Czech and Slovak National Committee ISSMGE



Brno University of Technology Faculty of Civil Engineering



International Society for Soil Mechanics and Geotechnical Engineering

## **BULLETIN No.3**



General view on the complex of buildings of the Faculty of Civil Engineering BUT, Brno

# **Invitation to**

# 20<sup>th</sup> European Young Geotechnical Engineers Conference

The Czech and Slovak Committee of the ISSMGE and Organising Committee have the pleasure of inviting you to Brno, Czech Republic where the 20<sup>th</sup> European Young Geotechnical Engineers Conference will be held from

# May 30, to June 1, 2010

#### **Conference Advisory Committee**

Ivan Vaníček Vice-President ISSMGE for Europe, Conference advisor

Kamila Weiglová

Jana Frankovská Chairwoman of the Czech and Slovak Committee of ISSMGE

#### Věra Glisníková Conference Organising Committee

Ivan VaníčekVice-President ISSMGE for EuropeVěra GlisníkováChairwomanJiří BoštíkSecretaryKamila WeiglováAlexandra ErbenováLumír MičaPavel PospíšilVáclav RačanskýAll Department of Geotechnics, Faculty of Civil Engineering, BUT

#### **Conference Venue**

The 20<sup>th</sup> European Young Geotechnical Engineers Conference will be held at the Faculty of Civil Engineering, Brno University of Technology, Brno, Czech Republic.

Brno University of Technology is the second largest and second oldest technical university in the Czech Republic. Its history goes back to 1849; the Faculty of Civil Engineering is 110 years old and has been significantly refurbished in recent years. For more details, see <u>http://www.fce.vutbr.cz/</u>.

#### Contacts

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# **Programme of EYGEC Conference**

# Sunday 30<sup>th</sup> May 2010

Arrival, accommodation.

14:00 - 16:00	Conference registration at the Hotel Palacký		
16:00	Sightseeing Brno, meeting point Hotel Palacký		
18:00	Dinner for all EYGEC delegates in town		
	(Restaurant "Špalíček", Zelný trh 12)		

# Monday 31<sup>st</sup> May 2010

08:00 - 09:00	<b>Conference registration</b> at the Faculty of Civil Engineering, auditorium D182
09:00 - 09:30	<b>Opening Ceremony</b> Ivan VANÍČEK – Vice-President ISSMGE for Europe
	Rostislav DROCHYTKA – Dean of Faculty of Civil Engineering, Brno University of Technology
09:30 - 10:00	<b>Keynote lecture: "How to do research"</b> John ATKINSON – Emeritus Professor of Soil Mechanics, City University London
10:00 - 11:00	Lectures

Session 1:	Ground Investigation
Chairman:	John ATKINSON

Nanna Vesterlund Frandsen: *Philosophy of site investigations for an offshore wind farm* 

Sergii Kurash: Soil sinkholes in conditions of compact city planning

Katarzyna Stefaniak: The constrained modulus of varved clay from in-situ tests

Session 2:GeomechanicsChairman:John ATKINSON

Marzena Lendo-Siwicka: *Volume change of Warsaw clay due to deep excavation* Laure F. C. Wils: *Stiffness of calcareous sands under cyclic loading* Ibrahim Yigit: *Influence of duration of anisotropic loading in terms of clay fabric* 

11:00 – 11:15 **Coffee break** 

11:15 – 13:00 Lectures

João Santos Pina: The behaviour under excavation of the Luanda's sandy formation: case studies

Rasmus Klinkvort: Centrifuge modelling of monopiles

Benoit Meulewaeter: *Application of the observational method for both final and temporary complex slopes design. Case study Bioko 3 Bridges* 

Zsolt Szilvágyi: New development in geotechnical numerical calculations

Florent Prunier: *Modelling material instabilities in geomechanics. Application to landslides* 

Benjamin Charbit: Numerical analysis of laterally loaded lime/cement columns

Muge Balkaya: Comparison of the results of 3D FEA with analytical solutions for a buried PVC with water distribution pipe

Olga-Joan Ktenidou: Numerical investigation of site effects at Aegion, Greece

Mirko Petković: *Experience in using increx system for axial deformation measurements* 

Dominik Hauswirth: Development of a fibre optic strain sensor for soil displacement monitoring

Raffaele di Laora: Phase lag between kinematic and inertial interaction

13:00 – 14:00 Lunch

14:00 – 14:30 Walk round the Faculty of Civil Engineering

14:30 – 14:50Keynote lecture: "The removal of rocky environment and<br/>groundwater contamination – GEOtest Brno case studies"<br/>Miloš POLENKA – GEOtest Brno, Inc.

