth Day, Co-organizer from University of Ostrava –Svatava Kubicová, place: Ostrava-Poruba, participants: students of elementary and secondary schools from Ostrava region, Ostrava.

13.7 Contacts and cooperation

- Institute of Vertebrate Biology, v.v.i., Brno.
- Institute of Entomology, České Budějovice.
- Institute of Mikrobiology, AS CR, v.v.i.
- Institute of Biophysics, AS CR, v.v.i.
- National Museum in Prague.
- Museum of Beskydy in Frýdek-Místek.
- Silesian Provincial Museum in Opava (membership in Advisory board: Journal of Silesian Provincial Museum).
- ZOO Ostrava.
- Silesian Regional Museum - Arboretum Nový Dvůr.
- The Forestry and Game Management Research Institute, Frýdek-Místek.

- Agency for Nature Conservation and Landscape protection of the CR, Ostrava.
- Masaryk University, Faculty of Science and Faculty of Social Studies.
- Palacký University Olomouc 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.
- Charles University in Prague – Faculty of Science.
- Mendel University of Agriculture and Forestry, Faculty of Horticulture.
- Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia.
- Slovak University of Agriculture in Nitra, Horticulture and Landscape Engineering Faculty, Botanic garden.
- University in Lodź - Poland.
- Gdańsk University – Poland.
- University of Agriculture, Poznań – Poland.
- Medical Institute Sosnowiec – Poland.
- Uniwersytet Śląski Katowice – Poland.
- Maria Curie-Skłodowska University, Lublin. Poland.
- US Nature Heritage Centre, Katowice, Poland.
- Scientific Board of the journal: ATH, Bielsko Biała (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).

Visitors to the institute

- Prof. Alexandr Pavko, University of Ljubljana, Slovenia, 20. 3. 2006,
- Prof. Edgar Wagner, University of Freiburg, 13. 4. 2006,
- Dr. Marco Vervliet-Scheebaum, University of Freiburg, 13. 4. 2006
Informational visit for purpose of a preliminary agreement on cooperation.
- Prof. Regina Galimska, University of Silesia, Poland, 10. 9. – 17. 9. 2006,
1. Plants pathogens.
2. Microbiological analysis of a soil.
3. Microflora of anthropogenic areas.
- Janja Babič-Kuplenko, University of Ljubljana Slovenia, 16. 10. – 27. 10. 2006
Usage of immobilized filamentous fungi in the different reactors for decolorization of the dye RO16.
- Grazyna Wilczek, University of Silesia, Poland, 20. 11. – 25. 11. 2006,
Analysis of rests of metabolic environmental contaminants by enzymatic biomarkers.

- Prof. Jan Zarnowiec, University of Bielsko-Biala, 13. - 15. 12. 2006,
Life-forms of mosses and its application in comparative analysis of habitats.
- Prof. Henryk Klama, University of Bielsko-Biala, 13. - 15. 12. 2006
Primeval forest as the habitat for the bryophytes
- Prof. Henryk Kasza, University of Bielsko-Biala, 13. - 15. 12. 2006
Eutrophication processes in dam reservoirs.

Visits of Staff Members

- Ďuriš Z., Horká I. – May 24– June 28. 6.
Lectures at Knox College, Galesburg, Illinois, USA,
Lectures at Coe College, Cedar Rapids, Iowa, USA,
Lecture in the Museum of Natural Sciences, Chicago, USA,
Summer practice with U.S. students and field research in Belize.
- Ďuriš Z., Horká I., - August 5 – September 17,
Research works, Institute of Oceanography, Vietnamese Academy of Sciences and
Technology, Nha Trang, Vietnam.
- Malachová K., Plášek V., Ďuriš Z., 6. - 8. 11. 2006,
Bielsko-Biala, Poland,
Malachová K.: News in the ecotoxicological biomonitoring,
Plášek, V.: Epiphytic bryophytes in Silesia,
Ďuriš, Z.: Life in fresh and marine waters, biology of crayfish.
- Malachová K., Pavlíčková Z. 18. 9. – 27. 9. 2006,
University of Ljubljana, Slovenia,
Malachová K.: Mutagenicity tests as a tool for effective evaluation of biodegradation of
pollutants,
Pavlíčková Z.: Detection of DNA damage using plasmid DNA.
- Kočárek P., Dolný A., Majkus Z. - 27. 11. - 1. 12. 2006,
Katowice, Poland,
Kočárek: Orthoptera and orthopterology in the Czech Republic - current stage of
knowledge,
Dolný: The occurrence of dragonflies (Odonata) in the Czech and Polish parts of Upper,
Silesia: Habitat affinity of indicating dragonfly species: myths and reality
Majkus: Systematics, biology and behaviour of spiders,
Identification of spiders – seminars.

Conferences

Name	Dpt.	Country	Place	Action	Date
Majkus, Z.	BE	Slovakia	Východná	Diversity and protection of arachnofauna	15. - 17. 9.
Malachová, K.	BE	Poland	Sczyrk	Conference	23. - 24. 11.
Plášek, V.	BE	Poland	Sczyrk	Conference	23. - 24. 11.
Tureček, T.	BE	Poland	Sczyrk	Conference	23. - 24. 11.
Tureček, T.	BE	Slovakia	Nitra	11 th colloquium on landscape formation	20. - 22. 11.

Short stays abroad 2006 (less than 10 days)

Name	Dpt.	Country	Place	Action	Date
Dolný, A.	BE	Slovakia	Bratislava	Lecture	6. - 7. 4.
Drozd, P.	BE	Slovakia	Runina	Field excursion (trip)	19. - 26. 6.
Krpeš, V.	BE	Slovakia	Zvolen	Member of opponent commission	18. - 19. 12.
Lojkásek, B.	BE	Slovakia	Runina	Field excursion (trip)	19. - 26. 6.
Lojkásek, B.	BE	Poland	Wroclaw	Cooperation	16. 10.
Majkus, Z.	BE	Slovakia	Martin	Arachnology section SES	23. 3.
Malachová, K.	BE	Poland	Katowice	Cooperation	17. 1.
Malachová, K.	BE	Poland	Wroclaw	Cooperation	16. 10.
Plášek, V.	BE	Slovakia	Runina	Field excursion (trip)	19. - 26. 6.
Tureček, T.	BE	Slovakia	Nitra	Research	28. 9.

13.8 Student research activities

- Ivona Horká, Price of Rector OU, Mobility: Biodiversity of river and coastal ecosystems of Khanh Hoa Province, Vietnam,
- Oldřich Motyka, Epiphytic bryophytes as bioindicators, Poland.

13.9 Conference**Environmental Changes and Biological Assessment**

- Völkl Pavel: Fuzzy modelling – a prospective tool for conservation biology,
- Honkyš Vladimír: Diagnostic Evaluation of Norway Spruce *Picea abies* Needles (L.) KARST. Using Methods of Structural Analysis,
- Motyka Oldřich: Small witnesses of air quality improvement,
- Harabiš Filip: Could the fen rise in a place of a strip mine lake?,
- Šipoš Jan: Do ecologists need to buy analytical software?,
- Šuhaj Jan: Araneae of gravel-silts near Starý Bohumín town and Věřňovice village with the focus on distribution of genus *Arctosa* in the Czech Republic,
- Horká Ivona: Ecotoxicological evaluation of sediments contaminated by waste coal by in vivo and in vitro bioassays,
- Fisherová Andrea: The preparation of Method for the detection of mutagenicity of substances in water.

