XII

NATIONAL GEOPHYSICAL CONFERENCE
with international participation



29-30 September 2025

NEW CHALLENGES IN GEOPHYSICS

Sofia

Bulgarian Academy of Sciences

"15 Noemvri" Str. №1

BULGARIAN GEOPHYSICAL SOCIETY

University of Mining and Geology "St. Ivan Rilski"

Sofia University "St. Kliment Ochridski"

National Institute of Geophysics, Geodesy and Geography - BAS

Space Research and Technology Institute - BAS

HOUR	No	SESSION, REPORT	AUTHORS / PRESENTER
29 September 2025 (Monday)			
08:30 16:00	**REGISTRATION**		
09:00	**XII BgGS CONFERENCE OPENING** Moderator: Christian Tzankov **WELCOME WORD FROM THE MANAGEMENT OF BAS** Prof. DSc. Daniela Jordanova		
09:20 09:50	1	Deploying the magnetism of natural materials as a highly effective research method in Earth sciences: application areas, advantages and limitations	Daniela Jordanova
	GEOSCIENCE FOR SOCIETY, EDUCATION AND ENVIRONMENT Moderator: Atanas Kisyov		
09:50 10:30	1	Utilization of mineral magnetic properties of composts and potting soils for evaluation of their nutrient content	Daniel Ishlyamski, Deyan Lesigyarski, Bozhurka Georgieva, Diana Jordanova, Neli Jordanova
	2	Modern non-destructive methods for testing and quality control of asphalt road pavements and application of ground-penetrating radar in Bulgaria	Christian Tzankov, Bogomil Stefanov
10:30 11:00	**Coffee break**		
11:00	**EARTH PHYSICS, GEODYNAMICS AND SEDIMENTOLOGY** Moderator: Gergana Georgieva		
11:00 12:40	1	An approximate assessment about seismic danger by sources threatening Bulgarian territory	Boyko Ranguelov, Edelways Spassov, Memet Bayraktutan
	2	From stars' magnitude trough Richter's earthquake magnitude back to the stellarquakes' magnitude	Boyko Ranguelov
	3	Temporal characteristics of the 17 August 1999 Mw7.5, Turkey earthquake aftershock sequence	Plamena Raykova, Dimcho Solakov, Stela Simeonova
	4	Pi2 pulsations during the main phase of the geomagnetic storm on May 10-11, 2024	Maria Chamati
	5	Possibility of multipurpose use of GNSS station KOH2, built in the area of BAB "St. Kliment Ohridski", Livingston Island	Lyubka Pashova
12:40 14:00	**Lunch break**		

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29 September 2025 (Monday)			
14:00	**EARTH PHYSICS, GEODYNAMICS AND SEDIMENTOLOGY** Moderator: Gergana Georgieva		
14:00 14:40	6	Study of the dependence of the H/V curve on the orientation and type of recording equipment	Gergana Georgieva, Liliya Dimitrova, Vasilena Vacheva, Yana Keskinova
	7	Performance of the stations from the Seismological Network of Sofia University	Elitza Pandourska, Lyuba Dimova, Reneta Raykova
14:40	**PALEO- AND ARCHEO-GEOPHYSICS** Moderator: Christian Tzankov		
14:40 15:40	1	Geophysical surveys of the Neolithic settlement of Iridere near the village of Skutare, Plovdiv region	Petar Zidarov
	2	Georadar surveys in the southern Roman necropolis of Philippopolis in the area of Plovdiv railway station	Christian Tzankov, Petar Zidarov
	3	Geophysical survey of the Roman road station Sirnota to the village of Manole	Todor Todorov
15:40 16:00	**Coffee break**		
16:00	**REMOTE SENSING, UAV GEOPHYSICS AND GIS** Moderator: Denitsa Borisova		
16:00 17:00	1	Application of the MT-SAR method for monitoring ground movements in the area of the Studena-quarry for the extraction of inert materials	Mila Atanasova-Zlatareva
	2	Results from Bathymetric Scanning in the Area of South Bay, Livingston Island, during the 33rd Bulgarian Antarctic Expedition	Kiril Velkovsky
	3	Spectral characteristics of the soil in an experimental plot in the area of the town of Sadovo	Denitsa Borisova, Hristo Nikolov, Vencislav Dimitrov
17:00 18:30	**COCKTAIL**		

HOUR	No	SESSION, REPORT	AUTHORS / PRESENTER
30 September 2025 (Tuesday)			
09:00	**REMOTE SENSING, UAV GEOPHYSICS AND GIS** Moderator: Denitsa Borisova		
09:00 10:00	1	Correcting InSAR interferograms for atmospheric effects	Hristo Nikolov
	2	Evaluating the impact of radiometric calibration on glacier velocity estimates from Sentinel-1 SAR data: a case study of Livingston Island	Adrian Yordanov, Vassil Gourev, Gergana Georgieva
	3	Combining Optical and Lidar Satellite Observations for Water Level Assessment in Reservoirs	Hristo Nikolov, Ivan Stoev, Elitza Uzunova, Denitsa Borisova
10:00 10:30	**Coffee break**		
10:30	**EXPLORATION GEOPHYSICS** Moderator: Petya Trifonova		
10:30 12:30	1	Magnetotellurics for mineral exploration	Maxim Smirnov
	2	Geophysical research at Conrad Observatory in Austria	Roman Leonhardt
	3	Magnetotelluric data as the key link to assess space weather hazard to ground-based infrastructure in the UK	Juliane Hübert, C.D. Beggan, G.S. Richardson, L. Orr, Ellen Clarke
	4	Methodology for geothermal exploration: comprehensive approach for advanced geophysical investigations.	Petya Trifonova, Metodi Metodiev, Dilyana Hristova, Atanas Kisyov, Christian Tzankov
	5	Application of the ERT method for examining the rock massif along a design route of tunnel facilities	Nikolay Stoyanov, Atanas Kisyov
	6	Application of exploratory drilling geophysical surveys in determining the hydrogeological features of the fracture-vein complex at the "Asarel" mine	Antony Kisyov
	7	Global Leaders in Deep Exploration – An Introduction to Quantec	Rob Gordon
12:30 13:30	**EXPLORATION GEOPHYSICS – POSTER SESSION** Moderator: Christian Tzankov		
	1	Opportunities for Integrated Application of Geophysical Methods in the Exploration of Geothermal Energy Sources in the Kazichene – Ravno Pole Area	Irina Ivanova, Zuzana Karakasheva
	2	Application of Induced Polarization and Electrical Resistivity Tomography for Subsurface Targeting in Underground Polymetallic Mines	Atanas Kisyov, Maya Tomova
	3	Methodology for geothermal exploration: geological framework and structural interpretation for geothermal potential assessment in the Sofia sedimentary basin with Kazichene – Ravno pole test area	Petar Gerginov, Boyka Mihaylova, Yavor Ivanov, Aleksey Benderev
	4	Methodology for geothermal exploration procedure (Part 3 – Geoinformatics)	Davis Dinkov, Ivajlo Karabojkov
13:30	**XII BgGS CONFERENCE CLOSURE**		