

11th Slovak Geophysical Conference

Conference program

September 8. - 9. 2015
Slovak University of Technology in Bratislava
Faculty of Civil Engineering

Organized by:

Department of Theoretical Geodesy,
Faculty of Civil Engineering, Slovak University of Technology
Bratislava, Slovak Republic

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Bratislava, Slovak Republic

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Pavol Letko, KGZA SvF STU

September 8, 2015

Room B-319

08:00 - 09:00	Registration
09:00 - 09:10	Conference opening and invitation (S. UNČÍK – Dean of the faculty)
09:10 - 09:40	Plenary lecture: Seismology (J. KRISTEK)
09:40 - 10:10	Plenary lecture: Gravimetry (P. VAJDA)
10:10 - 10:30	Coffee break
10:30 - 11:00	Plenary lecture: Geodesy and Geodynamics (M. MOJZEŠ)
11:00 - 11:30	Plenary lecture: Geomagnetism (J. BRESTENSKÝ)
11:30 - 12:00	Plenary lecture: Applied Geophysics (R. PAŠTEKA)
12:00 - 13:30	Lunch break
BLOCK 1.	conveners: L. BRIMICH, J. KRISTEK
13:30 - 13:50	M. PITOŇÁK, M. ŠPRLÁK, E. HAMÁČKOVÁ, P. NOVÁK: Regional Determination of Disturbing Gravitational Potential from the Satellite Gradiometry Data
13:50 - 14:10	R. PAŠTEKA, P. ZAHOREC, J. MIKUŠKA, V. SZALAIOVÁ, J. PAPČO, M. KRAJŇÁK, D. KUŠNIRÁK, J. PÁNISOVÁ, P. VAJDA, M. BIELIK: Contributions to the Creation of New Generation Bouguer Anomaly Map from Slovak Republic Territory
14:10 - 14:30	I. SMETANOVÁ, M. MÜLLEROVÁ, K. HOLÝ, A. MORAVCSÍK, T. KOVÁCS, A. CSORDÁS, M. NEZNAL, M. NEZNAL, K. KOZAK, J. MAZUR, D. GRZADZIEL: Thoron Activity concentration in Selected Houses in Ružomberok (Northern Slovakia)
14:30 - 14:50	R. ČUNDERLÍK, M. MACÁK, Z. MINARECHOVÁ, K. MIKULA: High-resolution Numerical Modelling of the Altimetry-derived Gravity Disturbances over Oceans
14:50 - 15:10	A. CIPCIAR, K. CSICSAY, M. KRISTEKOVÁ, M. SRBECKÝ, L. FOJTÍKOVÁ, P. PAŽÁK, E. BYSTRICKÝ, P. MOCZO, J. KRISTEK: Earthquakes in Slovakia
15:10 - 15:40	Coffee break
BLOCK 2.	conveners: M. MOJZEŠ, P. GUBA
15:40 - 16:00	M. BAKOŇ, J. PAPČO, D. PERISSIN, M. LAZECKÝ, J. J. SOUSA, I. HLAVÁČOVÁ, K. BÁTOROVÁ, P. ONDREJKA, P. LIŠČÁK, P. PAUDITŠ: Application of Multi-temporal InSAR Techniques for Monitoring Landslide Activity in Nižná Myšľa
16:00 - 16:20	M. REVALLO, F. VALACH, P. HEJDA, J. BOCHNÍČEK: Two Classes of Geomagnetic Storms Modeled by Means of Artificial Neural Networks
16:20 - 16:40	M. BEDNÁRIK, J. PAPČO, V. POHÁNKA, V. BEZÁK, I. KOHÚT, L. BRIMICH: Colour Map of the Stress Field in Tatra Mountains Region
16:40 - 17:00	L. BRIMICH: Influence of Indirect Effects of Ocean Tides and Inertial Forces on the Tidal Measurements in Vyhne
17:00 - 18:10	Poster session
18:30	Social evening in Faculty Club

September 9, 2015

Applied Geophysics

Room B-302

BLOCK 3A.

convener: P. VAJDA

- 09:00 - 09:20 M. BIELIK, M. GRINČ, H. ZEYEN, V. STAROSTENKO, I. MAKARENKO, O. LEGOSTAEVA, M. BOŠANSKÝ, M. KRAJŇÁK, R. PAŠTEKA, J. DÉREROVÁ, P. HLAVŇOVÁ: Integrated Interpretation of Gravity Field: Case Studies from Western Carpathians and Central Europe
- 09:20 - 09:40 P. ZAHOREC, J. MIKUŠKA, J. PAPČO, I. MARUŠIAK, R. KARCOL, R. PAŠTEKA: Investigation of Zero Vertical Gradient of Gravity
- 09:40 - 10:00 Č. TOMEK: The Importance of Free-air Gravity and Geoidal Anomalies in Carpathian Geodynamic Studies
- 10:00 - 10:20 J. MIKUŠKA, I. MARUŠIAK: Geological Corrections in Gravimetry
- 10:20 - 10:40 Coffee break

