

VSB - Technical University of Ostrava  
Czech Association for Geoinformation  
Slovak Association for Geoinformatics  
International Society for Photogrammetry and Remote Sensing

# Symposium GIS Ostrava 2011

23. 1. - 26. 1. 2011



**GEOBUSINESS**

**GeInformatika**  
spravodajský portál  
slovenskej a českej geokomunity

**Portál**

New Hall of VSB - TUO, 17. listopadu 15, Ostrava-Poruba, Czech Republic, EU

1<sup>st</sup> circular

# Call for papers

**organize under auspices of**

**Prof. Ivo Vondrak, CSc.**, Rector of VSB – TU Ostrava

**Prof. Vladimír Slivka, CSc., dr.h.c.**, Dean of FMG VSB – TU Ostrava

The symposium **“GIS Ostrava 2011”** follows three main topics - Advances in Remote Sensing, Advances in Spatial Modelling and Geoinformation Technology Challenges.

**„Advances in Remote Sensing“** The aim of the workshop is to present new methods, new data, new sensors, and new applications in remote sensing. The new methods should be focused on synergy effect of different data types including GIS data to bring new tools for analysis of complex tasks in studying mutual relations among natural changes, global changes, anthropogenetical influence, etc. There are many data types covering different application fields of remote sensing and GIS applications, however, there are many applications where the data are not sufficient either due to their insufficient time resolution, spectral resolution etc. Most cases appear at data with low time resolution. New data types and new sensors can present advances in application of spectral imaging, polarimetry, interferometry and/or optical and microwave remote sensing for land use/land cover performed from, forestry, agriculture, geology, risk/hazard management, hydrology/wetlands, etc. There are many branches which are going to be new for users of remote sensing applying remote sensing methods for imagery focused not exactly the earth surface, but civil engineering object surfaces, different materials and their quality evaluation from their photographs, e.g. The remote sensing session will be interesting for many specialists and users especially due to the fact that there are many part of remote sensing, which are not used and the proposed themes belong to modern and quickly developing remote sensing directions.

**„Advances in Spatial Modelling - Theory and Applications“** The workshop aims at delivering the recent knowledge about the advances in spatial analyses and modelling, emphasizing the benefits of Geographic Information Science. The workshop has also ambition to go beyond the GIS, and be open for other fields of modelling to initiate a cross-subject discussion. The workshop should provide a round table for experts to present and discuss their recent achievement; as well as for students and other practitioners to improve their understanding of spatial modelling issues. Three workshop`s sections are aimed at theoretical aspects of spatial modelling; applied environmental modelling; and socio-economy and technical systems modelling. The theory-focused section pays attention to the introduction of new methods or novel use of standard methods. The section is open to theoretical papers on spatial statistics, geostatistics, spatio-temporal modelling, relief analysis and other fields of spatial science. The Applied Environmental Modelling section focuses on case studies on climatology, hydrology and water management, forestry and agriculture, landscape ecology, etc. Social-economy and technical systems section primarily aims at urban geography; transportation, mining industry, oil and gas industry. Global studies attracting a broader audience, such as climate change; environment deterioration; forest fires, floods, windstorms and other hazards; human health; etc., are especially welcome. Local or subject-too-specific studies without clear message to broad audience will not be supported as oral presentations.

**„Geoinformation Technology Challenges“** The aim of the workshop is to bring together experts of geoinformation technologies that are interested in design and development of geoinformation technologies and technical background necessary for making geoinformation technologies more efficient. During the workshop we would like to discuss challenges that bring new technologies in the area of geoinformation. The workshop is mainly focused on systems' interoperability that allows system integration inside an enterprise or across countries. The interoperability is based on open standards that are implemented in open source software or in closed source software. This workshop should identify tools (closed source software, open source software, open languages, open standards) that can be used for building geoinformation systems in open interoperable way and identify white areas that bring challenges for developers. For example, we have tested several tools for dynamic orchestration of geoweb services and the results from our research show that there is no tool available that can be directly used for this area. One of the workshop's targets is to show such areas that should be researched and filled with new software or new software components. Another problem, that is related with geoinformation technologies, is the efficiency. For example, even that we have better hardware, the systems, that are in use, are not fast enough to give results in a time requested by user. The workshop should discuss which technologies can be used to speed up current software (cache, better rendering algorithms, new data structures, new data models) and make software reliable (monitoring, logging, self learning systems). There are still areas, that are not well discovered, such as grid computing for spatial enabled applications, loosely coupled integration or knowledge based integration. We hope that this workshop can prepare good conditions for discussion of the mentioned areas and prepare some recommendations for developers.