13.10 Membership in Professional Organizations

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 by Czech Union of Conservators of the Nature.

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 SPOLECZNE.

Vítězslav Plášek, PhD.:

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

Tomáš Tureček:

- Association of Botanic Gardens in the Czech Republic.

13.11 Publications

Monographic publications

- Kočárek, P. - Plášek, V. - Malachová, K.: *Environmental Changes and Biological Assessment*. No. 163/2006, 346 pp, 160 copies, Repronis Ostrava, 300,- CZK.(80-7368-201-X)
- KRPEŠ, V., KINCL, M.: *Fundamentals of plant physiology*. 3. issue. Ostrava: Baloušek, 2006. 225 pp. ISBN 80-239-8375-X.
- HRNČÍŘ, K.: *Noise*. Rožnov pod Radhoštěm: ROVS - Rožnovský vzdělávací servis, s.r.o., 2006. 75 pp.
- HRNČÍŘ, K.: *Vibration*. Rožnov pod Radhoštěm: ROVS - Rožnovský vzdělávací servis, s.r.o., 2006. 95 pp.
- HRNČÍŘ, K.: *Dust*. Rožnov pod Radhoštěm: ROVS - Rožnovský vzdělávací servis, s.r.o., 2006. 145 pp.
- HRNČÍŘ, K.: *Non-ionizing radiance*. Rožnov pod Radhoštěm: ROVS - Rožnovský vzdělávací servis, s.r.o., 2006. 105 pp.
- HRNČÍŘ, K.: *Carcinogens and mutagens*. Rožnov pod Radhoštěm: ROVS - Rožnovský vzdělávací servis, s.r.o., 2006. 110 pp.

Parts of monographic publications, articles

- DOLNÝ, A., DROZD, P.: *Ke stanovištním požadavkům indikačních druhů vážek: mýty a realita*. In Environmental changes and biological assessment III. Scripta Facultatis Rerum Naturalium Universitatis Ostraviensis. No. 163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-X. pp. 193 - 198.
- HARABIŠ, F., DOLNÝ, A., PLÁŠEK, V.: *Could the fen rise in a place of a strip mine lake?* In Environmental changes and biological assessment III. Scripta Facultatis Rerum Naturalium Universitatis Ostraviensis No. 163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-X. pp. 212 - 214.
- DROZD, P., ŠIPOŠ, J.: *Do ecologists need to buy analytical software?* In Environmental changes and biological assessment III. Scripta Facultatis Rerum Naturalium Universitatis Ostraviensis No. 163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-x. pp. 221 - 226.
- PAVLÍČKOVÁ, Z., FIŠEROVÁ, A., MALACHOVÁ, K., LEDNICKÁ, D.: *The preparation of method for the detection of mutagenicity of substances in water*. In Environmental changes and biological assessment III. Scripta Facultatis Rerum Naturalium Universitatis Ostraviensis No. 163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-X. pp. 317 - 321.
- MALACHOVÁ, K.: *New tools of ecotoxicological monitoring - biomarkers and biosensors*. In Environmental changes and biological assessment III. Scripta Facultatis Rerum Naturalium Universitatis Ostraviensis No. 163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-X, pp. 264 - 273.
- TUREČEK, T.: *Influence of the water stress and anatomical structure of the leaf of the genus Peperomia*. In Environmental changes and biological assessment III, Scripta Facultatis Rerum Universitatis Ostraviensis, No.163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-x. pp. 28 - 33.
- DOLEŽÍLKOVÁ, I., MALACHOVÁ, K., PAVLÍČKOVÁ, Z., NOVOTNÝ, Č., ŠUŠLA, M.: *Genotoxicity as a criterion of the efficiency of textile dyes biodegradation in industrial waste water*. In Environmental changes and biological assessment III. Scripta Facultatis Rerum Naturalium Universitatis Ostraviensis No. 163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-X. pp. 295 - 297.
- KRPEŠ, V., HONKYŠ, V.: *Diagnostic Evaluation of Norwegian Spruce Needles Picea abies (L.) KARST. Using Methods of Structural Analysis*. In Environmental changes and biological assessment III. No.163. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-X. pp. 71 - 76.
- DROZD, P., ŠTĚPNIČKA, M., DOLNÝ, A., VÖLKL, P.: *Fuzzy modelling - a prospective tool for conservation biology*. In Environmental changes and biological assessment III. Scripta Facultatis Rerum Naturalium Universitatis Ostraviensis No. 163. 1. issue. Ostrava: University of Ostrava in Ostrava, 2006. ISBN 80-7368-201-X. pp. 7 - 14.
- ĎURIŠ, Z., HORKÁ, I.: *Amphipoda (různonožci)*. In Červený seznam ohrožených druhů České republiky. Bezobratlí (Red list of threatened species in the Czech Republic. Invertebrates). Prague : AOPK , 2006. ISBN 80-86064-96-4. pp. 102 - 103.
- KOČÁREK, P.: *Blattaria – cockroaches*. In Nepůvodní druhy fauny a flóry České republiky. Prague : ČSOP, 2006. ISBN 80-86770-17-6. pp. 249-249.
- KOČÁREK, P.: *Blatta orientalis Linnaeus, 1758*. In Nepůvodní druhy fauny a flóry České republiky. Prague : ČSOP, 2006. ISBN 80-86770-17-6. pp. 250 - 250.
- KOČÁREK, P.: *Blattella germanica (Linnaeus, 1758)*. In Nepůvodní druhy fauny a flóry České republiky. Prague: ČSOP, 2006. ISBN 80-86770-17-6. pp. 250 - 251.

- KOČÁREK, P.: *Periplaneta americana* (Linnaeus, 1758). In Nepůvodní druhy fauny a flóry České republiky. Prague: ČSOP, 2006. ISBN 80-86770-17-6. pp. 251 - 251.
- KOČÁREK, P.: *Orthoptera - bushcrickets and grasshoppers*. In Nepůvodní druhy fauny a flóry České republiky. Prague: ČSOP, 2006. ISBN 80-86770-17-6. pp. 251 - 252.
- KOČÁREK, P.: *Acheta domestica* (Pallas, 1771). In Nepůvodní druhy fauny a flóry České republiky. Prague: ČSOP, 2006. ISBN 80-86770-17-6. pp. 252 - 253.

