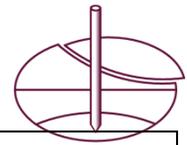




**ISSMGE FOUNDATION  
REPORT ON CONFERENCE ATTENDANCE**

<b>Your Name:</b> Zoran Berisavljevic	<b>Your Organization:</b> Koridori Srbije Ltd.	<b>Date of report:</b> 30/06/2017
<b>Conference Title:</b> EUROCK2017	<b>Location of Conference:</b> Ostrava, Czech Republic	<b>Dates of Conference:</b> 19-22/06/2017
<b>What you learned:</b> <p>During the first day, on 19<sup>th</sup> of June, I have attended “Workshop on Simulation of Fractured Rock Masses” where lecturers from ITASCA (Germany), TU BAF (Germany) and Newcastle University (England) delivered lectures on joints and rock mass modelling by means of continuum and discontinuum approaches.</p> <p>Prof. Heinz Konietzky delivered lecture on “Joint behaviour under static and dynamic conditions and Numerical simulation of crack / fracture propagation”</p> <p>Christian Missal delivered lecture on “Continuum based simulation approach of jointed rock mass”</p> <p>Romain Le Goc’s lecture was about “Discrete Fracture Networks – Theory and practical applications”</p> <p>Stefano Utili delivered lecture on “The Discrete Element Method for the design of tunnel support in jointed rock Masses”</p> <p>The basics of techniques to model jointed rock mass by means of continuum and discontinuum approaches were overcome. Several steps such as collection of joint data, formation of discrete fracture network (DFN) and simulation by ITASCA’S discrete element method software were well explained.</p> <p>The main venue was organized within multifunctional auditorium “Gong”. Key-note lectures were combined with poster and parallel session presentations. One of the key issues raised by well-known professor John Harrison was about future trends in the field of rock mechanics and rock engineering. The lesson learnt from this lively discussion is related to better prediction of rock mass behaviour in terms of input parameters. The future trends should be oriented towards characterisation of joint discontinuity patterns by means of laser techniques. Rock mass classifications should be abandoned and more precise non-subjective approaches should be sought for. Reliable prediction of rock mass stress still remains one of the key issues. Behaviour of the soft and hard rocks under the effects of freeze/thaw, wetting and drying in relation to underground and surface excavations should be better understood.</p>		
<b>People you met:</b> Prof. Predrag Mišćević PhD, department of geotechnics, University of Split, Croatia Dr Miguel Cano Gonzales, associate professor, University of Alicante, Spain		



Kari Avellan from KAREG consulting engineers  
Dipl.-Ing. Christian Missal, senior consultant, ITASCA Consultants GmbH.  
Tsvetomir Velkov, Operations director at Dundee precious metals - Chelopech, Bulgaria  
Mohamed Ismael, PhD student at Technische Universität Bergakademie Freiberg, Germany  
Manuel Aukenthaler, Plaxis BV, the Netherlands

***Main features of conference:***

One-day workshop “Simulation of Fractured Rock Masses was organized by ITASCA Consultants GmbH, Gelsenkirchen, Germany” on 19<sup>th</sup> of June in the premises of Institute of Geonics. The workshop was very intensive starting at 9am and lasted until 16pm.

The topics addressed were:

Joint behaviour under static and dynamic conditions and Numerical simulation of crack / fracture propagation, Continuum based simulation approach of jointed rock mass, Discrete Fracture Networks – Theory and practical applications and the Discrete Element Method for the design of tunnel support in jointed rock Masses.

Main conference venue started on 20<sup>th</sup> of June and ended on 22<sup>rd</sup> of June.

12 topics were addressed (Rock mass properties, Laboratory and in-situ rock testing, Mine design and ground control, Underground storage and waste disposal, Dynamic phenomena in rock mass, Design methodology in mining and underground constructions, New materials and technologies in geomechanics and geotechnics, CO2 sequestration, Geothermal energy, Rock disintegration, Rock mass issues in mine closure, Preservation of natural stones).

