

# “GEOSCIENSES 2010”

## PROGRAM

**Thursday, December 9, 2010**

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08:30–09:15     **Registration**  
09:15–09:30     **Opening Ceremony**  
09:30–10:00     **Stefan Bonchev and Strashimir Dimitrov – Creators  
of the modern Bulgarian geology – Ivan Zagorchev**

**Session: Structural and Regional Geology**  
**Chairman: Radoslav Nakov**

10:00–10:20     “Kozhuh volcano” (SW Bulgaria) – arrangement of the puzzle, 2010  
*Alexandra Harkovska, Peter S. Petrov, Zlatka Milakovska,  
Veselina Nakova*

10:20–10:40     Palaeogene of Samothraki Island: Correlations with the basins  
of Thrace and Rhodope  
*Ivan Zagorchev, Daria Ivanova, Kristalina Stoykova,  
Davide Bassi*

10:40–11:00     Timing of extensional exhumation of the Eastern Rhodope high-  
grade basement (Bulgaria):  $^{40}\text{Ar}/^{39}\text{Ar}$  age constraints  
*Nikolay Bonev, Richard Spikings, Robert Moritz, Peter Marchev*  
U-Pb LA-ICP/MS zircon geochronology of metamorphic  
basement and Oligocene volcanic rocks from the SE Rhodopes:  
inferences for the geological history of the Eastern Rhodope  
crystalline basement  
*Nikolay Bonev, Peter Marchev, Maria Ovtcharova,  
Robert Moritz, Alexey Ulianov*

11:00 – 11:20     **C o f f e e B r e a k**

**Session: Structural and Regional Geology**  
**Chairman: Radoslav Nakov**

11:20–11:40      $^{40}\text{Ar}/^{39}\text{Ar}$  geochronologic constrains of a Variscan transpression  
in Central Stara Planina Mountain  
*Ianko Gerdjikov, Gilles Ruffet, Anna Lazarova, Dian Vangelov,  
Eleonora Balkanska, Kamen Bonev*

- 11:40–12:00 Structures demonstrating the belonging of Emine Formation and Tepetarla Formation to Srednogorie tectonic zone  
*Mitko Paskalev*
- 12:00–12:20 Tectonic geomorphology of the Karlovo basin as revealed by quantitative analysis of DEM  
*Dian Vangelov, Ianko Gerdjikov, Svetoslav Dimitrov, Petyo Benov*

**Session: Geochemistry and Petrology**

**Chairman: Radoslav Nakov**

- 12:20–12:40 The Sakar batholith – new look at its petrology, geochemistry and magmatic evolution  
*Borislav Kamenov, Vassil Vergilov, Christo Dabovski, Iliya Vergilov, Lyudmila Ivchinova*
- 12:40–13:00 Late Cretaceous subduction and magmatism in the Rhodopes: geochronological and isotope-geochemical evidence  
*Albrecht von Quadt, Irena Peytcheva, Stoyan Sarov, Anthi Liati*
- 13:00–14:00 **L u n c h b r e a k**

**Session: Paleontology, Stratigraphy and Sedimentology**

**Chairman: Dimitar Sinnyovsky**

- 14:00–14:20 The Salash Formation in Western Srednogorie: lithology, age and boundaries  
*Silviya Petrova, Iskra Lakova, Daria Ivanova*
- 14:20–14:40 Integrated stratigraphy and correlation of the platform-to-basin Upper Jurassic–Lower Cretaceous carbonate sediments across the Bulgarian-Serbian border  
*Daria Ivanova, Elena Koleva-Rekalova, Iskra Lakova, Kristalina Stoykova, Marin Ivanov, Lubomir Metodiev, Sylvia Petrova, Platon Tchoumatchenco, Dragoman Rabrenović, Vladan Radulović, Nenad Malešević*
- 14:40–15:00 Palynology of the Cenomanian–Turonian Rehkogelgraben boundary section in the Ultrahelvetic Zone, Eastern Alps, Austria  
*Polina Pavlishina, Michael Wagreich*
- 15:00–15:20 Stratigraphy and relations of the Upper Cretaceous of NW Bulgaria (Kula tectonic unit) and Eastern Serbia (Timok eruptive area)  
*Kristalina Stoykova, Dragoman Rabrenović, Marin Ivanov, Ivana Mojsic*