Articles in proceedings (proceedings of conferences or institutions)

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- DOLNÝ, A., BULÁNKOVÁ, E.: *Odonatofauna of the moorland in the Czech and Slovak Republics*. In Zoologické dny Brno 2006. 9. 2. 2006 - 10. 2. 2006 Brno. Brno: Ústav biologie obratlovců AV ČR, Brno, 2006. pp. 78 - 79. ISBN 80-903329-4-3.
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14 Department of Human Geography and Regional Development

Research activities

- a) Human Geography and Regional Development
 - The Research of the Ostrava and Moravian-Silesian Region as the Industrial and Border Region in the Context of the Czech Republic and the EU: Restructuring; Institutions and Subjects of Regional Development; Urbanization and Suburbanization; Deindustrialization and Reindustrialization; Urbanization and Suburbanization; Environmental Changes; Labour Migration and Transborder Labour Market Developments; Tourism and Second Housing etc.,
 - Innovative Concepts and Approaches to the Territorial Development and the Role of Institutions in the Local and Regional Development: Marketing Management in the Development and Restructuring of Towns and Regions; the Evaluation of Regional Development Agencies,
 - Image and Genius Loci of the Trans-Border Region Moravia-Silesia – Western Slovakia – Southern Poland and its Municipalities.
- b) Political and Cultural Geography
 - Geopolitical, Geocultural and Geoeconomic Processes Across the World with Specialization on the Post-Communist Area of Eurasia: Nations and Nationalism; Religions, Migrations, Multiculturalism and Pluralism; Politics and Geopolitical Conceptions; Conflicts and International Relations; Economic Integrations and Development.
- c) Teaching geography
 - Didactic Problems in Geography, Application of the European Dimension in All Types of Schools.

14.1 Staff

Head of Department

Petr Rumpel, PhD.

Deputy Head of Department

Monika Šumberová

Secretary to the Department

Jiřina Kučerová

Teaching staff

Professors

Jaroslav Vencálek
Arnošt Wahla

Associated Professors

Vladimír Baar
Jan Havrlant
Robert Ištók
Tadeusz Siwek
Petr Šindler

Assistant Professors

Pavel Bednář
Tomáš Drobík
Martin Kovář
Luděk Krtička
Kateřina Sidiropulu Janků
Monika Šumberová
Petr Wilam
Petr Žufan

Research project managers

Tomáš Boruta
Ondřej Slach

External teachers

Irena Eibenová
Klaudia Eibenová
Tomáš Hoch
Hana Chlebečková
Jiří Kern, Professor
Vincenc Kopeček
Jiří Krhut
Jan Malinovský, PhD.
Václav Lednický, Assoc. Professor
Petra Psíková
Jiří Novosák
Svatava Rumpelová
Lenka Říhová
Robert Stojanov
Marcela Šimíčková, PhD.
Eva Šmídáková
Lubor Tvrdý, PhD.
Petra Žižlavská

PhD. students (staff)

Tomáš Boruta

Branch of study: Regional Geography and Regional Development
 Thesis: Innovative Concepts of Development of Integrated Transportation Systems (ITS) in Polycentric Regions, Given on Example of the Moravian-Silesian Region
 Supervisor: Assoc. Prof. Vladimír Baar
 End: 2009 (Faculty of Science, MU Brno)

Tomáš Drobík

Branch of study: Politics - Political Geography
 Thesis: Comparison of Islamistic/Fundamentalistic Tendencies in the Selected Countries of the Middle East – Saudi Arabia, Iran and Turkey
 Supervisor: Assoc. Prof. Bořivoj Hnízdo
 End: 2009 (Faculty of Social Sciences UK Prague)

Pavel Bednář

Branch of study: Human Geography and Regional Development
 Thesis: Transformation of Retailing in Ostrava: a Geographical Approach
 Supervisor: Assoc. Prof. Luděk Sýkora
 End: 2007 (Faculty of Science UK Prague)

Kateřina Sidiropulu Janků

Branch of study: Sociology
 Thesis: Migration as a Life Strategy of Marginalized Families.
 Supervisor: Csaba Szaló, PhD.
 End: 2007 (FSS MU Brno)

Martin Kovář

Branch of study: Pedagogy of Geography
 Thesis: The Usage of E-Learning Portals in the Professional Education of Teachers of the Geography.
 Supervisor: Prof. Arnošt Wahla
 End: 2009 (Faculty of Education MU Brno)

Ondřej Slach

Branch of study: Human Geography and Regional Development
Thesis: Importance of soft factors for the revitalisation of old industrial regions: a comparison study - Ruhr Area and Ostrava Region
Supervisor: Assoc. Prof. Jiří Blažek
End: 2009 (Faculty of Science UK Prague)

Monika Šumberová

Branch of study: International Political Relations
Thesis: Diplomatic Culture
Supervisor: Prof. Zuzana Lehmannová
End: 2008 (University of Economics in Prague)

Petr Wilam

Branch of study: Regional Geography and Regional Development
Thesis: Job Conditioned Migrations as a Part of Transborder Labour Market of the Czech Republic (Case Study Moravian-Silesian region)
Supervisor: Assoc. Prof. Vladimír Baar
End: 2007 (Faculty of Science MU Brno)

Petr Žufan

Branch of study: Regional Geography and Regional Development
Thesis: Organic Farming in the Czech Republic in the Context of the Reform of the EU Common Agriculture Policy.
Supervisor: Assoc. Prof. Vladimír Baar
End: 2007 (Faculty of Science MU Brno)

14.2 PhD. Students

Miartuš Michal
Novák David
Půček Milan, MBA
Stojanov Robert

14.3 Study programmes

Code of the study programme ²⁵⁾	Title of the study programme	Title of the study major ²⁶⁾	Length of the study ²⁷⁾			
B 1301	Geography	Political and Cultural Geography	3			P
B 1301	Geography	Social Geography and Regional Development	3			P
N 1301	Geography	Political and Cultural Geography		2		P
N 1301	Geography	Social Geography and Regional Development		2		P
M 1301	Geography	Geography (Physical Geography and Geoecology; Social Geography and Regional Development)		5		P
M 1301	Geography	Political and Cultural Geography		5		P
M 1301	Geography	Teaching for Secondary Schools - Geography *)		5		P
M 7503	Teaching for Primary Schools	Teaching for Primary Schools - Geography *)		4		P
M 7504	Teaching for Secondary Schools	Teaching for Secondary Schools - Geography*)		5		P

14.4 Theses

Bachelor theses

- ANDĚL, Milan: *The historical development of the internal urban structure of Frýdek-Místek*. Supervisor: Bednář Pavel
- BAAR, Roman: *Linguistic emancipation of small Ibero-Romance ethnics*. Supervisor: Baar Vladimír
- BALVÍN, Petr: *Analysis of industrial activities influence on socioeconomic development of Hlubočky village and its job background*. Supervisor: Wilam Petr
- BARNA, Lukáš: *Brzezinski and Wallerstein: Two views of the international system*. Supervisor: Šumberová Monika
- BOHÁČ, Artur: *Postsoviet Afghanistan-historical-geographical analysis after the Year 1989*. Supervisor: Kovář Martin
- BOROVÝ, Lukáš: *Analysis of incoming tourism in the Czech Republic*. Supervisor: Havrlant Jan
- BRAUNEROVÁ, Martina: *Analysis of German historical-geographic internal migration*. Supervisor: Siwek Tadeusz
- CHLUD, Lukáš: *Analysis of low-cost airlines in the Czech Republic and Europe*. Supervisor: Bednář Pavel
- CHRÁPKOVÁ, Andrea: *The present of agrarian sector in the district of Přerov*. Supervisor: Žufan Petr

²⁵⁾ B – bachelor study programme, N – master study programme following bachelor study programme, M – master study programme, P – doctoral study programme.

²⁶⁾ Study programmes marked with an asterisk can (ordinarily) be studied only in a chosen study programme in pairs.

