

# 4<sup>th</sup> International

# Students Geological Conference







19<sup>th</sup> - 21<sup>st</sup> April 2013, Brno Czech Republic

# 2<sup>nd</sup> Circular





# INFORMATION

## **INFORMATION FOR ACTIVE PARTICIPANTS**

You may come and present your geological topic either in the form of an oral presentation or as a poster. For detailed information please look into the first circular and on the conference web site, section **Abstract and Presentation**.

Before you write the abstract, please study the abstract template and use it as a final format example. All the words used in abstract must be written in English alphabet including names of authors. Please be consistent when giving the name for all files accompanying the abstract text (pictures, tables etc.) according to the suggestion in the abstract template. You submit your abstract by sending the abstract in Microsoft Word version (e.g. Smith\_salt.doc) and PDF version (e.g. Smith\_salt.pdf), accompainied if necessary by pictures in JPG (e.g. Smith\_salt.jpg).

#### Please send your abstract to the following email address

isgc2013@gmail.com

### The deadline for abstract submission is 14<sup>th</sup> February 2013

### **INFORMATION FOR PASSIVE PARTICIPANTS**

In case you choose to become a passive participant, you are not obligated to present either an oral presentation or a poster. Therefore you don't have to write an abstract. However, you can take part in the whole conference program (lectures or workshops, scientific sessions including refreshments as well as field trips.)

## **INFORMATION ABOUT THE PAYMENT**

Please consider that the payment must be made in the Shopping Center of the Masaryk University where you can purchase all items (registration fee, field trips, accommodation). Payment of **the registration fee realised by 20<sup>th</sup> February 2013** is 600 CZK (approx. 24 EUR) and in the period 21<sup>st</sup> February - 20<sup>th</sup> March 2013 is 750 CZK (approx. 30 EUR).

The price of **the hotel-type accommodation is 520 CZK/per night (approx. 21 EUR), including breakfast.** You may book more nights. Specify days you wish to be accommodated in your registration. Then buy one Accommodation packet in the Shopping Center for every night you booked.

The payment must be done in Czech crowns (CZK) only. However, you may pay by bank transfer or by credit card.

To save money on the bank transfer we advise you to purchase and pay all items together, especially in case of external foreign payment.

For more information please visit the conference web page.



# COMMITTEE

### **SCIENTIFIC COMMITTEE**

Professor **Yves Géraud**, École Nationale Supérieure de Géologie, Université de Lorraine

Professor **Pavel Uher**, Department of Mineralogy and Petrology, Faculty of Natural Sciences, Comenius University in Bratislava

Associate Professor **Rostislav Melichar**, Department of Geological Sciences, Faculty of Science, Masaryk University

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Associate Professor **Josef Zeman**, Department of Geological Sciences, Faculty of Science, Masaryk University

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Dr. **Dalibor Všianský**, Department of Geological Sciences, Faculty of Science, Masaryk University

M. Sc. **Martin Knížek**, Department of Geological Sciences, Faculty of Science, Masaryk University

Dr. **Michael Unterwurzacher**, Institute of Geography and Geology, University of Salzburg

### **ORGANIZING COMMITTEE**

Martin Knížek, Kateřina Žaludková, Pavel Pracný, Kateřina Švecová, Ivo Macek, Jan Loun, Tomáš Kumpan, Martin Hanáček, Vojtěch Wertich, Jan Petřík, Jarmila Pospíšilová, Pavla Filipská, Anoine Warin, Radana Malíková, Petra Jakubová, Radka Drápalová, Lenka Dziková, Šárka Benedová, Juraj Hrabovský, Vladimír Strunga.



On Friday afternoon April 19<sup>th</sup> 2013 there will be a great opportunity to participate in lectures and a workshop in the Department of Geological Sciences of Masaryk University. Lectures are open to all participants, while the workshop capacity is limited to 25 people.