- 15:20–15:40 Palynological evidence for short-term vegetation and climate change in the Late Miocene of West Bulgaria  
*Dimiter Ivanov*
- 15:40–16:00 Holoplanktonic gastropods from the Middle Miocene of Bulgaria and their stratigraphical significance  
*Petar Nikolov*
- 16:00–16:20 **C o f f e e B r e a k**

**Session: Geochemistry and Mineralogy**

**Chairman: Mihail Tarassov**

- 16:20–16:40 Alteration processes in acid pyroclastic rocks in Eastern Rhodopes, Bulgaria  
*Georgi Kirov, Rossen Nedialkov, Tsveta Stanimirova*
- 16:40–17:00 State-of-the-art electronic bibliographic data base on minerals from Bulgaria  
*Vladislav Kostov-Kytin, Ruslan I. Kostov, Petya Ivanova*
- 17:00–17:20 Geochemical features of calcretized areas from the Tundzha depression, Southeast Bulgaria  
*Ivan Dimitrov, Dimitar Sachkov, Boris Valchev, Katya Vasileva*
- 17:20–17:40 Experimental study of formation and relationship between double hydroxide minerals of calcium  
*Stefka Dencheva*
- 17:40–18:00 Stream-sediment dividing and prognoses for mineral deposits in Smolyan administrative district, Bulgaria  
*Oleg Vitov*
- 18:00–19:00 **P o s t e r S e s s i o n w i t h a g l a s s o f w i n e**

**Friday, December 10, 2010**

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**Session: Petrology**

**Chairman: Borislav Kamenov**

- 09:00–09:20 Fluid enhanced metamorphic transformations of granitoid rocks into orthoschists, East Rhodopes  
*Lyubomira Macheva, Valentin Ganev*

- 09:20–09:40 Late-Jurassic granulite facies metamorphism of garnet-bearing metabasic rocks from the Chepelare area, Central Rhodope  
*Milena Georgieva, Valerie Bosse, Zlatka Cherneva, Pierre Gautier, Ianko Gerdjikov, Massimo Tiepolo*
- 09:40–10:00 The subsolidus segregation of leucocratic bands – a possible mechanism for formation of banded structures in metamorphic rocks  
*Philip Machev*
- 10:00–10:20 Metasomatic reaction phenomena from entrainment to cooling on the surface: evidence from mantle peridotite xenoliths from Moesian Platform  
*Peter Marchev, Shoji Arai, Orlando Vaselli, Fidel Costa, Hilary Downes*
- 10:20–10:40 Information about the behavior of S and Cl during the formation of the Plana pluton  
*Rossen Nedialkov, Lora Bidzhova, Alexander Filipov*
- 10:40–11:00 Geological, petrographic and geochemical peculiarities of the effusive rocks from the area of Zlatusha village (Western Srednogie)  
*Stefan Velev, Rossen Nedialkov*
- 11:00–11:20 **C o f f e e B r e a k**

### **Session: Petrology**

**Chairman: Zlatka Cherneva**

- 11:20–11:40 Geochemistry of alunite group minerals in hydrothermally altered rocks from the Asarel porphyry copper deposit, Central Srednogie  
*Atanas Hikov, Catherine Lerouge, Nadezhda Velinova*
- 11:40–12:00 Mineral chemistry of the collision-related acid Paleogene volcanic rocks of the Eastern Rhodopes, Bulgaria  
*Yotzo Yanev, Rositsa Ivanova*
- 12:00–12:20 Major and trace element compositions of clinopyroxenes from Zvezdel palaeovolcano (Eastern Rhodope): petrogenetic implications  
*Raya Raicheva, Peter Marchev, Elitsa Stefanova*

### **Session: Hydrogeology and Engineering geology**

**Chairman: Zlatka Cherneva**

- 12:20–12:40 Modeling of <sup>90</sup>Sr migration in clays with respect to soil adsorption properties using HPI  
*Dimitar Antonov*

12:40–13:00 Engineering geological phenomena and slope stability analysis of the quarry of Merlebach, France  
*Boyko Berov*

13:00–14:00 **L u n c h b r e a k**

**Session: Environmental Studies and Natural Hazards**

**Chairman: Nikolai Dobrev**

14:00–14:20 Seismogenic coseismic displacements of the continental plates resulting from the large subduction earthquakes Chile (Mw8.8, 2010) and Sumatra (Mw9.1, 2004)  
*Boyko Rangelov*

14:20–14:40 Chemical composition and heavy metal partition in mining-affected surface waters and stream sediments in Chiprovtsi area, NW Bulgaria  
*Vassilka Mladenova, Tzvetan Kotsev, Zornitza Cholakova*