²⁷⁾ P – full time study, D – distance form of study, K – combination of these;

- CHUDĚJ, Jiří: *Present state and development of railway network in China*. Supervisor: Bednář Pavel
- CITNAROVÁ, Veronika: *Home political situation of Burma*. Supervisor: Kovář Martin
- CVIKÝŘOVÁ, Vendula: *Evaluation of the process of strategic planning in Nové Město nad Metují*. Supervisor: Rumpel Petr
- FESTOVÁ, Jindřiška: *Present Czech-German relations in regional press of Moravian-Silesian region*. Supervisor: Wilam Petr
- FRANCOVÁ, Kateřina: *UN Reform*. Supervisor: Šumberová Monika
- GIŽOVÁ, Lucie: *The political development of Sudan since gaining its independence*. Supervisor: Kovář Martin
- HANÍKOVÁ, Eva: *The status of Russian ethnicity in Baltic States*. Supervisor: Žufan Petr
- HASALOVÁ, Jana: *Political system of Islamic Republic of Iran*. Supervisor: Drobík Tomáš
- HENNEBERG, Pavel: *Changes of industry structures in the period of transformation - case study - Pardubice*. Supervisor: Wilam Petr
- HOFFMANNOVÁ, Lenka: *The political system of the Kingdom of Saudi Arabia*. Supervisor: Drobík Tomáš
- HOVORIČOVÁ, Zuzana: *Water in the middle east - hydropolitics along the Jordan river*. Supervisor: Šumberová Monika
- HURTÍK, Roman: *The euroregions on the Czech-Slovak border-the analysis of the cross border cooperation problematic spheres*. Supervisor: Wilam Petr
- HÚSEK, Pavel: *Urbanization in Latin America*. Supervisor: Wilam Petr
- JUNGWIRTHOVÁ, Tereza: *The Sami - one indigenous people in four territorial states*. Supervisor: Žufan Petr
- JUREČEK, Radek: *Regional aspects of labour market development in Olomouc region*. Supervisor: Wilam Petr
- KAŠPAR, Roman: *Aspects of Turkey accession to the EU*. Supervisor: Drobík Tomáš
- KLAMKOVÁ, Veronika: *Analysis of the importance and development of charter companies in air transport in the Czech Republic, Europe*. Supervisor: Bednář Pavel
- KNOTOVÁ, Ludmila: *Image of Uherský Brod*. Supervisor: Vencálek Jaroslav
- KOHLOVÁ, Lucie: *Position of the Isle of Man in frame to the United Kingdom of Great Britain and Northern Ireland*. Supervisor: Siwek Tadeusz
- KOLÁŘ, Jiří: *Civil war on Ceylon: causes, course, present*. Supervisor: Kovář Martin
- KOMÁRKOVÁ, Marie Anna: *Switzerland - historical-political analysis*. Supervisor: Kovář Martin
- KOŘÍNKOVÁ, Markéta: *River transport in Europe*. Supervisor: Bednář Pavel
- KRAJČOVÁ, Jana: *Changes of dynamism of inhabitants in Moravian-Silesian Region in years 1971 - 2000*. Supervisor: Vencálek Jaroslav
- KUBÁNKOVÁ, Eliška: *Development of external and internal borders of Germany since 1815*. Supervisor: Kovář Martin
- KUKAČKOVÁ, Lenka: *The geopolitical role of Pakistan*. Supervisor: Drobík Tomáš
- LEGNER, Miroslav: *Hi-tech branches and their position in the industry of the Czech Republic illustrated by an example of Brno and its background*. Supervisor: Wilam Petr
- LYČKOVÁ, Lenka: *Crisis of French assimilationist model*. Supervisor: Janků Kateřina
- MACKOVÁ, Lenka: *Image of the town Studénka*. Supervisor: Šindler Petr
- NĚMCOVÁ, Anna: *The analysis of Muslim flows of migration to France*. Supervisor: Drobík Tomáš

- NEVAŘIL, Petr: *The progress of Muslim population in Bosnia and Hercegovina*. Supervisor: Kovář Martin
- NOVOTNÁ, Aneta: *Social-economic analysis of Liberec region*. Supervisor: Wilam Petr
- OTTMÁR, Aleš: *Visegrad cooperation*. Supervisor: Šumberová Monika
- PATOČKOVÁ, Kateřina: *The reasons and consequences of dividing the Korean Peninsula into two states*. Supervisor: Siwek Tadeusz
- PAULÍKOVÁ, Lenka: *The chances of migration from the Czech Republic and to the Czech Republic after 1989*. Supervisor: Siwek Tadeusz
- POVOLNÁ, Ivana: *Development of intrapolitical relations between Serbia and Montenegro*. Supervisor: Kovář Martin
- PŘÍVRATSKÝ, Jan: *Genius loci of the Trutnov microregion*. Supervisor: Vencálek Jaroslav
- PUTNÁŘOVÁ, Jana: *Individuality of Tuaregs emancipation in chosen North-African States*. Supervisor: Kovář Martin
- ŘEZNÍČKOVÁ, Lucie: *Case study of Microregion Matice Slezská*. Supervisor: Janků Kateřina
- SERBOUSEK, Pavel: *Analysis of the progress of industry structures in Trutnov region in transformation period as an example of essential sectors*. Supervisor: Wilam Petr
- SÝKOROVÁ, Lucie: *Case study of microregion Kroměřížsko*. Supervisor: Janků Kateřina
- ŠÍŘINA, Jan: *Change of socially spatial structure of Karviná by the period of transformation*. Supervisor: Bednář Pavel
- VALUCHOVÁ, Petra: *Image of Rožnov microregion*. Supervisor: Vencálek Jaroslav
- VANĚČKOVÁ, Petra: *The international governmental organizations in the Islamic World*. Supervisor: Drobník Tomáš
- VAŠÍČEK, Lukáš: *Slums of Calcutta*. Supervisor: Bednář Pavel
- VICHOVÁ, Veronika: *The Italian politic system (reform of the election systems)*. Supervisor: Šumberová Monika
- VOBORNÝ, Miloš: *Employment market in the Region of Znojmo*. Supervisor: Wilam Petr
- VOLKOVÁ, Jitka: *Image of the Litovel mikroregion*. Supervisor: Vencálek Jaroslav
- VOLNÁ, Markéta: *Brownfields in Brno*. Supervisor: Bednář Pavel
- VOMOČILOVÁ, Lucie: *Social and economic analysis of the Nachod county*. Supervisor: Wilam Petr
- WITTKOVÁ, Veronika: *Contemporary population development in Baltic States*. Supervisor: Siwek Tadeusz
- ŽALUDOVÁ, Michaela: *Geographical analysis of foreign development aid and co-operation of the Czech Republic after the year 1993*. Supervisor: Šumberová Monika
- ŽIDÍK, Miloš: *Location and realization preconditions for development of tourist trade in Orlické Hory*. Supervisor: Havrlant Jan

Diploma theses

- ABRAHAMOVÁ, Marie: *Image of Boskovice microregion*. Supervisor: Vencálek Jaroslav
- BÍLÝ, Pavel: *Political separation of the Czech and Slovak Federative Republic*. Supervisor: Siwek Tadeusz
- BRTNA, David: *The possibilities of development of tourist trade in the area of Šumperk*. Supervisor: Havrlant Jan
- BULAVOVÁ, Milena: *Geographic aspects of organic farming in the Czech Republic (Bruntal district example)*. Supervisor: Žufan Petr