## RESEARCH SESSION

### 1. *Advances in Remote Sensing*

#### Main Topics

- Optical remote sensing - airborne and space-borne imaging spectroscopy applications (incl. hyperspectral data of very high spatial resolution)
- LiDAR remote sensing - ground and airborne laser scanning applications
- Radar remote sensing - microwave interferometry and polarimetry applications

### 2. *Advances in Spatial Modelling - Theory and Applications*

#### Main Topics

- Theoretical advances in spatial modelling (spatial statistics; geostatistics; data integration; spatial predictive modelling; etc.)
- Applied environmental modelling (hydrology; climatology; air pollution; agriculture and forestry; environmental science; etc.)
- Social-economy and technical systems modelling (demography; transportation; mining industry; oil and gas industry; etc.)

### 3. *Geoinformation Technology Challenges*

#### Main Topics

- Geodata and metadata interoperability
- Enterprise Integration
- Spatial Infrastructures
- GeoWeb mapping and services
- Parallelisation and Grid computing
- Geoservices workflow management
- Open Source business model

#### Programme Committee

Lena Halounova – chairman  
Filip Hajek  
Gottfried Konecny  
Miroslav Kozuch  
Tomas Penaz

#### Programme Committee

Tomas Hlasny - chairman  
Branislav Bajat  
Jaroslav Hofierka  
Jiri Horak  
Dagmar Kusendova  
Csaba Matyas  
Katarzyna Juda-Rezler  
Frantisek Stanek  
Jan Unucka  
Vit Vozenilek

#### Programme Committee

Jan Ruzicka – chairman  
Rolf de By  
Ales Cepek  
Otakar Cerba  
Anneli Heimbürger  
Karel Charvat  
Karel Janecka  
Marcus Neteler  
Ulrich Schäffler  
Michal Seliga  
Jeroen Ticheler

## Call for Workshop Proposal

Additional workshops are welcome. Workshops are intended to provide a forum for the discussion of a specific topic from the geoinformatics between an group of researchers. Each workshop should last from 2 hours to 1 day. The workshop organiser will be responsible for advertising the workshop, reviewing and selecting the papers.

## Call for Papers

The Symposium incorporates two session threads; the **Research session** held in English language and the Application session held in Czech and Slovak language.

For an abstract submission, please, complete the Registration Form on the symposium website <http://gis.vsb.cz/gisostrava>.

All papers will be reviewed.

All accepted papers will be available in electronic proceedings on CD/DVD with full versions of papers from the Research session and the Application session.

The printed proceedings will be issued shortly after the symposium (containing only reviewed final papers of the research session). The proceedings will be sent for registration in **Web of Science - Conference Proceedings Citation Index**, Thomson Reuters.

## Important Dates

**June 30<sup>th</sup> 2010**

deadline for workshop proposals submission

**July 15<sup>th</sup> 2010**

acceptance notification for workshop proposals

**September 15<sup>th</sup> 2010**

deadline for paper proposals submission  
(abstract with min. 200 words)

**September 24<sup>th</sup> 2010**

acceptance notification for paper proposals

**September 30<sup>th</sup> 2010**

2<sup>nd</sup> circular

**November 1<sup>st</sup> 2010**

deadline for full papers submission for the research session  
(research workshops)

**December 3<sup>rd</sup> 2010**

comments from reviewers

**December 31<sup>st</sup> 2010**

deadline for final versions of papers

**January 15<sup>th</sup> 2011**

deadline for early registration (discounted fees)