14:50 - 15:20Keynote lecture: "The Role of the Geotechnics in the<br/>Supply of Future Energy"<br/>Susanne LACASSE - Director of NGI and chairwoman of<br/>ISSMGE Technical Oversight Committee

15:20 – 16:00 **Lectures** 

Session 3:Geotechnics – Foundation EngineeringChairman:Susanne LACASSE

Arne T. Eigeland: New head office for DnB-NOR in Bjørvika, Oslo, Norway Foundation on drilled steel pipe piles

Asuencei Vlad: Influence of hydrostatic level variation on the foundations of civil engineering works in Moinesti town area, Moldavia region, Romania

Yuri Gotman: Variant design of using the jet-grouting technology for reduction the settlements of the existing buildings while construction an underground complex in Moscow

Paul Doherty: The impact of end condition on pile resistance in clay

16:00 – 16:15 **Coffee break** 

16:15 – 17:25 **Lectures** 

Johann Brückl: Pile integrity testing effected by concrete age

Ján Pivarč: Stone columns - design methods

Malek Allani: Non axial effects in dynamic pile testing: pile vibration analysis using Timoshenko beam theory

Ellen Katrine Wensaas Lied: A study of time effects on pile capacity

Dirk-Jan Jaspers Focks: *Quay wall design under seismic conditions in Filyos, Turkey* 

Dimitros Karamitros: Simplified methodology for the performance-based design of shallow foundations on liquefiable soil with a clay crust

Paul J. Vardanega: Design methods for piles: dealing with uncertainty

19:00 **Dinner** with live dulcimer music for all EYGEC participants

# Tuesday 1<sup>st</sup> June 2010

- 09:00 09:30 **Keynote lecture: "ISSMGE, research, and education"** Jean - Louis BRIAUD – President of ISSMGE, Texas A&M University, USA
- 09:30 10:45 **Lectures**

Session 3:	Geotechnics – Earth Structures
Chairman:	Jean - Louis BRIAUD

Alexander Rohe: *Stability analysis of dikes with reinforcing structures using finite element calculations* 

Zoran Jovanov: Repair of damaged building and road near dam

Ville J. Lehtonen: *Instrumentation and analysis of a full-scale railway embankment failure experiment* 

Germain Auray: Construction of a motorway section on potential sinkholes: reinforcement with an original very high tensile strength geogrid

Dorin Vasile Moldovan: Designing reinforced soil slopes and retaining walls with geosynthetics

Zoran Berisavljevic: Problems in predicting the behaviour of the road embankment built on a soft soil

José Sánchez Martín: *Reinforcing soil in front of the toe of a diaphragm wall with jet-grouting* 

10:45 – 11:00 **Coffee break** 

#### 11:00 – 12:30 **Lectures**

Jude M. Clancy: *Analysis of pullout resistance of a novel multifunctional geosynthetics in a fine grained marginal fill* 

Sebastian Althoff: *Contribution to use multi-stage large shear-frame tests to investigate the interaction- behaviour between geosynthetics and cohesive soil* 

Gregor Supp: Spinanchor - a new constructional element

Kevin Briggs: *Charing embankment: climate change impacts on embankment hydrology* 

Ignasi Aliguer: Canelles dam left abutment stability analysis

Session 3:Geotechnics – Environmental GeotechnicsChairman:Ivan VANÍČEK

Marcus Fuchsschwanz: Geotechnical aspects for the design of waste rock dumps from coal mining in Vietnam

Jan Valenta: Problems with highly loaded foundation slab of building situated on abandoned fly ash tail basin

- 12:30 13:30 Lunch
- 13:30 14:05 **Keynote lecture: "Modern foundation technologies"** Jiří MŰHL – Technical director of Foundation engineering, Inc. and Jan ŠPERGER
- 14:05 14:45 **Lectures**

Session 3:Geotechnics – Underground StructuresChairman:Ivan VANÍČEK

Jiří Boštík: Experimental analysis of parallel tunnels

Tomáš Svoboda: Simulations of a NATM tunnel in a stiff clay using hypoplastic model

Maxim Tupikov: Prediction of deformation of surfaces and buildings due to shallow service tunnels construction

Primož Jelušič: Deformation analysis of LRC underground gas - storage

15:00 – 17:00 **Technical excursion** – construction of city road tunnels in Brno, meeting point car park in front of Faculty of Civil Engineering

#### Note:

- Each participant will make a Power point presentation lasting **8 minutes** with **2 minutes** of discussion. We kindly ask participants to submit their presentation at the registration desk.
- Organizers reserve the right to change the conference programme.