- DOČKAL, Radim: *Iraq at the turn of the millennium (from the war with Iran to the war in Iraq, 1980-2003)*. Supervisor: Kovář Martin
- DOSTÁL, Milan: *Development possibilities of tourism in Vallachian area*. Supervisor: Havrlant Jan
- EHLER, Tomáš: *Proposal for development of tourism infrastructure in Ostravice municipality*. Supervisor: Havrlant Jan
- ESLEROVÁ, Iva: *Asylum policy of the Czech Republic*. Supervisor: Baar Vladimír
- GARŠIC, Tomáš: *Housing Policy and the Collective Housing's Situation on the Example of Opava-City*) Supervisor: Bednář Pavel
- GEBAUEROVÁ, Barbora: *Image of the microregion Jeseník*. Supervisor: Vencálek Jaroslav
- GŘEŠICA, Jakub: *Transformation of facilities for articulated and free tourism in the Jablunkov recreation area*. Supervisor: Havrlant Jan
- GURECKÝ, Michal: *Image of secondary schools in the microregions Frýdek-Místek and Frýdlant*. Supervisor: Kovář Martin
- HARUDA, Jan: *Territorial waters of states as a geopolitical problem*. Supervisor: Šindler Petr
- HILSCEROVÁ, Lucie: *Regional identity of secondary school pupils in Nový Jičín*. Supervisor: Vencálek Jaroslav
- HLÁVKOVÁ, Kristýna: *Support system of small and medium enterprises in the Czech Republic*. Supervisor: Rumpel Petr
- HRAZDÍLEK, Jiří: *Proposal for development of tourism infrastructure in the recreational area of Malenovice - Lysá hora*. Supervisor: Havrlant Jan
- JANOUSHKOVÁ, Eva: *Evaluation of EURES (European Employment Service) in EU countries and in the Czech Republic*. Supervisor: Rumpel Petr
- JANOVSÁ, Jarmila: *Image of the micro region of Přerov*. Supervisor: Vencálek Jaroslav
- JAROŠ, Petr: *Image of the Frýdek-Místek microregion*. Supervisor: Vencálek Jaroslav
- JATZEK, Václav: *Socio-economic potential of the area of Krnov with the emphasis on agriculture*.
- KOSÍK, Lukáš: *Asylum policy in the European Union, applicants for asylum, migration*. Supervisor: Wilam Petr
- KRATOCHVÍLOVÁ, Jana: *Historical and geographical analysis of conflict in Somalia*. Supervisor: Šumberová Monika
- LORIŠ, Pavel: *Study of and proposals for the development of agrotourism within the Region of Beskydy*. Supervisor: Havrlant Jan
- LUKEŠ, Jakub: *Perspectives of tourism development in Euro Region Těšínské Slezsko*. Supervisor: Havrlant Jan
- LUKSZOVÁ, Miriam: *Chile on the way from dictatorship to democracy*. Supervisor: Wilam Petr
- MACUROVÁ, Petra: *Latin America - internet sources and possibilities of their application in geography education*. Supervisor: Wilam Petr
- MAIXNER, Jaroslav: *Geographic aspects of farming in Ústí nad Orlicí district example*. Supervisor: Žufan Petr
- MALÍKOVÁ, Eva: *Territorial and Political development of Swiss Confederation*. Supervisor: Siwek Tadeusz
- MAREK, Lukáš: *Old industrial regions abroad and their restructuring*. Supervisor: Rumpel Petr

- MORIC, Karel: *Czech-Polish cross-border cooperation at the level of municipalities - the case study of municipalities Hat', Píšť, Šilheřovice and Krzyzanowice*. Supervisor: Wilam Petr
- NIESLANIKOVÁ, Věra: *The foreign migration on a territory of the Czech Republic (aimed at a labour migration)*. Supervisor: Wilam Petr
- NOVÁK, Michal: *Analysis of progress industry structures in the Opava region as an example of essential sectors*. Supervisor: Wilam Petr
- NOVROCIKOVÁ, Petra: *The image of town Bohumin*. Supervisor: Vencálek Jaroslav
- PARGAČOVÁ, Lucie: *Possibilities of development of rural areas – Osoblaha region*. Supervisor: Rumpel Petr
- PAVKA, Ondřej: *The function of the Bata Channel in the tourism of Slovacko Region*. Supervisor: Žufan Petr
- PETEREK, Pavel: *Political and socio-economic development of the Republic of Ireland after joining the European communities*. Supervisor: Siwek Tadeusz
- POHLOVÁ, Kristina: *Spain and its above standard relations with Latin American countries*. Supervisor: Baar Vladimír
- POSPÍŠILOVÁ, Vladislava: *Social and political changes in Bulgaria after 1990*. Supervisor: Žufan Petr
- POŽÁR, Tomáš: *Fundamental social processes of microregional cohesion of the Velké Meziříčí region*. Supervisor: Vencálek Jaroslav
- SCHREIBER, Václav: *Industrial zones in Moravian-Silesian region*. Supervisor: Wilam Petr
- SEDLÁKOVÁ, Petra: *City marketing in chosen Bavarian towns*. Supervisor: Rumpel Petr
- STEBLOVÁ, Daniela: *Geographical aspect of organic farming in the Czech Republic (district Šumperk example)*. Supervisor: Žufan Petr
- SUMERLING, Dušan: *The impact of foreign direct investment on the regional development in Slovakia*. Supervisor: Rumpel Petr
- ŠIMČÍK, Petr: *Industrial clusters and their position in the current industrial situation of the Czech Republic on the example of the Moravian-Silesian Region*. Supervisor: Wilam Petr
- ŠIMONOVÁ, Lucie: *Cameroonian identity-fiction or fact? Postcolonial relations in Cameroon today*. Supervisor: Baar Vladimír
- ŠIPOŠOVÁ, Denisa: *Development of apartheid in South Africa*. Supervisor: Kovář Martin
- ŠTASTNÁ, Marcela: *Geographic aspects of organic farming in the South-East Moravia*. Supervisor: Žufan Petr
- ŠUPOVÁ, Zdenka: *Image of the microregion Blansko*. Supervisor: Vencálek Jaroslav
- ŠVRČINOVÁ, Nikola: *Regional identity of students of the grammar school of O. Havlova in Ostrava-Poruba*. Supervisor: Vencálek Jaroslav
- TLUSTÁ, Jitka: *Regional identity of the students of the secondary schools in Žďár nad Sázavou*. Supervisor: Vencálek Jaroslav
- VAVŘINOVÁ, Michala: *Public-private partnership - theory and practice in the Czech Republic*. Supervisor: Rumpel Petr
- VLČKOVÁ, Štěpánka: *Political-Geographic paper problem of Northern Ireland*. Supervisor: Siwek Tadeusz
- VORÁLEK, Oldřich: *Foreigners on labour market in Pilsen Region*. Supervisor: Wilam Petr
- ZANINA, Milan: *Migration of the Romanies from Slovakia to the Czech Republic since 1993, political measures and international cooperation*. Supervisor: Janků Kateřina

- ZEMANOVÁ, Eva: *Integration processes in the macroregion of Northern Europe*. Supervisor: Žufan Petr
- ZUKALOVÁ, Irena: *UN peacekeeping operations after 1989*. Supervisor: Šumberová Monika
- ŽÁKOVÁ, Lenka: *Comparison of the spatial planning systems in the Czech Republic and Germany*. Supervisor: Rumpel Petr

