



Palacký University Olomouc



StatGis Team



DEPARTMENT OF GEOINFORMATICS

Palacký University in Olomouc | Faculty of Science

November 10-14, 2014



Palacký University Olomouc

- est. 1573
- 23,000 students
- 2,500 employees

- Sts. Cyril and Methodius Faculty of Theology
- Faculty of Medicine and Dentistry
- Philosophical Faculty
- **Faculty of Science**
- Faculty of Education
- Faculty of Physical Culture
- Faculty of Law
- Faculty of Health Sciences





department of
geoinformatics

est. 2001

- 22 in staff
 - 9 academic staff
 - 11 research staff
 - 2 administration staff
- 166 students
 - Bc 64%
 - MSc 27%
 - PhD 9%





Academic staff

- **Vít Voženílek**, prof. – thematic and atlas cartography
- **Jiří Dvorský**, assoc. prof. – software engineering
- **Vilém Pechanec**, assoc. prof. – GIS in environment
- **Jaroslav Burian** – GIS in human geography
- **Jan Brus** – GISc, spatial analysis
- **Zdena Dobešová** – database systems
- **Jakub Miřijovský** – Earth remote sensing, GNSS
- **Jana Svobodová** – GIS in physical geography
- **Pavel Tuček** – maths, spatial statistics
- **Alena Vondráková** – digital cartography



RESEARCH STREAMS

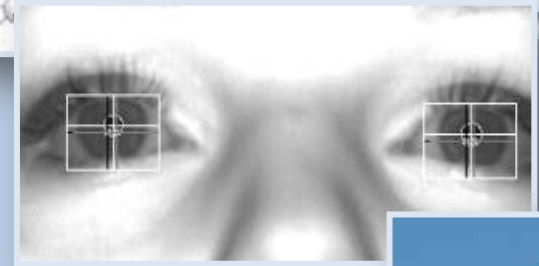
Spatial modelling of geographical phenomena in GIS

- modelling of natural phenomena
- modelling of urbanization processes
- geostatistics in transport
- environmental statistics
- analysis of surveys



Digital cartography

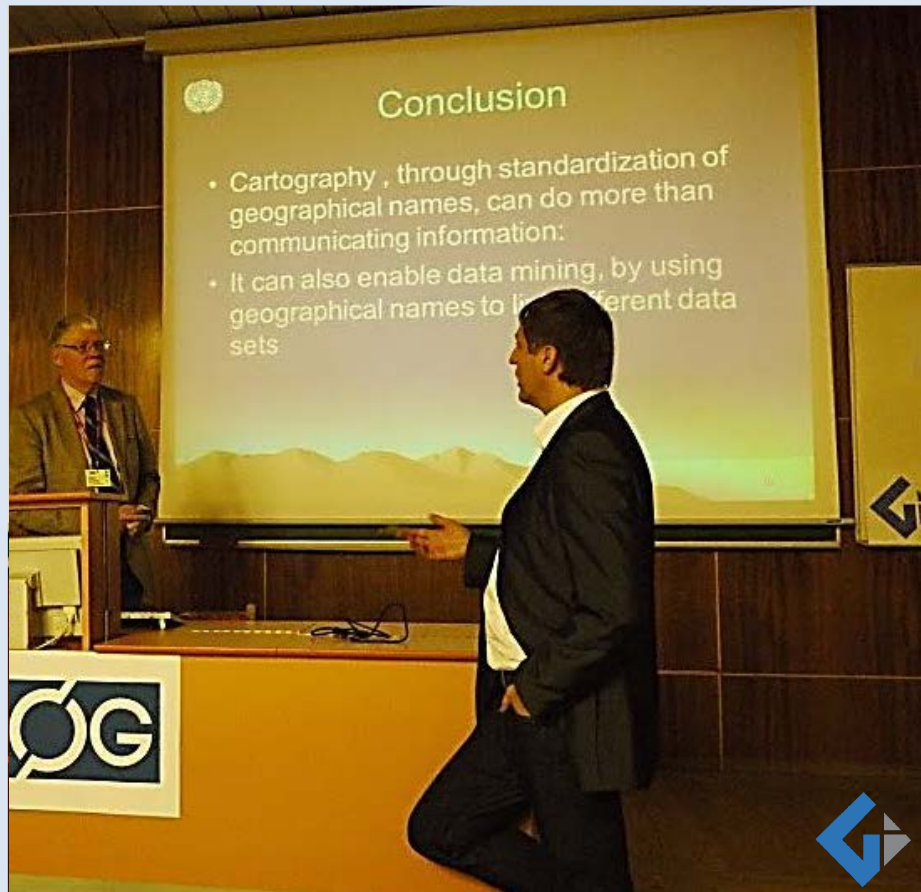
- production of thematic atlases
- synthetic map-making and map-use
- usability evaluation of map reading
- geovisualization on web
- visualisation of uncertainty



