



4TH TRADITIONAL INTERNATIONAL COLLOQUIUM ON GEOMECHANICS AND GEOPHYSICS

dedicated to the 30th anniversary
of the Institute of Geonics AS CR, v.v.i.

BELTINE FOREST HOTEL, OSTRAVICE, CZECH REPUBLIC
JUNE 7 – 8, 2012

Organizers

Institute of Geonics AS CR, v.v.i.

Green Gas DPB Inc.



Motto

"Rock mechanics is a basement of rational mining."

Professor Alois Říman

The fourth Traditional International Colloquium on Geomechanics and Geophysics enables the gathering of experts in the fields of mining geomechanics and geophysics as well as those from the geotechnical engineering domain. It is a forum for the exchange of knowledge, information and experiences gained in different areas of research and practices in the scientific life. One of the main goals of the colloquium is to harmonize the needs of a full-scale cooperation within the scientific and research areas and to set the pace for further collaborations.



Colloquium will be held in a conference hall at **Beltine forest hotel in Ostravice** village in June 7-8, 2012.

Beltine forest hotel is situated in the marvellous mountain environment of Moravian-Silesian Beskydy Mountains with charming view of Mt. Lysá hora. The hotel provides pleasant background for all. It provides comfortable services and accommodation with an omnipresent nature. For more information please visit hotel website (www.beltinehotel.cz).

Registration and Payment

Registration fee includes all costs related to participation in the colloquium and accommodation from June 7-8, 2012. The invoice of payment for the colloquium fee will be issued upon request.

Accommodation

Colloquium participants will be accommodated on June 7, 2012 immediately after registration. Accommodation will be provided at the venue of the colloquium in double rooms or cottages. Check-out of accommodated participants will be on June 8, 2012 after lunch.

The further accommodation required in the application form (before or after the colloquium) has been reserved. We also inform that accommodation periods outside the frame (June 7-8, 2012) of the colloquium are not included in the participation fee. Payment of accommodation and any other services is possible only in Czech crowns (by cash) or using the electronic card. Please NOTE: there are no foreign currency exchange offices or ATMs in the nearby surroundings of the colloquium venue.

Restaurants

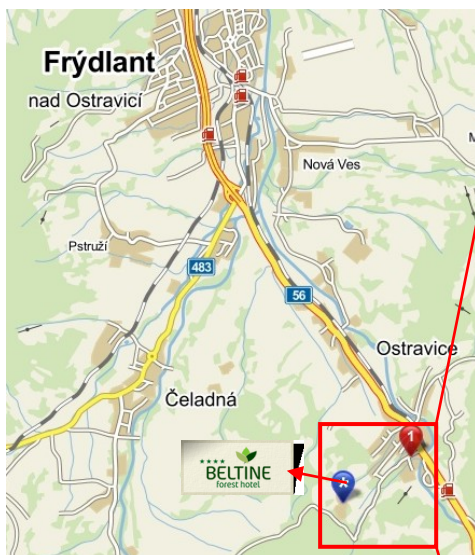
Breakfast and lunch will be served in the **hotel restaurant** and social dinner will be held in the nearby **Koliba – stylish restaurant**.

Relax

For moments of relaxation or active leisure there is a wellness and spa center and a heated outdoor swimming pool. For more information about offered services, pricing and ordering, please see the hotel website.

Driveway

Getting to the hotel is schematically indicated by the following situational map of the village Ostravice. Getting to the hotel is well marked in Ostravice. More information can be found on the hotel website.



BELTINE FOREST HOTEL
Ostravice 386
739 14
Tel.: +420 558 402 900
GPS:
49°31'45.563"N, 18°22'38.031"E



PRELIMINARY PROGRAM

June 7, 2012 (Thursday)

8:30 – 9:30

registration of participants (hotel reception)

9:30

opening ceremony, organizational information (conference hall)

10:00 – 12:35

morning session (conference hall)

12:35 – 13:35

lunch (hotel restaurant)

13:35 – 17:10

afternoon session (conference hall)

19:00 – 24:00

social evening (Koliba – stylish restaurant)

June 8, 2012 (Friday)

09:30 – 14:05

morning session (conference hall)

14:05

closing ceremony (conference hall)

14:05 – 15:00

lunch (hotel restaurant)

Languages

The colloquium will be conducted in the following languages: English, Czech, Slovak, and Polish. Simultaneous interpretation from other languages to English and vice versa will be provided.

Presentations

Approximate time for presentation of invited lectures is 35 minutes including discussion. Estimated time for each lecture is 20 minutes including discussion. Detailed program of colloquium will be received by participants during registration.

For the presentation of individual contributions, a PC running Windows operation system with **Microsoft Office PowerPoint 2007** software, projector, screen and speakers will be provided.

The organizing committee of the colloquium warns the participants that the registered lectures can be presented only with the above described computer equipment and software. Any specific requirements need to be agreed in advance with the organizing committee of the colloquium.

Posters

The poster panels with dimensions of 90 x 130 cm (portrait orientation) for poster presentation are available. Print of poster provides each of the presenters themselves.

Proceedings

All accepted papers will be published in the form of extended abstracts in the **Proceedings of the colloquium**. The proceedings will be distributed to each participant during registration period. Full version of selected papers will be recommended for

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publication in the **Acta Geodynamica et Geomaterialia** journal. Other full papers will be published on the website of the Institute of Geonics AS CR, v.v.i.

Contact

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GENERAL PARTNER



SCIENTIFIC PARTNERS



ÚSTAV STRUKTURY A MECHANIKY HORNIN AV ČR, v. v. i.



PARTNERS



PRELIMINARY LIST OF CONTRIBUTIONS

Keynote Lectures

Drzewiecki J. & Makówka J.