14:40–15:00 Requirements to the limestones used for flue gas desulphurisation in Maritza-Iztok Coal Basin  
*Peter I. Petrov*

15:00–15:20 New features about wave pictures of seismic profiles for determination of the sediments formed during raise and fall of sea level  
*Orlin Dimitrov*

15:20–15:40 Three-dimensional spatial analysis of the upwelling along the Bulgarian Black Sea coast  
*Dobromir Grozdev*

15:40–16:00 **C o f f e e B r e a k**

**Session: Geological Heritage, Geoarcheology and Interdisciplinary Studies**

**Chairman: Strashimir Strashimirov**

16:00–16:20 Permanente geological exhibition in the Regional historical museum – Vratsa  
*Angel Kunov, Iliya Stoyanov*

16:20–16:40 Popularization of the Bulgarian geological heritage  
*Dimitar Sinnyovsky, Venelin Jeleu, Boris Valchev, Dimka Sinnyovska*

16:40–17:00 Archaeometallurgical evidences for exploitation of copper deposits from the Medni Rid Ridge in the fifth millennium BC  
*Petar Leshtakov*

- 17:00–17:20 The beginning of the loess research in Bulgaria  
(studies till the 20-th century)  
*Tivadar Gaudenyi, Mladjen Jovanovic*
- 17:20–17:40 About the Black Sea expedition in 2009  
*Daniel Cohen, Krasimira Slavova, Petko Dimitrov,  
Veselin Peychev, Dimitar Dimitrov, Atanas Vasilev, Preslav Peev*
- 18:30 Cocktail for the participants and the traditional “Christmas party of the ecologist” in National Museum “Man and Earth”.  
A presentation of the book of Ivanka Topolova “The Gaia secrets”**

## POSTER SESSION

**Thursday, December 9, 2010**

**18:00 – 19:00**

1. Early diagenetic structures in Middle Devonian (Givetian) sabkha evaporites from the Moesian Platform (Northeastern Bulgaria)  
*Polina Andreeva*
2. Meso- and microstructural characteristics of deformed carbonate sediments within the zone of Botev Vrah thrust, Central Stara Planina Mountain  
*Eleonora Balkanska, Ianko Gerdjikov*
3. Determination of organic maturity and paleotemperatures based on conodonts by CAI (Conodont Alteration Index) method  
*Iliana Boncheva*
4. New data on the presence of the genus *Ficus* (fam. Moraceae) in Bulgarian Paleogene flora  
*Vladimir Bozukov, Dimiter Ivanov, Torsten Utescher*
5. On the geodynamics of the Eastern Balkans based on some seismic and GPS data  
*Emil Botev, Ivan Georgiev, Dimitar Dimitrov*
6. Petrographical typification of the Triassic dolostones from Elovitsa (Melyane) anticline, NW Bulgaria  
*Athanas Chatalov, Tsvetelina Petkova*
7. Advantages of borehole-scanning geophysics during the drill hole documentation  
*Marian Damyanov, Klaus Brauch, Jurgis Claudius, Kamelia Nedkova, Nikolay Petrov*
8. Determination of crustal strain from GPS and triangulation data in Central West Bulgaria  
*Nikolay Dimitrov, Ivan Georgiev*
9. Palynological evidence for Pennsylvanian extra-basinal vegetation in Atlantic Canada  
*Tatyana Dimitrova, Christopher Cleal, Barry Thomas*