Oral presentations were delivered throughout four parallel sessions. In total six keynote lectures were delivered. One and a half hour poster session was organized after the lunch on 21<sup>st</sup> of June. Banquet was organized on 21<sup>st</sup> of June between 20h and 24h. Field trips were scheduled for 23<sup>rd</sup> of June.

All accepted papers are published in an open access Procedia Engineering journal (Elsevier BV).

***Your comments on the conference:***

Workshop on Simulation of Fractured Rock Masses:

Presentations were great, lecturers did an amazing job trying to explain and give answers to all questions.

Main venue:

The conference was well organized. I find it successful in terms of gained knowledge and contacts.



***Please attach short report (maximum 400 words) suitable for publication in the ISSMGE Bulletin:***

EUROCK2017 took place in June, 20-22, 2017, in unique industrial and mining city of Ostrava in the Czech Republic. Symposium was organized by Czech national group of the ISRM and the institute of Geonics of the Czech Academy of Sciences. The event attracted more than 250 scientists and practitioners from Africa, Asia, Europe, Australia and America. More than 150 peer-review papers focusing on rock mass properties, laboratory and in-situ rock testing, mine design and ground control, underground storage and waste disposal, dynamic phenomena in rock mass, design methodology in mining and underground constructions, geothermal energy, rock disintegration as well as new materials and technologies in geomechanics and geotechnics are published in *Procedia Engineering Journal*, Vol. 191 (Elsevier BV).

The opening ceremony speech given by Prof. Petr Konicek was followed by Prof. Walter Wittke's Keynote lecture "Design based on the anisotropic jointed rock model (AJRM)". In total six keynote lectures were delivered during symposium venue covering various topics in the field of rock mechanics and rock engineering. Keynote lectures were delivered by Prof. Heinz Konietzky, Prof. Frederic Pellet, Dr. Jiri Ptacek, Prof. Walter Wittke, Prof. Arno Zang and Dr. Marwan Al Heib.

Oral presentations were delivered throughout four parallel sessions. Large number of papers addressed sub-topics such as underground and slope stability modelling by means of DEM, in-situ stress measurements, simulation of hydraulic fracturing, rockbursts, strength and deformability of rock masses and weathering of clay-bearing rocks.

Overall the conference has given me an opportunity to meet scientists, engineers and researchers around the world to share our research work and get their suggestions. As I am interested in doing post-doctoral research in the area of influence of weathering on strength and deformation properties of clay-bearing rocks, the conference was helpful to develop contacts to continue my research in the future.

I would like to thank each and everyone from ISSMGE Foundation for hearted support and financial help which enabled me to attend the course.

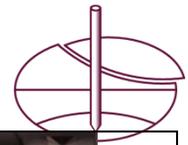
Reported by

Zoran Berisavljevic, PhD (Rock mechanics)

Member of Serbian Society for Soil Mechanics and Geotechnical Engineering

Koridori Srbije Ltd, Belgrade, Serbia

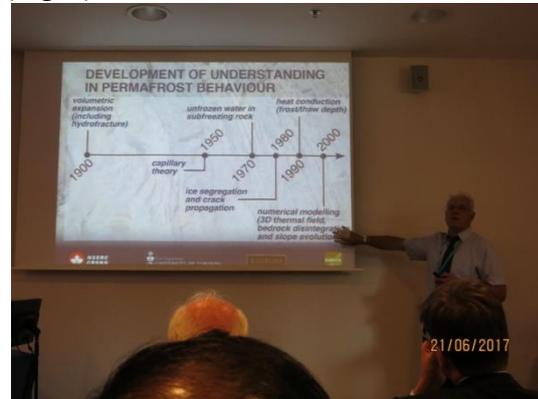
***Photographs from Conference:*** Insert here or attach to email



Workshop on Simulation of Fractured Rock Masses (left) and professor Konietzky giving lecture on Joint behavior under static and dynamic conditions (right)



Pictures showing venue locations - Institute of Geonics (left) and Multifunctional auditorium GONG (Right)



Welcome reception inside the GONG (left) and professor Harrison's vivid lecture on the history of permafrost (right)



View of my presentation "Weathering characteristics of heterogeneous Permian-age siltstone and mudstone sediments from Serbia" at EUROCK2017