

# Technical Programme of the Alpine-Carpathian Gravimetry Workshop

Bratislava, Comenius University, Faculty of Natural Sciences,  
Ilkovičova 6 street, room AMOS (pavilion B1), 22 – 23. May 2024

## ***Wednesday, 22. May***

13:30 - 14:00 Welcome of participants

*Chairman: Prof. Miroslav Bielik*

14:00 - 14:10

Opening of the workshop: dean of the faculty - Prof. Fedor, Prof. Bielik

14:10 - 14:30

Götze Hajo (CAU) and the AplArray Gravity Research Group - *invited paper* :  
AlpArray's gravity team that crossed frontiers

14:30 - 14:50

Paštka Roman (CU), Bielik Miroslav (CU, ESI SAS), Zahorec Pavol (ESI SAS),  
Papčo Juraj (SUT), Karcol Roland (CU), Nogová Ema (ESI SAS, CU):

Qualitative analysis of higher derivatives ratios of Bouguer anomaly map from  
pan-Alpine region

14:50 - 15:10

Zahorec Pavol (ESI SAS), Nogová Ema (ESI SAS, CU), Papčo Juraj (SUT),  
Paštka Roman (CU):

Comparison of global gravity data in the Adria Array area

15:10 - 15:35

Götze Hajo (CAU), Strehlau Ronja (CAU), Dannowski Anke (GEOMAR),  
Schmidt Sabine (CAU), Plonka Christian (GFZ), Scheck-Wenderoth Magdalena  
(GFZ), Anikiev Denis (GFZ):

Do gravity data justify a rifted "Liguro-Provençal Basin"? - A few thoughts on  
gravity data analysis

15:35 - 16:00 coffee break

*Chairman: Prof. Roman Pašteka*

16:00 - 16:25

Bauer Tobias (BKG), Schwabe Joachim (BKG), Liebsch Gunter (BKG), Sacher Martina (BKG):

The European Alps Geoid project - a regional contribution to a unified European height reference frame

16:25 - 16:50

Rosowiecka Olga (PGI), Olszak Tomasz (PGI)

Polish ways to ITGRF realisation in geodetic and geophysics gravimetric bases

16:50 - 17:15

Čunderlík Robert (SUT), Macák Marek (SUT), Zahorec Pavol (ESI SAS), Papčo Juraj (SUT), Minarechová Zuzana (SUT), Jančovičová Miroslava (SUT):

Local gravity field modelling in Tatra Mountains using the FEM approach

17:15 - 17:40

Anikiev Denis (GFZ), Götze Hajo (CAU), Plonka Christian (GFZ), Schmidt Sabine (CAU):

Subsurface space warping driven by gravity data

17:40 - 18:00

Mikuška Ján (G-trend), Pohánka Vladimír (ESI SAS), Papčo Juraj (SUT), Kubica Lukáš (SUT), Zahorec Pavol (ESI SAS), Pašteka Roman (CU):

Calculation of distant relief effect in gravimetry using ellipsoidal Earth approximation

18:00 - 00.00

**Icebreaker party** (lecture room G-337, Lab of applied geophysics) - invitation from the Slovak AAGR group ;-)

## ***Thursday, 23. May***

*Chairman: Prof. Jörg Ebbing*

09:00 - 09:20

Scarponi Matteo (UCBL), Bodin Thomas (UCBL):

Towards Bayesian Joint Inversion of Bouguer Gravity and Surface Wave data:  
application to the Western Alps

09:20 - 09:45

Mohamed Sobh (LIAG):

On the application of gravity and magnetic data in exploring geothermal and  
natural hydrogen resources

09:45 - 10:10

Wolfgang Szwillus (CAU):

Investigating the Deep Earth with gravity and long-periodic seismology

10:10 - 10:30

Josef Sebera (AI CAS):

A comparison of four forward modelling approaches with a global lithosphere  
density model

**10:30 - 10:55 coffee break**

*Chairman: Prof. Hajo Götze*

10:55 - 11:20

Yu Tian (CAU):

An integrated method for gravity gradient inversion and gravity gradient depth  
imaging

11:20 - 11:45

Eric Fosso Teguia (CAU):

Crustal modelling over the Central and West African Rift Zone

11:45 - 12:10

Mikhail Ginga (CAU):

Joint inversion for crustal structure in Dronning Maud Land

12:10 - 12:35

Nasuti Aziz and Geophysics (NGU):

An overview of Potential field databases and studies at the Geological Survey of Norway

12:35

Final words and closing of the workshop: Prof. Götze, Prof. Paštka.

[Lunch is not covered by the workshop organisers.](#)

16:00 - 23:00

**Wine trip** to the company Vínne pivnice Svätý Jur (for those who are interested and can stay longer in Bratislava...):

15:45 meeting at the main railway station of Bratislava (Hlavná stanica Bratislava) in the main entrance hall

16:06 - 16:20 local train to the small village Svätý Jur pri Bratislave, short walk to the wine company

17:00 - 21.30 excursion in the wine cellar, wine testing and dinner

22:06 - 22:21 local train back to Bratislava

Costs for wine testing and the dinner will be covered by each participant (not by the workshop organisers).

## Abbreviations of affiliations:

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AI CAS = Astronomical Institute of the Czech Academy of Sciences

BKG = Bundesamt f. Kartographie und Geodäsie = Federal Agency for Cartography and Geodesy

CAU = Christian Albrechts University Kiel

CU = Comenius University in Bratislava

ESI SAS = Earth Science Institute of the Slovak Academy of Sciences

GEOMAR Helmholtz Centre for Ocean Research Kiel

GFZ = Deutsches GeoForschungsZentrum = German Research Centre for Geosciences

G-trend Ltd company Bratislava

LIAG = Leibniz-Institut für Angewandte Geophysik = LIAG Institute for Applied Geophysics

NGU = Norges geologiske undersøkelse = Norway's National Geological Survey

PGI = Polish Geological Institute

SUT = Slovak University of Technology Bratislava

UCBL = Université Claude Bernard Lyon 1