Doctoral theses

- NOVÁK, David: *Living Environment Like Reflectiveness of Internal and External Processes of Social Cohesion - in Conditions of Microregion Villages of Stonávka River-basin*. Supervisor: Vencálek, Jaroslav
- PUČEK, Milan: *Innovative Approaches in Environmental Management of Territorial Units*. Supervisor: Vencálek, Jaroslav

14.5 Research projects

Research projects in 2006 (filed in CEP – Central Evidence of Projects)

Coordinator/ Contractor*	Department	Provider (agency)	Project title	Grant (ths. CZK)
Rumpel, P.	KSGRR	GACR 402/04/0078	Innovative concepts and approaches in the socioeconomic development of territorial units	248
Šindler, P.*	KSGRR	GACR 409/04/1088	The development changes of postsocialistic towns of Ostrava and Upper Silesia region in the conditions of transformations	39
Rumpel, P.*	KSGRR	Ministry of Regional Development MR WB 15-05	The Future of Regional Developments Agencies in the Czech Republic	313
Rumpel, P.	KSGRR	Ministry of Regional Development MMR WB 22-05	Marketing Management of Municipalities and Regions	544

Development projects in 2006 (except of CEP – Central evidence of projects)

Projects financed by the European Commission

Provider	Action	Dpt.	Project title	Duration	Grant (CZK) NIV/INV	2006 Grant (CZK) NIV/INV
European Commission	Jean Monnet European Module	KSGRR	Geographical aspects of European Integration – the role of the Czech Republic in the enlarged EU	09/2004 – 12/2009	600 000/0	153 000/0

14.6 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 serial) lounges for students.

For research purposes:

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

14.7 Conferences and seminars

- International Conference: „Innovations in the Development of Municipalities and Regions with the Emphasis on Marketing Management“, 29. - 31. 5. 2007,
- Conference venue: Ostrava, Scientific and Technology Park Ostrava-Poruba, 70 Participants,
- Workshop, 31. 5. 2006, Workshop organised within the Framework of the Conference (10 participants),
- 12th Annual Tutorial for Teachers of Geography, 19. 4. 2006, Tutorial venue: Departmental Facilities, 80 participants,
- 31. May 2006 Workshop organised within the Framework of the Conference (10 participants), international.

14.8 Contacts and Cooperation

Contacts with Universities and Colleges and Research Institutions 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, Science Faculty, 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).

International Contacts with Universities and Colleges and Research Institutions

- CIMA Österreich, Austria – Ried im Innkreis (Roland Muraue),
- 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, Science Faculty, Institute of Geography,
- Regional Association Ruhrgebiet – Regionalverband Ruhr (Sabine Lange, Wilfried Dege),
- Prešov University, Slovakia, Faculty of Humanities and Natural Sciences, Department of Geography.

Visitors to the institute

- Prof. Musa Tasdelen, University of Sakarya. Turkey, 23. - 27. October 2006,
- Prof. James Russell, Connecticut State University, USA, 18. - 19. October 2006,
- Prof. Daniel Ricard, Clermont-Ferrand, France, 2. - 6. May 200,
- Dr. Bożena Pactwa, Colledge of Management and Social Sciences, Tychy, Poland, 27. 3. 2006.

Visits of Staff Members

Conferences

Name	Dpt.	Country	Place	Action	Date
Havrlant, J.	SGR	Poland	Krakow	Tourism and Regional Development	28. 9. - 1. 10.
Rumpel, P.	SGR	Germany	Bamberg	Vital Cities	27. - 30. 9.
Rumpel, P.	SGR	Austria	Salzburg	Stadtmarketing	20. - 22. 3.
Siwek, T.	SGR	Poland	Ustroń	Edukacja międzykulturowa...	10. - 11. 10.
Siwek, T.	SGR	Poland	Toruń	55th Congress of Polish Geographers	13. - 16. 9.

Name	Dpt.	Country	Place	Action	Date
Siwek, T.	SGR	Slovakia	B.Bystrica	SGS Congress	11. - 13. 9.
Siwek, T.	SGR	Poland	Łódź	Regions in the process of European integration	18. - 21. 9.
Slach, O.	SGR	Austria	Salzburg	CIMA	20. - 22. 3.
Vencálek, J.	SGR	Slovakia	Bratislava	Trends in regional development	9. - 11. 10.
Vencálek, J.	SGR	Slovakia	Sládkovičovo	Casework in globalisation	22. - 24. 11.
Vencálek, J.	SGR	Slovakia	Nitra	Central European Area	10. - 14. 9.
Wahla, A.	SGR	Slovakia	B.Bystrica	SGS Congress	11. - 13. 9.
Wahla, A.	SGR	Poland	Toruń	55th Congress of Polish Geographers	13. - 16. 9.
Žufan, P.	SGR	Slovakia	B.Bystrica	SGS Congress	11. - 13. 9.

Short stays abroad 2006 (less than 10 days)

Name	Dpt.	Country	Place	Action	Date
Havrlant, J.	SGR	Poland	Krakow	Research	31. 1. - 1. 2.
Havrlant, J.	SGR	Poland	Krakow	Educational excursion	10. - 14. 6.
Havrlant, J.	SGR	Austria	Linz	Educational excursion	22. - 23. 9.
Rumpel, P.	SGR	Austria	Güssing	Research	30. - 31. 3.
Šindler, P.	SGR	Slovakia	Nitra	Working meeting	22. - 23. 3.

Long time stays abroad 2006 (more than 10 days)

Name	Dpt.	Country	Place	Action	Date
Drobík, T.	SGR	UK	Chester	Language course	26. 8. - 23. 9.
Slach, O.	SGR	Austria	Ried im Innkreis	Research fellowship - CIMA	17. 10. - 1. 11.
Šumberová, M.	SGR	Belgium	Brussels	Research fellowship	30. 6. - 13. 7.

14.9 Student research activity

- The Departmental Round of Student Research Conference took place on 27th June 2006. Five students participated in. Michal Baier – the Winner of the Departmental Round – took part in the Czech Republic Round in České Budějovice in September 2006.

14.10 Membership in Professional Organisations

Assoc. Prof. Tadeusz Siwek:

- President of the Czech Geographical Society.

Martin Kovář:

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

Kateřina S. Janků:

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

14.11 Publications

Monographic publications

- BAAR, V.: *External relations of the European Union. Geo-economic and geopolitical aspects of their macro regional differentiation*. Ostrava: University of Ostrava, 2006. 199 pp. ISBN 80-7368-142-0.
- WAHLA, A.: *Web databases for the preparation of professionals in tourism*. 1st issue Prague: IDEA SERVIS, 2006. 91 pp. ISBN 1866-069-06

Parts of monographic publications, articles

- RUMPEL, P.: *Innovative approaches in the development of localities and regions: case study Vsetin*. In *Polityka zrównoważonego rozwoju oraz instrumenty zarządzania miastem - Miasta v okresie przemian*. Opole: Wydawnictwo Uniwersytetu Opolskiego, 2006. ISBN 83-7395-188-1. pp. 173 - 185.
- BAAR, V.: *Situation of the world population in the 21st century*. In *Kapitoly z multikulturní tolerance IV*. Prague: Human Rights Education Centre, European Information Centre of Charles University, 2006. ISBN 80-903623-0-3. pp. 13 - 26.