BLOCK 4A.

convener: M. BIELIK

- 10:40 - 11:00 B. ŠÁLY, I. HLAVATÝ, V. JUREŇA: Modern Exploration Methods Application Experiences in Vienna Basin and East Slovakian Basin
- 11:00 - 11:20 M. GRINČ, M. SLABEJ, Š. ŠEDIVÝ: Prediction of the Pavement Degradation Based on Regular Repeated GPR Measurements
- 11:20 - 11:40 J. CHROMČÁK, M. GRINČ, J. PÁNISOVÁ, P. VAJDA, A. KUBOVÁ: Validation of Sensitivity and Reliability of GPR and Microgravity Detection of Underground Cavities in Complex Urban Settings: Test Case for a Cellar
- 11:40 - 12:00 R. PAŠTEKA, S. HRONČEK, P. IHRING, M. BOŠANSKÝ, B. TEKULA: Qualitative Interpretation of the New Bouguer Anomalies Field of Slovak Republic Area by Means of Concave and Convex Features Analysis
- 12:00 - 13:30 Lunch break

Seismology

Room B-302

BLOCK 5A.

convener: M. KRISTEKOVÁ

- 13:30 - 13:50 F. DIAS, M. ASSUMPÇÃO, J. ZAHRADNÍK: Path-specific, Dispersion-based Velocity Models and Moment Tensors of Moderate Events Recorded at Few Distant Stations: Examples from Brazil
- 13:50 - 14:10 J. KRISTEK, P. MOCZO, P. BARD, F. HOLLENDER, S. STRIPAJOVÁ, Z. MARGOČOVÁ: Identification of Key Site Features for Site Effect Evaluation in Class of Local Surface Sedimentary Structures
- 14:10 - 14:30 L. FOJTÍKOVÁ, J. ZAHRADNÍK: New Strategy for Weak Events in Sparse Networks: First-motion Polarity Solutions Constrained by Single-station Waveforms Applied on Kolárovo Earthquake January 17, 2013
- 14:30 - 14:50 Z. MARGOČOVÁ, J. KRISTEK, R. KYSEL, A. CIPCIAR, K. CSICSAY: Determination of Local Magnitude for Earthquake Recorded by the Slovak National Network of Seismic Stations
- 14:50 - 15:10 R. KYSEL, J. KRISTEK, P. MOCZO, J. HÓK, M. KOVÁČ, M. ŠUJAN, M. KRISTEKOVÁ, K. CSICSAY, A. CIPCIAR: Seismic Hazard Assessment of the NPP Jaslovské Bohunice Site
- 15:10 - 15:20 Closing remark

September 9, 2015

Geomagnetics **Room C-214**

BLOCK 3B. **convener: J. BRESTENSKÝ**

- 09:00 - 09:20 GUBA P.: Dynamics of the Earth's Inner Core
- 09:20 - 09:40 MARSENIĆ A.: Numerical Modelling of the Vertical Magnetic Field Convection and Diffusion
- 09:40 - 10:00 ŠEVČÍK S., ONDRÁŠKOVÁ A.: Number of Transients/Q-bursts in ELF-band as a Criterion for the Global Thunderstorm Activity Estimation
- 10:00 - 10:20 ONDRÁŠKOVÁ A., ŠEVČÍK S.: Two Methods of the Schumann Resonance Modal Frequency Determination
- 10:20 - 10:40 Coffee break
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Geodesy, Gravimetry and Geodynamics **Room C-214**

BLOCK 4B. **convener: J. JANÁK**

- 10:40 - 11:00 P. HOLOTA, O. NESVADBA: On the Construction of Galerkin's Matrix for Elementary Potentials in Case of an Ellipsoidal Solution Domain in Earth's Gravity Field Studies
- 11:00 - 11:20 B. HÁBEL: Advantages of Kalman Filtering Approach for Correcting of Time-series Measured by Superconducting Gravimeters
- 11:20 - 11:40 M. LEDERER: The Quasigeoid QGZÚ - State and an Outlook for the Future
- 11:40 - 12:00 P. VAJDA, P. ZAHOREC, J. PAPČO, A. KUBOVÁ: Deformation Induced Topographic Effects in Inversion of Temporal Gravity Changes: Free Air and Bouguer Terms: Preliminary Results by Simulations
- 12:00 - 13:30 Lunch break
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BLOCK 5B. **convener: R. ČUNDERLÍK**