DIRECTED ROCK MASS FRACTURING AHEAD OF LONG WALL FACE AS A CONSEQUENCE OF THE INTENSITY OF EXPLOITATION

Mutke G.

REGISTRATIONS OF SEISMIC FOCI UNDER MINING COAL SEAM THE EXPERIENCE OF POLISH MINES

Obara Y., Kataoka M., Yoshinaga T. & Sato A.

CROSS-SECTIONAL BOREHOLE DEFORMATION METHOD (CBDM) FOR MEASUREMENT OF ROCK STRESS CHANGE AND ITS APPLICATION

Stephansson O. & Zang A.

WORLD STRESS DATABASES AND ROCK STRESS MODELS AS RESOURCES FOR ROCK MECHANICS AND ROCK ENGINEERING

Lectures

Patyńska R.

THE CONSEQUENCES OF THE ROCK BURST HAZARD IN THE SILESIA COMPANIES IN POLAND

Jiráňková E., Staš L., Kajzar V. & Doležalová H.

MECHANISM OF RIGID OVERLAYING STRATA FAILURE IN FACE MINING IN CONDITIONS OF MULTISEAMS CARBONIFEROUS DEPOSITS

Šťástka J. & Kaisr Z.

IN SITU PHYSICAL MODEL OF A CLAY BARRIER

Nemcik J., Baafi E. & Porter I.

STABILISING ROCK SURFACE WITH A GLASS REINFORCED POLYMER SKIN.

Ren T., Aziz N., Nemcik J. & Zhang L.

PERMEABILITY AND VOLUMETRIC CHANGES IN COAL UNDER DIFFERENT TEST ENVIRONMENT

Asaue H., Sasahara M., Yoshinaga T., Obara Y., Uchida K. & Matsumoto H.

CLARIFYING GEOLOGICAL STRUCTURE FOR COAL AND MARSH GAS DEVELOPMENT USING MAGNETOTELLURIC METHOD

Holečko J., Havaj J. & Dvorský P.

CURRENT RESULTS AND STATUS OF TESTING “STATIONARY ROTATIONAL – SLIDING TUBES SYSTEM (DRR)” IN OKD COAL MINES TERMS

Ladányi G. & Nagy E.

COMPUTERIZED MODEL SUPPORTING OPTIMIZATION OF DRIVE FOR THE BELT CONVEYOR SYSTEM IN OPENCAST MINING

Waclavik P., Ptáček J. & Grygar R.

SOME POSSIBILITIES OF TECTONIC AND STRESS ANALYSIS APPLICATION IN MINING IN THE UPPER SILESIA COAL BASIN

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Ptáček J., Hájek A., Melichar R., Koníček P., Souček K., Staš L., Kříž P. & Lazárek J.

STRUCTURAL ANALYSIS IN THE ROCK MASS BETWEEN ROŽNÁ AND OLŠÍ URANIUM DEPOSITS (STRÁŽ MOLDANUBICUM) FOR STRESS FIELDS INTERPRETATION IN THE REGION OF UNDERGROUND GAS STORAGE

Bodnárová L., Sitek L., Hela R, Foldyna J. & Válek J.

EFFECT OF HIGH TEMPERATURES ON CEMENT COMPOSITE MATERIALS IN CONCRETE STRUCTURES

Niedbalski, Z., Małkowski, P. & Majcherczyk T.

MONITORING OF STAND-AND-ROOF-BOLTING SUPPORT: DESIGN OPTIMIZATION

Małkowski, P. & Niedbalski, Z.

STRUCTURAL CHANGES IN ROCKS EXPOSED TO HIGH TEMPERATURES AND THEIR EFFECT ON THE THERMAL PARAMETERS

Stolárik, M. & Kukutsch R.

ANALYSIS OF TRANSFER CONSTANTS BASED ON SEISMIC MEASUREMENTS IN TUNNELS ON THE RAILWAY CORRIDOR IV

Holečko, J. & Mutke, J.

THE MINING SEISMICITY INFLUENCE ON SURFACE IN OSTRAVA-KARVINÁ COALFIELD - FIRST RESULTS OF MONITORING WITH NEW SEISMIC NETWORK

Hokr M., Havlíček J. & Rálek P.

NUMERICAL MODELLING OF STRESS INFLUENCE TO FLOW AND TRANSPORT IN FRACTURED ROCK

Brož M., Štrunc J., Valenta J., Hladky R. & TIP Working Group

GEOPHYSICAL AND GEOMECHANICAL MONITORING OF THERMAL EXPERIMENT AT THE JOSEF GALLERY IN MOKRSKO

Kaláb Z., Knejzlík J. & Lednická M.

APPLICATION OF ROTATIONAL SENSOR FOR MONITORING OF MINING INDUCED SEISMIC EVENTS IN KARVINA REGION.

Nastulczyk C., Dvorský P. & Polysos N.

APPLICATION OF GEOMECHANICAL PARAMETERS AS BASIS FOR OPTIMIZATION OF STRATA CONTROL IN MINING AND SUPPORT DESIGN

Holub K., Rušajová J. & Holečko J.

INDUCED SEISMIC ACTIVITY IN THE SOUTHERN PART OF THE OSTRAVA-KARVINÁ COAL MINES

Posters

Vavro, L. & Souček, K.

FRACTURE TOUGHNESS – PARAMETRIC STUDY

Mikoláš M. & Jiráňková E.

DIMENSIONING PILLARS FOR MINING METHOD ROOM-PILLAR IN PROTECTION PILLARS OF SHAFT CSM SOUTH MINE

Kuda F. & Hubatka F.

3D VISUALISATION OF GPR DATA IN VOXLER SOFTWARE.

Vašek Z., Juchelka M. & Dudešek P.

STEEL MINE SUPPORTS.