Articles in proceedings (proceedings from conferences or institutions)

- SIWEK, T.: *Polskie organizacje z Republiki Czeskiej w internecie*. In *Polska - Polonia: wzajemne oczekiwania II*. 18. 9. 2003 - 20. 9. 2003 Szczecin. Szczecin: Uniwersytet Szczeciński, 2006. pp. 157 - 168. ISBN 83-7241-519-6.
- WAHLA, A.: *Czech didactics of geography in the phase of development since 1993*. No. 4 (2005) Prague: CGS, 2006. pp. 315 - 318. ISBN ISSN 1212-0014.
- SIWEK, T.: *The Poles, Silesians, Zaolzians and Czechs of Polish origin*. In *Polska - Polonia: wzajemne oczekiwania I*. 19. 9. 2002 - 21. 9. 2002 Szczecin. Szczecin: Uniwersytet Szczeciński, 2006. pp. 143 - 150. ISBN 83-7241-519-6.
- SIWEK, T.: *Different levels of identity in the Czech Republic*. In *Dynamika śląskiej tożsamości*. 10. 6. 2005 - 10. 6. 2005 Katowice. Katowice: Uniwersytet Śląski, 2006. pp. 87 - 97. ISBN ISBN 83-226-1552-3.
- RUMPEL, P.: *City and Regional Marketing as Innovative Concept-Czech Experience in the European Context*. 29. 5. 2006 - 31. 5. 2006 Ostrava VTP: International Conference, 2006.
- ŠINDLER, P.: *The globalization processes - not only regional problem*. In *Česká geografie v evropském prostoru*. 30. 8. 2006 - 2. 9. 2006 České Budějovice. České Budějovice: ČGS, University of South Bohemia in České Budějovice, 2006. pp. 23 - 23. ISBN 80-7040-879-0.
- VENCÁLEK, J.: *Paradox of abundance and deficiency of regional perception of the region*. In *XIV. kongres Slovenské geografické spoločnosti*. 12. 9. 2006 - 14. 9. 2006 Banská Bystrica. Banská Bystrica: SGS pri SAV v Bratislave, Stredoslovenská pobočka

- SGS Banská Bystrica, FPV UMB Department of Geography, Banská Bystrica, 2006. pp. 104-105. ISBN 80-969541-7-2.
- DROBÍK, T.: *Islamic Responses to the Geopolitics of Domination*. In Globalisation and its Impact to Society, Regions and States. Ostrava : University of Ostrava, 2006. pp. 86-95. ISBN 80-7368-256-7.
 - VENCÁLEK, J.: *Knowledge of genius loci of the landscape as a basis for the support of the regional development*. In Verejná správa a regionálny rozvoj. 24. 11. -25. 11. 2005, Trenčín. Trenčín: Alexander Dubcek University in Trencin, 2006. pp. 235 - 239. ISBN 80-8075-142-0.
 - HAVRLANT, J.: *Modernization of service infrastructure in the Beskydy and Těšínské Slezsko Euroregions*. In XXI.sjezd České geografické společnosti. 30. 8. - 2. 9. 2006 České Budějovice. České Budějovice: PF JČU, 2006.
 - HAVRLANT, J.: *New trends in the development of tourism and holiday activities in the Beskydy region*. In Sborník z konference UJ Kraków. Krakow: Uniwersytet Jagielloński Kraków, 2006.
 - HAVRLANT, J.: *Problematika druhého bydlení v beskydském zázemí ostravské aglomerace*. In Přínos univerzit k transformaci regionů. 20. 9. 2006 - 20. 9. 2006 Ostrava. University of Ostrava in Ostrava: OU, 2006.
 - SLACH, O.: *A part-analysis of a restructuring process in the Ruhr area presented on*. In Mezinárodní kolokvium „Cestovní ruch jako významná síla rozvoje lidské společnosti. 2. 11. 2006 - 3. 11. 2006 Ostrava. Ostrava: Dům kultury Poklad, 2006. pp. 87 - 90. ISBN 1214-886.
 - SLACH, O., BORUTA, T.: *The Forms of Inner Cities and the City Management*. In Mezinárodní konference Nové trendy - Nové nápady. 23. 11. 2006 - 24. 11. 2006 Znojmo. Znojmo: Soukromá vysoká školy ekonomická Znojmo, 2006. pp. 171 - 184. ISBN 80-239-8268-0.
 - SLACH, O., BORUTA, T.: *The Role of Soft Location Factors in the City Development*. In 2. ročník mezinárodní interdisciplinární konference Proměny bydlení a širší otázky úrovně obslužné sféry. 19. 9. 2006 - 20. 9. 2006 Olomouc. Ostrava: VŠB-TECHNICKÁ UNIVERZITA OSTRAVA, 2006. pp. 149 - 157. ISBN 80-248-1219-3.
 - BORUTA, T., SLACH, O.: *Role of Soft Location Factors in the City Development*. In 2. ročník interdisciplinární mezinárodní konference Proměny bydlení. 20. 9. 2006 - 20. 9. 2006 Olomouc. Ostrava: VŠB-TUO, 2006. pp. 149 - 157. ISBN 80-248-1219-3.
 - BORUTA, T., SLACH, O.: *The Forms of Inner Cities and The City Management*. In Mezinárodní konference Nové trendy - Nové nápady. 23. 11. 2006 - 24. 11. 2006 Znojmo. Znojmo: Soukromá vysoká školy ekonomická Znojmo, 2006. pp. 171 - 184. ISBN 80-239-8268-0.
 - BORUTA, T.: *Fortificational trail: utilization of technical military monuments for tourism in the Opava and Hlučín regions*. In Mezinárodní kolokvium „Cestovní ruch jako významná síla rozvoje lidské společnosti. 2. 11. 2006 - 3. 11. 2006 Ostrava. Ostrava: Dům kultury Poklad, 2006. pp. 80 - 83. ISBN 1214-886.
 - SLACH, O., BORUTA, T.: *The Marketing Management of Localities, Towns and Regions*. In Mezinárodní geografická konference 150 let geografie na Univerzitě Karlově. 10. 11. 2006 - 11. 11. 2006 Prague. Prague: UK in Prague, Faculty of Science, geographic section. 2006. pp. 13 - 13. ISBN 80-86561-96-8.
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15 Financial results for the year 2006

This part provides an overview of the university's activity from the financial point of view.

The University's consolidated income, expenditure and results for the year 2006 are summarized as follows:

Total income of the Faculty of Science in 2006 was 108,445 (in ths. CZK)

- Principal activity: 86,292 (in ths. CZK),
- Funding for specific research: 2,768 (in ths. CZK),
- Operating funding for OP RLZ: 5,919 (in ths. CZK),
- Operating funding for grants activities: 2,145 (in ths. CZK),
- Operating funding for projects LEONARDO, PHARE etc: 1,390 (in ths. CZK),
- Operating funding from GACR: 3,013 (in ths. CZK),
- Operating funding for other projects: 772 (in ths. CZK),
- Income from supplementary activities: 1,432 (in ths. CZK),
- Income from lifelong learning: 894 (in ths. CZK),
- Other income: 1,925 (in ths. CZK),
- Received monetary contribution: 707 (in ths. CZK),
- Scholarship fund: 1,188 (in ths. CZK).