Remote monitoring of landscape

- small format landscape photography in visible and near infrared spectrum
- continuous monitoring of abiotic factors using sensor networks, telemetry stations and single- or multifunction data loggers,
- identification and analysis of landscape structure with the use of GIT
- creation and analysis of records







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November 18-21, 2013



Francis HARVEY

University of Minnesota
Dept. of Geography, Environment
and Society



Qiming ZHOU

Hong Kong Baptist University
Dept. of Geography
Centre for Geo-computation



Maik NETZBAND

Ruhr-University Bochum
Institute of Geography



Mircea ARDELEAN

West University of Timișoara
Dept. of Geography





Heiko Balzter
University of Leicester
Dept. of Geography

Specialties

- Earth Remote Sensing
- climate change
- human impacts on biogeochemical cycles and biophysical systems

Publications

Feasibility of X-HH InSAR Data to Derive High-resolution Vegetation Cover Maps and Canopy Height
Data assimilation into land surface models: the implications for climate feedbacks
The BIOMASS Mission: Mapping global forest biomass to better understand the terrestrial carbon cycle

Research Activities

- Remote sensing of forest structure and dynamics
- European Centre of Excellence for Earth Observation Research Training “GIONET”
- Land/atmosphere interactions
- The role of fire in biogeochemical cycles
- a member of the editorial board of the journals “Remote Sensing “Earth Science and Climatic Change”

Specialties

- GIS & Earth Remote Sensing
- El Niño/Southern oscillation
- stochastic modelling in geosciences
- geophysics

Publications

- Is there any teleconnection between surface hydrology in Poland and El Niño/Southern Oscillation?
- El Niño's impact on the probability distribution of sea level anomaly fields
- Statistical characteristics of riverflow variability in the Odra River basin, Southwestern Poland
- On the optimal siting of cubic kilometre scale neutrino telescope infrastructure on the deep-sea floor
- Forecasting sea level anomalies from TOPEX/Poseidon and Jason-1 satellite altimetry
- Prediction of UT1-UTC, LOD and AAM X3 by combination of the least-squares and multivariate stochastic methods
- A data-based regional scale autoregressive rainfall-runoff model: A study from the Odra River

Research Activities

- System supporting a comparison of hydrologic predictions
- Development of new geoinformation methods for modelling and prediction of sea level change over different timescales