- 13:30 - 13:50 R. TENZER, A. FADIL: Estimates of Vertical Land Motions and Sea Level Variations in New Zealand Using Geodetic Techniques and Geological Evidence
- 13:50 - 14:10 R. TENZER: How Accurately Helmert's Definition Approximates the Geoid-to-Quasigeoid Separation?
- 14:10 - 14:30 Z. ĎURÍČKOVÁ, J. JANÁK, P. ZAHOREC, J. PAPČO: Different Ways to Treat the Position of Computation Point in Residual Terrain Modeling
- 14:30 - 14:50 M. MAJKRÁKOVÁ, J. PAPČO, P. ZAHOREC, B. DROŠČÁK: Methods of Gravity Determination for Calculation of Physical Heights in the Slovak National Leveling Network
- 14:50 - 15:00 Closing remark

Poster Session

1. L. FOJTÍKOVÁ, M. KRISTEKOVÁ, J. MÁLEK, E. SOKOS, K. CSICSAY, J. ZAHRADNÍK: Justifying Suggested Extension of a Local Seismic Network in Terms of Improved Location and Focal-mechanism Determination: The Little Carpathians, Slovakia
 2. L. GRAJCAROVÁ, M. KRISTEKOVÁ: Vp/Vs Estimate for Dobrá Voda Area, Based on Wadati Analysis of P- and S-waves Arrival Times of 2006-2012 Earthquakes
 3. P. PAŽÁK, M. KRISTEKOVÁ, A. CIPCIAR: New Improved Version of Web-based Macroseismic Questionnaire Suitable for Use on Mobile Devices
 4. F. KUBINA, P. MOCZO, J. KRISTEK: Investigation of the Use of the Adjoint-tomography Inversion to the Small-scale Surface Sedimentary Structure: The Case of the Mygdonian Basin, Greece
 5. J. KYSELICA, J. ŠIMKANIN, P. GUBA: Inertial Effects on Thermochemically Driven Convection in Spherical Shells
 6. M. VÁCZYOVÁ, F. VALACH: The Accuracy of the Reduction of Magnetic Surveys - Dependence on the Distance from the Magnetic Observatory
 7. F. VALACH, M. VÁCZYOVÁ, T. ŠOLTIS, M. VAJKAI: The Results of the Magnetic Repeat Station Survey in Slovakia for Epoch 2014.5
 8. D. MAJGIN, R. I. KUTAS, D. BILČÍK, V. BEZÁK, L. KUCHARIČ: Analysis of Geothermal Field in the Flysch Belt of the NE Part of Slovakia
 9. D. MAJGIN, D. BILČÍK, T. KLUČIAR: Thermal State of the Lithosphere in the Danube Basin and its Relation to Tectonics
 10. A. GLUCH, M. DVORČÁKOVÁ, V. SZALAIOVÁ, A. ALFÖLDYOVÁ: New Database of Vertical Electrical Sounding - VES
 11. I. DOSTÁL, R. PUTIŠKA, D. KUŠNIRÁK, A. MOJZEŠ: Complex Geophysical Imaging of Kapušany Landslide
 12. A. MOJZEŠ, I. DOSTÁL: Correlation between NNL/GGL Curves and Lithology Profile
 13. J. PÁNISOVÁ, I. MURÍN, R. PAŠTEKA, J. HALIČKOVÁ, P. BRUNČÁK, V. POHÁNKA, J. PAPČO, P. MILO: Combined Geodetic and Geophysical Modelling of a Religious Building
 14. J. DÉREROVÁ, I. KOHÚT, M. BIELIK, P. HLAVŇOVÁ, M. PAŠIAKOVÁ: 2D Integrated Modeling in the Eastern Part of the Western Carpathians – Transect KP-X
 15. J. DÉREROVÁ, I. KOHÚT, M. BIELIK, P. HLAVŇOVÁ, M. PAŠIAKOVÁ: Temperature Distribution and Rheological Properties of the Lithosphere in the Western Carpathian-Pannonian Basin – Transect II
 16. O. NESVADBA, M. LEDERER, M. PŘIKRYL, J. HOLEŠOVSKÝ: Analysis of Systematic Effects in the National Vertical Reference System of the Czech Republic
 17. O. NESVADBA, M. LEDERER: Towards a Highly Accurate Quasigeoid for the Czech Republic
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