Total expenditure of the faculty in 2006 was: 107,069 (in ths. CZK)

- Consumption of material: 5,552 (in ths. CZK),
- Repairs and maintenance: 5,460 (in ths. CZK),
- Travel expense: 1,990 (in ths. CZK),
- Other services: 9,658 (in ths. CZK),
- Wages and salaries: 56,228 (in ths. CZK),
- Mandatory social insurance: 18,828 (in ths. CZK),
- Graduate scholarships: 2,966 (in ths. CZK),
- Scholarships for other students: 1,348 (in ths. CZK),
- Other costs: 5,039 (in ths. CZK).

At the end of the year 2006 1,376 (in ths. CZK) were transferred to the fund of operating costs at disposal in the year 2007.

Elaborated by: Iveta Nevludová

In Ostrava, 24. 4. 2007

16 Faculty of Science Personnel (31. 12. 2006)

Adamec	Martin	Mgr.
Baar	Vladimír	doc. RNDr., CSc.
Balonová	Pavčina	
Bartl	David	RNDr., Ph.D.
Bartošová	Radka	Mgr.
Bednář	Pavel	Mgr.
Bohdálková	Jana	Mgr.
Bouřová	Eva	
Bražina	David	Ing.
Bulava	Petr	Mgr.
Burian	Květoslav	doc. RNDr., CSc.
Burianová	Eva	Ing., Ph.D.
Címalová	Šárka	Mgr.
Čajánek	Martin	RNDr., Ph.D.
Dolný	Aleš	RNDr., Ph.D.
Drobík	Tomáš	Mgr.
Drobíková	Ludmila	Mgr.
Drozd	Pavel	Mgr., Ph.D.
Řuriš	Zdeněk	doc. RNDr., CSc.
Dušek	Radek	Ing., Ph.D.
Dvořák	Dalibor	doc. RNDr., CSc.
Filipezyková	Hana	doc. Dr. Ing.
Fojtík	Rostislav	Mgr.
Gáper	Ján	prof. RNDr., CSc.
Goralová	Jana	
Greplová	Petra	
Habiballa	Hashim	RNDr. PaedDr., PhD.
Haluzík	Michal	Mgr.
Hančl	Jaroslav	doc. RNDr., CSc.
Havelková	Martina	
Havrlant	Jan	doc. RNDr., CSc.
Hradecký	Jan	RNDr., Ph.D.
Hrivňák	Daniel	Mgr., Ph.D.
Huňka	František	doc. Ing., CSc.
Iřtok	Robert	doc. RNDr., CSc.
Jandová	Věra	
Janeček	Ivan	Ing., CSc.
Janoschová	Pavla	
Janořcová	Jana	
Javorská	Monika	
Kalina	Jiří	doc. RNDr., Ph.D.
Kalus	René	doc. RNDr., Ph.D.
Káňová	Lenka	Ing.
Karlický	František	Mgr.
Klimánková	Jana	RNDr.
Klimeř	Cyril	doc. Ing., CSc.
Knybel	Jaroslav	RNDr.

Kočárek	Petr	RNDr., Ph.D.
Kolcun	Alexej	Mgr., CSc.
Konečná	Petra	RNDr., Ph.D.
Koníček	Libor	Mgr., PhD.
Kovář	Martin	Mgr.
Kožušník	David	Mgr.
Kričfaluši	Dana	doc. PaedDr., CSc.
Krpeš	Václav	doc. Ing., Ph.D.
Krtička	Luděk	Mgr.
Krupková	Olga	prof. RNDr., DrSc.
Křivý	Ivan	prof. RNDr. Ing., CSc.
Kříž	Vladislav	prof. RNDr. Ing., DrSc.
Kubicová	Svatava	PaedDr., CSc.
Kučerová	Jiřina	
Kurasová	Irena	Mgr., Ph.D.
Kusýn	Michal	Mgr.
Liška	Miroslav	RNDr., CSc.
Lojkásek	Bohumír	doc. RNDr., CSc.
Lukasová	Alena	doc. RNDr., CSc.
Majkus	Zdeněk	RNDr., CSc.
Malachová	Kateřina	doc. RNDr., CSc.
Maršálek	Roman	Mgr., Ph.D.
Martinkovská	Eva	
Mechlová	Erika	prof. RNDr., CSc.
Minár	Jozef	prof. RNDr., CSc.
Mišík	Ladislav	doc. RNDr., CSc.
Močkoř	Jiří	prof. RNDr., DrSc.
Mulková	Monika	Mgr.
Müller	Lubomír	Mgr., CSc., Ph.D.
Navrátil	Martin	Mgr.
Navrátilová	Zuzana	doc. Ing., CSc.
Nevludová	Iveta	Ing.
Novák	Vilém	prof. Ing., DrSc.
Novotná	Blanka	Mgr.
Pánek	Tomáš	RNDr., PhD.
Paulík	Tibor	prof. Ing., CSc.
Pavlíčková	Zuzana	Mgr.
Pavlíčková	Zdenka	
Pečinka	Petr	RNDr., CSc.
Perfiljeva	Irina	prof., CSc.
Peter	Rudolf	Ing., CSc.
Piskořová	Běla	
Placková	Marie	
Plášek	Vítězslav	RNDr., Ph.D.
Podolinská	Jana	Mgr.
Plochohová	Simona	Bc.
Pomp	Marek	RNDr., Ph.D.
Procházka	Jaroslav	RNDr.
Rozehnal	Tomáš	Mgr.
Rumpel	Petr	RNDr., Ph.D.

Ryšková	Dagmar	
Sedlářiková	Renata	Mgr.
Schmidtová	Jarmila	
Sidiropulu Janků	Kateřina	Mgr.
Siwek	Tadeusz	doc. RNDr., CSc.
Sklenák	Ladislav	doc. RNDr., CSc.
Skripová	Zlata	
Slovák	Václav	doc. RNDr., Ph.D.
Sochor	Tomáš	RNDr., CSc.
Solárová	Marie	doc. RNDr., Ph.D.
Straňák	Lukáš	Bc.
Swaczyna	Martin	RNDr., Ph.D.
Šaloun	Petr	doc. RNDr., Ph.D.
Šimonková	Natálie	
Šindler	Petr	doc. RNDr., CSc.
Špunda	Vladimír	doc. RNDr., CSc.
Štroch	Michal	Mgr., Ph.D.
Šumberová	Monika	Mgr.
Taraba	Boleslav	prof. Ing., CSc.
Telnarová	Zdeňka	Ing., Ph.D.
Tóth	János	doc. RNDr., Ph.D.
Treterová	Eliška	Ing.
Trizna	Milan	doc. RNDr., Ph.D.
Tureček	Tomáš	Ing.
Tvrdík	Josef	doc. Ing., CSc.
Václavíková	Zuzana	RNDr., Ph.D.
Vencálek	Jaroslav	prof. PaedDr., CSc.
Vítek	Aleš	Mgr.
Volná	Eva	RNDr. PaedDr., Ph.D.
Wahla	Arnošt	prof. RNDr., CSc.
Wilam	Petr	Mgr.
Závorková	Dana	Bc.
Živný	Michal	RNDr., Ph.D.
Žufan	Petr	Mgr.



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