Tomasz NIEDZIELSKI

Wroclaw University

Dept. of Geoinformatics and Cartography



StatGis Team

Employment History

Project Coordinator

Liverpool Hope University College

Deanery Research Director

Liverpool Hope University

National Teaching Fellow, Director, Development Office

Liverpool Hope University

Group Member

Liverpool Hope University

President

EUROGEO

Honorary Vice President

Geographical Association

Board Memberships and Affiliations

International Fellow and Senior Lecturer

Liverpool Hope University College

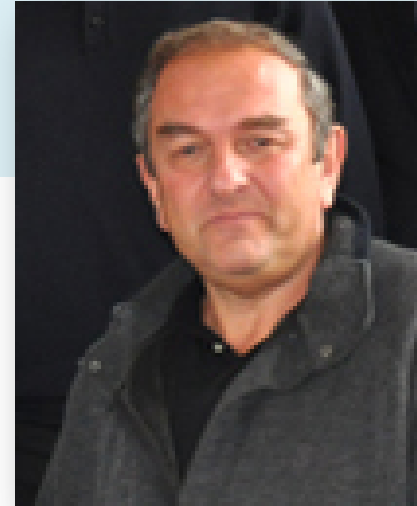
Executive Board Member

Geospatial World

Karl DONERT

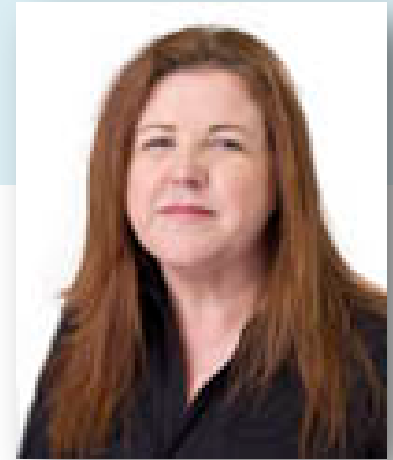
EUROGEO

president



The principal aims of EUROGEO are to advance the status of geography by:

- organising events and activities for members
- producing publications for members
- supporting geographers in their jobs and careers
- identifying and promoting good practise
- lobbying at European and national level
- giving advice on geography
- making recommendations to decision makers



Helen BRADLEY

University College Cork

Dept. of Geography

Specialties

- cartography
- GIS development

Research Activities

- Irish land Mapping Observatory (EPA funded).
- Mapping Peatlands of Ireland at a hierarchy of scales (Friends of the Irish Environment funded).
- The Use of Earth Observation in Monitoring the Dynamics of Saltmarsh Distribution and Extent (British National Space Centre funded).
- Mining and analysis of telemetry data obtained from bio-tagged seals on the West Coast of Ireland, to investigate their use for oceanographic studies (HEA funded).
- Spatial Data Infrastructures for Thai Provinces – Applications of Geographic Information Systems in Local Governments (EU Asia IT&C Programme funded).
- Scoping, selection and procurement of the Scoilnet Online Map Viewer /digital map browser for Irish Secondary Schools (project coordinated by the National Centre for Technology in Education, Dublin).
- Cartography for the Atlas of Cork City (2005), and the Atlas of the Iveragh Peninsula (2009) (both Cork University Press).

program



Hotel Flora

Monday 10. 11.

Time	Lecturer	Topic
13:00 - 13:30	Voženílek, Burian	Opening, organizing issues
13:30 - 15:30 Chair: Voženílek	Burian (20min)	Možnosti prostorového záznamu pohybových aktivit
	Tuček (15min)	Mentální vymezení dojížděkových vzdáleností
	Pohanka (15min)	Souřadnicové systémy online
	Marek (15min)	Prostorová geo-demografická klasifikace úmrtnosti
	Rypka (15min)	Apolloniovy kružnice a jejich dimenze
	Slezáková (8min)	Nelineární regrese v problematice modelování nahodilé těžby dřeva
	Minařík (8min)	Hodnocení přesnosti GNSS přístrojů v závislosti na jejich konfiguraci
Hradečný (8min)	Rekognoskace a zaměření sesuvů v oblasti Vnějších Západních Karpat	
Králík (8min)	Anaglyfové vizualizace stavby areálu Šantovka	
15:30 - 16:00	Break	
16:00 - 17:30 Chair: Burian	Janoška (15min)	Prostorové trajektorie a jak s nimi pracovat
	Janoška (15min)	How to measure similarity of species distribution recorded by quadrat mapping?
	Janoška (10min)	Munster
	Niedzielski (10min)	University of Wrocław
	Pohanka (10min)	Baar
	Čepová (10min)	Turku

Tuesday 11 .11.