The proceedings also includes the following papers:

Valeria Bandini: Modelling of seismic-induced deformations in slopes: multi-block analysis vs shaking table tests

Elona Goxhaj: *Bearing capacity of shallow foundations* 

Xhevahir Aliu: Some aspects during design of one bridge abutment

Late afternoon – transportation to Bratislava for participants wishing to join the Danube-European Conference ISSMGE in Bratislava – Slovak Republic, see <u>www.decge2010.sk</u>.

#### Information about the city of Brno

Brno is the second largest city of the Czech Republic and has a population of nearly 370,000 people. It lies at the central part of Europe and within its two hundredkilometre radius there are other important European capitals including Prague, Vienna and Bratislava. The international airport in Brno serves regular flights.

For more information see <u>http://www.brno.cz/</u>.

# Currency

The official currency in the Czech Republic is Czech crown (CZK). 1 EUR = 25 CZK

#### Accommodation

Accommodation of hotel quality is booked in twin-bedded rooms at the Hotel Palacký \*\*\*. Address of the Hotel Palacký:

Kolejní 2 612 00 Brno For further information about the Hotel Palacký see http://www.hotel-palacky.cz/en/index.aspx.

Note: Check in time: 14:00 Check out time: 10:00

# **USEFUL INFORMATION**

## How to get to Brno

Brno is easily accessible by plane, train and by car.



#### By plane

Brno international airport is situated 7.5km from the centre of the city. However, there is only limited connection to other European cities and other international airports in Prague, Vienna and Bratislava can be considered as these have very good direct transport links to Brno by train or bus.

#### By train or by bus

There is a direct connection with many European capitals; e.g. with Prague, Bratislava, Berlin, Vienna, Budapest, Bucharest.

#### By car

Brno is situated at the crossroads of the D1 (Prague - Brno) and D2 (Brno - Bratislava) motorways. Both these motorways form part of the trans-European East-West highways (France - Ukraine: E50) and North-South (Scandinavia - Balkans: E55, E65).

#### How to get to Hotel Palacký by public transport

Accommodation of hotel quality has been booked in twin-bedded rooms at the Hotel Palacký \*\*\*. Hotel Palacký is close the "Kolejní" stop.

Address of the Hotel Palacký: Kolejní 2 612 00 Brno

For further information about the Hotel Palacký see <u>http://www.hotel-palacky.cz/en/index.aspx</u>.

From Main train station ("Hlavní nádraží") to Hotel Palacký

Take tram No. 13 (direction "Technologický park") and go to the "Skácelova" stop. Then change to bus No. 53 and go to "Kolejní" stop (the 5<sup>th</sup> stop). It takes about 30 minutes.

*From Airport Brno Tuřany* (<u>http://www.airport-brno.cz/index.php?</u> <u>id=0&lang=en</u>) to Hotel Palacký

Take bus No. 76 and go to the ending stop ("Hlavní nádraží" stop). Then change to tram No. 13 and continue as mentoined above. It takes about 60 minutes.

# How to get from Hotel Palacký to Faculty of Civil Engineering by public transport

Take bus No. 53 and go to the "Technologický park" stop (the 2<sup>nd</sup> stop). Then change to tram No. 13 and go to the "Nerudova" stop. Faculty of Civil Engineering is near the "Nerudova" stop: Veveří street 95. It takes about 20 minutes.

For more information on public transport see <u>http://www.dpmb.cz/e41.asp</u> .

## How to get to Bratislava

The EYGEC Conference Organising Committee will not organise transport to Bratislava on June 1. However the connection between these two cities is very easy by bus or train; the distance is only about 150 km.

Train connection					
Train	Departure - Brno Main train station ("Hlavní nádraží")	Arrival – Bratislava Main train station ("Hlavná stanica")			
EC 175 Jan Jesenius	6:24 p.m.	7:51 p.m.			
EC 177 Johannes Brahms	8:24 p.m.	10:02 p.m.			

Note: without guarantee

Bus connection						
Bus	Departure – Brno Hotel Grand, Benešova street	Departure –Brno Bus station "Zvonařka"	Arrival - Bratislava			
000008 1	-	5:45 p.m.	7:30 p.m.			
000038 3	6:30 p.m.	-	8:15 p.m.			
000407 5	8:30 p.m.	-	10:00 p.m.			

*Note: without guarantee*