#### ACTIVATION ANALYSIS - USEFUL TOOL FOR MULTIELEMENT ANALYSIS IN GEOCHEMICAL AND COSMOCHEMICAL RESEARCH

#### Jiří Mizera

Nuclear Physics Institute of the Academy of Sciences of the Czech Republic



#### Vladimír Havránek

Nuclear Physics Institute of the Academy of Sciences of the Czech Republic



#### NEOGENE OF THE SOUTH MORAVIA (CZECH REPUBLIC)

Šárka Hladilová, Rostislav Brzobohatý, Nela Doláková

Department of Geological Sciences, Faculty of Science, Masaryk University, Brno Czech Republic



#### PRODUCTION OF ZERO-VALENT IRON NANOPARTICLES (nZVI) FOR IN-SITU GROUNDWATER REMEDIATION INCLUDING RECENT FIELD SCALE APPLICATION

Kateřina Jašková

NANO IRON, S.R.O., Štefánikova 116, Rajhrad, Czech Republic



The Field Trips planned on 21<sup>st</sup> April 2013 will provide many exciting geological experiences directly in the field. We decided to improve the programme of Field Trips 1 and 3. In each annotation, you can read the most important information about the programme and planned events. When you choose the field trip, please consider also the equipment requirements for some activities, especially in case of Field Trip 3.

### **FIELD TRIP 1**

#### Archives of ancient marine environments at the contact of the Bohemian Massif and Western Carpathians

Travel Plan: Brno - Sloup (Sloup-Šošůvka caves) - Šošůvka (Old Quarry) - Malý Chlum hill - Turold Quarry - Boleradice - Mušlov sandpit

The excursion will provide information about typical Fanerozoic marine sequences in the Southern Moravia. Localities are planned to be visited according to the stratigraphic order from the oldest to the youngest successions. First part of the excursion will take place in the Bohemian Massif. There will be a possibility to observe the Upper Devonian reefoidal limestones with fossils such as corals or stromatoporoids in cave and on surface outcrops, Variscan flysch sequence comprises distal turbidites or Cretaceous siliciclastics with inoceramid bivalves etc. However, the second part of the excursion will be held in marine sediments of the Western Carpathians, south of Brno, the area famous for its vineyards. Mesozoic carbonate sequences in the Pavlovské vrchy Hills will be observed and the field trip will be closed up in a quarry near Mikulov where coraline limestones with rich fossil marine fauna are exposed.



Upper-Devonian Limestones close to the entrance of Sloup-Šošůvka caves



Upper-Jurassic and Upper Cretaceous limestones in the Turold quarry



### FIELD TRIP 2

#### Nedvědice-Rožná excursion profile - mineralogical and petrological localities on the boundary between Strážek Moldanubicum and Svratka Crystalline Complex

Travel Plan: Nedvědice - Pernštejn - Věžná - Rožná (Li-pegmatite) - Rožná I uranium mine

Unique mineralogical and petrological localities occur in the valley of the Nedvědička river between Nedvědice and Rožná villages. Calcitic marble with typically blue calcite close to Nedvědice is accompanied by Ca-skarns and sulfphide mineralisation. Metamorphosed turmalinites in mica schist, Fe-skarns in garnet mica schist are localised in the vicinity as well as an old serpentinite quarry. Moreover, the excursion continues in world-famous localities of pegmatites Věžná and Rožná. Desilicated beryl-columbite pegmatite with rare-elements mineralisation is exposed in Věžná. On the other hand, complex Li-pegmatite vein of lepidolite subtype lies in Rožná-Hradisko. It was mined mined in the past, but there is still a great chance to find many rare minerals.On top of that, the oldest active uranium mine on the world will be visited in Rožná. Therefore you will have a possibility to observe mining and processing of uranium ore.



Blue marble at Nedvědice quarry



Magnesite vein at serpentinite quarry



Uranium mine Rožná I.



Underground of Rožná I míne at 21<sup>st</sup> floor (1050 metres under the surface)



### **FIELD TRIP 3**

# Terrestrial and deltaic siliciclastic sediments in southeastern part of Bohemian Massif and in Carpathian Foredeep

Travel Plan: Brno-Červený hill - Čebínka hill - Tišnov and Železné (old quarry) -Bačov- Luleč - Nemojany (old sandpit) - Býčí skála Cave and Barová Cave

Excursion is oriented on terrestric and deltaic sediments of eastern Bohemian Massif and contact zone with transgressive margin of Western Carpathians. The localities represent main sedimentary units in the vicinity of Brno: Basal Proterozoic to Lower-Paleozoic clastics, Culm of Drahanská vrchovina Highlands, variscian postorogenetic Borkovice Furrow, and marginal Baden clastics of Carpathians Foredeep. There will be an unique opportunity to visit exclusively a newly uncovered Pleistocene profile with palaentological excavation in Barova Cave and to enter Býčí skála Cave. Caves are with limited public access, so you will need your own light, solid shoes and a helmet. Please consider necessary equipment for the cave excursion:

- · helmet and headlamp
- hiking boots and spare clothes suitable for caving (7°C a clayey soil, possibility of dirty clothes)

#### If you don't have the helmet at your disposal, please inform the organizing committee

isgc2013@gmail.com

#### Other equipment is obligatory.



Entrance to the Byčí skála Cave



Nemojany - gravel and sandy foresets of fan delta (Carpathian Foredeep)



Bačov - a quarry in lacustrine silt and sandstone, rich in fossil material (Boskovice Forrow)

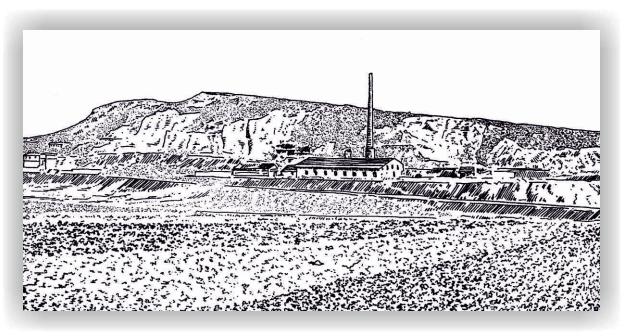


#### **FIELD TRIP 4**

#### Geological Brno City Tour: from proterozoic to quaternary rocks

Travel Plan: Brno - Stránská Rock - Hády (old quarry) - Špilberk Castle -Petrov hill - Brno city tour

Brno city geological and historical richness will be presented, including proterozoic and paleozoic rocks, the oldest vulcanites in the Bohemian massif, old-red clastic sediments, Jurassic limestones. Quaternary human settlement, the oldest north of the Danube river, will be demonstrated as well as loess profile with sedimentary sequence including glacial periods. Prehistoric mining site Stránská Rock of chert material will be visited. Historical utilisation of geological material in building, especially in case of Špilberk Castle will be demonstrated. Old quarry Hády in Devonian limestones will provide interesting tectonic structures as well as palaeontological records.



Stránská Rock at the beginning of the 20<sup>th</sup> century. Drawn by T. Přichystal

# HOW TO GET TO BRNO?

To help you to decide how to travel to the conference, you may consider following possibilities.

#### **BY PLANE**

To arrive by plane, you may consider airports in **Prague, Bratislava** and **Vienna** with a high frequency of international and intercontinental flights. All are well accessible from Brno within two hours by bus or train.

The airport in **Brno Tuřany** offers regular flights to Milan Bergamo, London Stansted, London Luton, Eidhoven and Moscow Vnukovo. More information here: http://www.brno-airport.cz/en/.

If you arrive to **Prague, Bratislava** or **Vienna**, we advise you to travel by cheap and comfortable Czech busses of **Student Agency** (online reservation here: http://bustickets.studentagency.eu/ or **Eurolines** (https://www.elines.cz/en/).

### **BY BUS**

Many international bus companies go to the Brno City. We mention just two cheap Czech examples: Student Agency (http://www.studentagency.eu) and Eurolines (https://www.elines.cz/en/). These companies drive you directly into the city center, just next to the main intersection of public transport and the main railway station. Other international companies drive you to the main bus station Zvonařka the main city bus station, which is about 10 minutes from the city center.

### **BY TRAIN**

Those who decide to travel to Brno by train please consider that the train is more expensive than the bus in the Czech Republic, especially for foreigners. However, journey is comfortable and less affected by possible traffic jam. More information about Czech trains: http://www.cd.cz/en/default.htm

### **BY CAR**

Travelling to Brno by car is easy thanks to the highway D1 on the way Germany -Prague and on the opposite side Poland - Ostrava. Moreover, highway D2 connects Brno with Bratislava (Slovakia) and Hungary.

The price of diesel is circa 35.50 CZK and petrol circa 35.30 CZK (January 2013).

# ISGC 2013



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3<sup>rd</sup> circular including a detailed programme and a session plan will be published on 20<sup>th</sup> March 2013







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