Time	Lecturer	Topic
10:00 - 12:00 Chair: Voženílek	Donert (25min)	GeoCapacity Building - what future for 'geospatial geoskills'?
	Niedzielski (25min)	Unmanned aerial vehicle as a tool for checking the correctness of flood inundation on models
	Burian (20min)	Urban Planner 3.0 - Tool for optimal land use scenario modelling
	Marek (15min)	The exploration of spatio-temporal patterns
	Pászto (15min)	Twitter data potential - case studies (Ukraine Crisis and others)
	Hartmannová (8min)	Aplikace prostorové a tvarové metriky pro hodnocení (sub)urbanizace
Pour (8min)	Detekce volných ploch pro vnitřní rozvoj města Olomouce pomocí metod DPZ	
12:00 - 13:00	Lunch	
13:00 - 15:00 Chair: Burian	Baltzer(25min)	Remote sensing of forest structure and dynamics from Radar, LiDAR and optical sensors
	Netzband (25min)	Remote Sensing for Biodiversity
	Dvorský (20min)	Growing Neural Gas as Extension of Kohonen Map
	Tuček (15min)	Spatial analysis of transport infrastructure in the Czech Republic
	Rypka (15min)	New developments in the chaos game theory
	Macků (8min)	Geostatistické vyhodnocení desetiletého pozorování sesuvu Halenovice
15:00 - 15:30	Break	
15:30 - 17:00	Baltzer (15min)	University of Leicester
	Donert (15min)	EUROGEO
	Voženílek (10min)	Cork, Čína
	Janák (10min)	Szeged
	Burian (10min)	Berkeley
	Zajíčková (10min)	Tel Aviv
Marek (10min)	Tenerife	
17:30	Společenský večer	



Olomouc

Wednesday 12. 11.

Time	Lecturer	Topic
10:00 - 12:00	Netzband (20min)	What can Geoinformation and Remote Sensing contribute in Social Sciences?
	Voženílek (20min)	Vector vs. Raster in Network Analysis
	Niedzielki (25min)	Real-time prognoses of peak flows: a case study from the upper Nysa Kłodzka basin (SW Poland)
	Pohanka (15min)	Fuzzy models for efficient traffic management
	Samec (15min)	The perspectives of biogeography at forestry environmental modelling
	Dědková (15min)	Spatio-temporal accessibility analysis of social services of Karlovy Vary region
12:00 - 13:00	Lunch	
13:00 - 15:00	Batzer (25min)	MERIS observations of Lake Balaton phytoplankton dynamics
	Donert (25min)	Digital Earth needs Spatial Citizenship
	Vondráková (15min)	Map design and its influence on users perception
	Miřijovský (15min)	Application of UAS photogrammetry to evaluate changes in fluvial morphology
	Zajíčková (15min)	Regular commuting to work and school
	Samec (15min)	Lesnický významné charakteristiky zón ohrožení lesů
15:00 - 15:30	Break	
15:30 - 17:00	Workshop Pohanka (35min)	Efektivní práce s EPSG.io
	Workshop Zajíčková (50min)	Zpracování dat v excelu pomocí kontingenčních tabulek

Thursday 13. 11.

Time	Lecturer	Topic
10:00 - 12:00	Voženílek (20min)	Metoda kartografické generalizace zjednodušení průběhu linií a obrysů ploch pomocí skeletonu
	Miřijovský (15min)	Specifika leteckého snímkování pro archeologické účely
	Hejlová (15min)	Bezdrátové senzorové sítě: funkcionality a využití
	Pászto (15min)	"Straka v říši entropie" - možnosti informační entropie v geoinformaticce
	Dědková (15min)	Sociální povrchy
	Drážná (8min)	Stanovení vah a parametrů extenze Arc Urban Planner
	Fedrzal (8min)	Ověření přesnosti laserových dat z projektu nového mapování výškopisu České republiky
	Benc (8min)	Geoinformatické alternativy stanovení C-faktoru modelu RUSLE
	Fusková (8min)	Geoinformace v prostředí sociálních sítí
12:00 - 13:00	Lunch	
13:00 - 15:00	Dvorský (20min)	Flexibilní neuronové stromy
	Hejlová (15min)	Factors that influence distribution of wireless nodes in urban environment
	Vondráková (15min)	Potenciál nízkonákladového 3D tisku v kartografii
	Workshop Sedoník (40min)	Shlukování prostorových dat KDE+
	Workshop Růžička (40min)	Storytelling a mapy



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Thank you for coming....

.... enjoy StatGIS!



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esf evropský sociální fond v ČR EVROPSKÁ UNIE MŠMT MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY OP Vzdělávání pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