



**AGILE**

VSB – Technical University of Ostrava  
Faculty of Mining and Geology  
Institute of Geoinformatics



**Geoinformatika**  
spravodajský portál  
slovenskej a českej geokomunity

GISportal.cz



# Surface models for geosciences

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

**January 23 - 25, 2012**

## Keynote lessons

**Monika Sester** (University of Hannover)

**Xiaoye Liu** (University of Southern Queensland)

**Helena Mitášová** (NC State University)

# First announcement: call for papers

### under auspices of

Association of Geographic Information Laboratories for Europe  
International Society for Photogrammetry and Remote Sensing

Czech Association for Geoinformation

Slovak Association for Geoinformatics

Prof. Ivo Vondrak, Rector of VSB – TU Ostrava

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

Surface models are frequently used for many applications in geosciences. The associated research field is central in many applications including GIS, follow-up environmental modelling, land and urban management, flight simulations, virtual reality etc.

Models with different scales, variety of data sources, alternative construction approaches and data representations are examples of research issues related to this field. One shared aim is to achieve quality models that satisfy the required needs while remaining efficient. Moreover, controlling data integrity and coherence is essential for many applications that involve decision making. Extensive field studies and research have been conducted to address these issues.

The aim of the conference is to present and discuss new methods, issues and challenges encountered in all parts of the complex process of gradual development and application of digital surface models. The process covers data capture, data generation, storage, model creation, validation, manipulation, utilization and visualization. Each stage requires adequate methods and contains issues which may substantially decrease the value of the model.

Furthermore, the conference provides a platform to discuss about requirements, features and research approaches for virtual reality, 3D modelling, continuous field modelling and other geosciences applications.

### **Keynote lessons**

**Monika Sester** (University of Hannover): Building extraction from Lidar Data

**Xiaoye Liu** (University of Southern Queensland): Accuracy of LiDAR-derived digital elevation model

**Helena Mitášová** (NC State University): Will be specified

### **Topics**

Optical remote sensing for elevation data

LIDAR for elevation data

Radar interferometry for elevation data

GPS for elevation data

Other sources of elevation data

Elevation data integration

Surface model creation

Surface model statistics

Surface model storage (including data formats, standardization, database)

High resolution DMR

Fractal and chaos for surfaces

Feature extraction

Geomorphology

Analysis of surface models

Surface models for hydrology, meteorology, climatology

Surface models for pollution

Surface models for agriculture and forestry

Surface models for signal spreading

Surface models for visibility studies

Surface models for geology (structural, mining)

Surface models for environmental science

Surface models for human geography

Surface models for urban geography

Spatial infrastructures for surface models (including web services)

Uncertainty of surface models and digital terrain analysis

Surface model visual enhancement and rendering

Surface model for 3D visualization and VRML

Surface model for animations

## Call for papers

Researchers are encouraged to present results of their work in the specified topics. For the abstract submission, please, complete the Registration Form at <http://gis.vsb.cz/gisostrava/>. All papers will be reviewed and available in electronic proceedings.

The printed proceedings will be issued shortly after the symposium. The proceedings will be sent for registration in **Web of Science - Conference Proceedings Citation Index**, Thomson Reuters.

Selected papers will be published in journal **Transactions in GIS**.

## Registration fees

Early registration (before 5. 1. 2012)	<b>140 EUR</b>
Registration (after 5. 1. 2012)	<b>160 EUR</b>
Authors before 15. 12. 2011	<b>90 EUR</b>
Full-time students	<b>40 EUR</b>
Workshop	<b>50 EUR</b>
Printed proceedings (including shipping)	<b>25 EUR</b>
Excursion	<b>5 EUR</b>
Participation at sessions of conference "Současné výzvy geoinformatiky" **	<b>0 EUR</b>

Discount for members of  
AGILE, CAGI, SAGI, ISPRS  
- **10 EUR/person**

Fee covers all days of conference,  
electronic proceedings, coffee  
breaks, light lunch and banquet.

*\*\* Valid only with registration to the  
conference Surface models for geosciences.*

## Important days

September 10, 2011 deadline for abstract submission (abstract with min. 200 words)

September 24, 2011 acceptance notification for paper proposals

November 1, 2011 deadline for full papers submission

December 3, 2011 comments from reviewers

December 15, 2011 deadline for final versions of papers

January 5, 2012 deadline for early registration (discounted fees)

January 23-25, 2012 symposium days

## Preliminary programme

January 23, 2012 - morning - workshops

January 23, 2012 - afternoon - opening ceremony, keynote lessons

January 23, 2012 - afternoon - sessions

January 23, 2012 - evening - banquet

January 24, 2012 - all day - sessions

January 24, 2012 - evening - farewell party

January 25, 2012 - all day - workshops, excursions

## Language

English

## Workshops and excursions

As a part of the conference will be organised workshops and excursions.

## Registered workshops:

\* Digital surface models in City GML (guarantee Dr. Jan Růžička (VSB-TU of Ostrava)).

**Additional workshops are welcome.** If you would like to organise your own workshop, please contact us at [gisostrava@vsb.cz](mailto:gisostrava@vsb.cz).

## Programme committee

Dr. Kateřina Růžičková (VŠB-Technical University of Ostrava, CZ) - chairman

Dr. Farès Belhadj (Université Paris, FR)

Assoc. prof. Lena Halounová (Czech Technical University in Prague, CZ)

Assoc. prof. Tomislav Hengl (ISRIC World Soil Information institute, Wageningen, NL)

Assoc. prof. Tomáš Hlásny (National Forest Centre Zvolen, SK)

Assoc. prof. Jaroslav Hofierka (University of Presov in Presov, SK)

Assoc. prof. Jiří Horák (VŠB-Technical University of Ostrava, CZ)

Assoc. prof. Josef Kohout (University of West Bohemia, CZ)

Assoc. prof. Jaromír Kolečka (Masaryk University, CZ)

Prof. Gottfried Konecny (University of Hannover, DE)

Prof. Brian Lees (The University of New South, AUS)

Dr. Xiaoye Liu (University of Southern Queensland, AUS)

Assoc. prof. Helena Mitášová (NC State University, USA)

Assoc. prof. František Staněk (VŠB-Technical University of Ostrava, CZ)

Dr. Tomáš Vaníček (Czech Technical University in Prague, CZ)

Prof. Vít Voženílek (Palacky University in Olomouc, CZ)

Prof. J. P. Wilson (University of Southern California, USA)

Prof. Qiming Zhou (Hong Kong Baptist University, HK)

## Address

GIS Ostrava 2012

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