## Organizing Committee

Katerina Peskova - chairman  
Ivana Ceskova  
Lucie Tomasova  
Jiri Horak

## Correspondence Address

GIS Ostrava 2011  
Institute of Geoinformatics  
VŠB - Technical University of Ostrava  
17. listopadu 15  
708 33 Ostrava-Poruba  
Czech Republic  
[gisostrava@vsb.cz](mailto:gisostrava@vsb.cz)     <http://gis.vsb.cz/gisostrava>

## Conferency Secretariat

Katerina Peskova  
e-mail: [gisostrava@vsb.cz](mailto:gisostrava@vsb.cz)  
Phone: +420 731 473 843  
Fax: +420 596 918 589

## Venue

The symposium will be held at  
VŠB - Technical University of Ostrava premises,  
the New Hall building.

For registration and more information, please  
visit <http://gis.vsb.cz/gisostrava>

## Conference Programme Committee

Jiri Horak (VSB-TU Ostrava, CZ) – chairman  
Branislav Bajat (University of Belgrade, Serbia)  
Rolf de By (ITC Enschede, Netherlands)  
Ales Cepek (CTU Prague, CZ)  
Otakar Cerba (ZCU Plzen, CZ)  
Daniela Durakova (VSB-TU Ostrava, CZ)  
Filip Hajek (UHUL Frydek-Mistek, CZ)  
Lena Halounova (CTU Prague, CZ)  
Anneli Heimbürger (University of Jyväskylä, Finland)  
Tomas Hlasny (NLC Zvolen, SAGI, Slovakia)  
Jaroslav Hofierka (PU Presov, Slovakia)  
Bronislava Horakova (INTERGRAPH CS, CZ)  
Karel Charvat (CCSS, CZ)  
Karel Janecka (ZCU Plzen, CZ)  
Jaromir Kolejka (MU Brno, CZ)  
Gottfried Konecny (Hannover, Germany)  
Miroslav Kozuch (UK, Bratislava, Slovakia)  
Petr Kubicek (MU Brno, CZ)  
Dagmar Kusendova (UK, Bratislava, SAGI, Slovakia)  
Csaba Matyas (University of West Hungary, Sopron, Hungary)  
Marcus Neteler (Fondazione Mach - CEA, Trento, Italy)  
Branislav Niznansky (CU in Ruzomberok, Slovakia)  
Tomas Penaz (VSB-TU Ostrava, CZ)  
Katarzyna Juda-Rezler (Warsaw University of Technology, Poland)  
Jan Ruzicka (VSB-TU Ostrava, CZ)  
Ulrich Schäffler (TU Munich, Germany)  
Frantisek Stanek (VSB-TU Ostrava, CZ)  
Michal Seliga (T-MAPY Ostrava, CZ)  
Jeroen Ticheler (GEOCAT, Enschede Area, Netherlands)  
Jan Unucka (VSB-TU Ostrava, CZ)  
Vit Vozenilek (UP Olomouc, CZ)

## Registration Fees

Early registration (not later than January 15 <sup>th</sup> 2011)	<b>140 €</b>
Registration (later than January 15 <sup>th</sup> 2011)	<b>160 €</b>
Author's registration (not later than December 15 <sup>th</sup> 2010)	<b>100 €</b>
Full-time students without conference service	<b>Free</b>
Full-time students with service	<b>50 €</b>
Printed conference proceedings (a book including shipping)	<b>25 €</b>

The Symposium registration fee covers participation in all conference sessions, electronic conference proceedings (printed version optional), coffee breaks with refreshment, light lunch and a banquet.

## Preliminary Programme

<b>January 24<sup>th</sup> 2011</b>	afternoon - opening ceremony, 2 parallel sessions, banquet
<b>January 25<sup>th</sup> 2011</b>	morning - 2 parallel sessions afternoon - 2 parallel sessions
<b>January 26<sup>th</sup> 2011</b>	morning - 2 parallel sessions, closing ceremony

VSB - Technical University of Ostrava  
Czech Association for Geoinformation  
Slovak Association for Geoinformatics  
International Society for Photogrammetry and Remote Sensing



**<http://gis.vsb.cz/gisostrava>**

New Hall of VSB - TUO, 17.listopadu 15, Ostrava-Poruba, Czech Republic, EU