10. Arsenian marcasite in the barite-ankerite assemblage from the Chiprovtsi deposit, NW Bulgaria  
*Dimitrina Dimitrova, Tzvetoslav Iliev*
11. Features of the debris flow source zone in the northern part of Kresna Gorge  
*Nikolai Dobrev, Madlena Georgieva*
12. Petrology and age of Kozhuh volcano, SW Bulgaria  
*Stoyan Georgiev, Peter Marchev, Valentin Grozdev, Albrecht von Quadt, Irena Peytcheva*
13. The Studen Kladenets lava flow – petrology and structural features  
*Stoyan Georgiev, Borislav Jordanov, Yotzo Yanev*
14. Geochemical and geochronological data of the Tertiary magmatic rocks in Kyustendil area, SW Bulgaria  
*Valentin Grozdev, Stoyan Georgiev, Irena Peytcheva, Albrecht von Quadt, Peter Marchev*
15. Bulgarian contributions to IGCP projects in the 21-st century (2005–2009)  
*Daria Ivanova, Iskra Lakova, Valeri Sachanski, Iliana Boncheva, Tatyana Dimitrova, Radostina Atanassova*
16. Spinel accessories in ultramafic and mafic rocks from Gega ophiolite mélange in Ograzhden Mountain, Southwestern Bulgaria  
*Petya Ivanova, Nikola Zidarov*
17. The metasomatic rocks from Gurgulyatski Kamak area, Western Srednogie. Specific features and ore prospective  
*Radoslav Nàèov, Angel Kunov, Atanas Hikov, Nadezhda Velinova*
18. Geosites “Big and Small Veil” and “Leaky Stone” in Provadia River Canyon  
*Dimitar Sinnyovsky, Dimka Sinnyovska*
19. Finite strain determination in different lithological domains from the composition of the Sredogriv metamorphites (Northwestern Bulgaria)  
*Hristo Kiselinov*
20. Coal (jet) beads from the Varna Chalcolithic necropolis (V mill. BC) in a prehistoric weight system  
*Ruslan I. Kostov, Irena Kostova, Olga Pelevina*
21. New palaeoecological data on the Late Quaternary history of genus *Isoetes* (Lycopodiophyta) in Bulgaria  
*Maria Lazarova, Elissaveta Bozilova, Spassimir Tonkov, Dimiter Ivanov*
22. Monzonites in the Stomanovo prospect: first finding of Paleogene intrusive rocks in the Bratsigovo-Dospat area  
*Peter Marchev, Danko Jelev*
23. The preserved heritage of professor Naum Nikolov in the Mineralogy, petrology and mineral deposits museum of the Sofia University “St. Kliment Ohridski”  
*Elena Neykova, Anka Rusinova*

24. Comparative characteristics of groundwater resources formation in the Low-Danube and Tersko-Kumski artesian basins  
*Tatiana Orehova, Igor Zektser, Olga Karimova, Aleksey Benderev*
25. Stress field during the formation of the Elatsite Cu-porphry deposit  
*Nikolay Petrov*
26. New palynological finds from Southeast Strandzha Mountain, Bulgaria  
*Lyudmila Petrunova, Tatiana Dimitrova, Ivan Dimitrov, Yordan Malyakov*
27. SEM-EDX characterization of zeolitized coal fly ash from “Maritza 3” TPP  
*Annie Shoumkova, Valeria Stoyanova, Tsenka Tsacheva, Stela Atanasova*
28. SEM investigation of morphology and chemical composition of neo-phases formed during Er:YAG laser irradiation of human teeth  
*Eugenia Tarassova, Galia Zhegova, Mihail Tarassov, Maya Rashkova*
29. Comparative study of three methods for palaeoclimate reconstructions based on fossil plant macro remains  
*Boris Tsenov*
30. Minor and trace element content of sulphides from the Madan polymetallic deposits, Central Rhodopes: a LA-ICP-MS study  
*Rossitsa Vassileva, Radostina Atanassova, Elitsa Stefanova, Peter Marchev, Irena Peytcheva, Kalin Kouzmanov*
31. Zonal plagioclase from the Vitoshka pluton as an indicator of magmatic interaction  
*Stela Atanasova-Vladimirova, Iskra Piroeva*
32. A model of chemical composition variations of the rocks from the Balkan-Carpathian ophiolite segment  
*Oleg Vitov*
33. Polymorphism and law of Groth  
*Alexander Vlahov*
34. Characteristic and distribution of coal-bearing sediments in Lom Depression  
*Marlena Yaneva, Nadja Ognjanova-Rumenova, Stefan Shanov, Gabriel Nikolov, Nikolay Nikolov*
35. First find of nephrite in tremolitite body from Ograzhden Mountain, Southwestern Bulgaria  
*Nikola Zidarov, Ruslan I. Kostov, Petar Zidarov*
36. GPS’2009 campaign at the Bulgarian and Romanian tide gauges  
*Lyubka Pashova, Viorel Malciu*
37. Polished stone tools from the Late Neolithic site Hadzhidimitrovo, Yambol district: rocks and specifics in raw material procurement  
*Iliya Hadzhipetkov*
38. Lithotectonic subdivision of the metamorphic rocks in Rila-Rhodope region  
*Stoyan Sarov, Emilia Voinova, Maria Ovtcharova, Kalin Naydenov, Neven Georgiev, Dimo Dimov*