INFORMATION TECHNOLOGIES IN SOLVING MODERN PROBLEMS OF GEOLOGY AND GEOPHYSICS

International Scientific Conference of Young Scientists and Students, organized by Institute of Geology and Geophysics (IGG) of Azerbaijan National Academy of Sciences (ANAS) is an important scientific event covering fundamental and applied aspects of modern geology. The First Conference (held in 2005) was dedicated to the 60th anniversary of ANAS. Since 2005, this scientific event has become a tradition and held in Baku once in two years. Young scientists and students from different countries, such as Germany, USA, India, Chile, Turkey, Georgia, Russian Federation, Poland etc. participated in previous conferences. Now, after 13 years the VII International Scientific Conference is dedicated to the 80th anniversary of IGG.

GGI was founded in 1938. During long period, the Institute has become a large organization, a major center of fundamental and applied research. The Institute structure includes 24 research departments, the National Data Center of Azerbaijan, established in 2003 on the initiative of Preparative Committee of Comprehensive Nuclear Test-Ban-Treaty-Organization (CTBTO), Centre of common use of the analytical devices and equipment. The Institute staff 108 researchers, including 5 academician of ANAS (1 corresponding member of RAS), 4 corresponding members of ANAS, 17 doctors of science, 62 PhD.

Papers presented at the Conference will be published in a special book after peer reviewing and will be available during the Conference and online after it.





Conference is organizationally supported by the Institute of Geology and Geophysics (GGI) and Azerbaijan National Academy of Sciences



The Conference is financially supported by:



- New approaches and methods in investigation of the Earth's crust
- Information technologies in solving geological and geophysical problems
- Using advanced technologies in prospecting for minerals
- Geological events and processes; geological risk assessment

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ANAS

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Qojayeva Nabat Member of CYSS
Akhundov Ruslan Member of CYSS
Suleymanova Fatima Member of CYSS
Bashirov Orhan Member of CYSS
Asgarova Arzu Member of CYSS

FIRST DAY

			October 15, 2018
09 <u>30</u>	10^{30}	Registration	ANAS Central Library of Science (Main hall)
10^{30}	$13^{\frac{00}{}}$	Opening Ceremony	

• Akif Alizadeh

President of the Azerbaijan National Academy of Sciences, Academician

Akper Feyzullayev

Chairman of the Conference Organizing Committee, Dr. Sc. (Geol.-min.), Academician

• Famin Salmanov

Chairman of the Council of Young Scientists and Specialists of ANAS, PhD oh Physics, Associate Prof.

Orhan Abbasov

Chairman of the Council of Young Scientists and Specialists of GGI, PhD in Earth Sciences, Associate Prof.

Arzu Javadova

BP, Petroleum Systems Analyst, Phd

• Ian Lerche

Martin Luther University of Halle-Wittenberg, Germany, Dr., Prof.

11^{40}	13^{00}	Plenary Session		
Venue		ANAS Central Library of Science (Main hall)		
Chai	irman	Acader	mician Akper Feyzullayev	
1140	12 ⁰⁰	Cengiz Yıldırım (PhD, Associate Prof.)	Application of cosmogenic surface exposure dating in tectonic geomorphology; Examples from offset alluvial fans, fluvial terraces and normal fault scarps	Turkey
1200	12 ²⁰	Svetlana Kokh (PhD)	Geochemistry of mud volcano products on Kerch Peninsula	Russia
12 ²⁰	12 ⁴⁰	Márk Szijártó (PhD student)	Numerical investigation of the interaction of forced and free thermal convection in basinscales groundwater flow systems	Hungary
12 ⁴⁰	1300	Kanan Abbasov (PhD Candidate)	Estimation of crystallization depth of	Azerbaijan

Information technologies in solving modern problems of Geology and Geophysics

			the Gadabay intrusion	
			on the base of iron-titan	
			oxide minerals	
			geothermobarometry	
13 ⁰⁰	14^{20}		Lunch	
Venue		Master class Al	NAS Central Library of Sci	ence (Main hall)
				Martin Luther
			Geological risk of	University of
14^{20}	15^{20}	Dr., Prof. Ian Lerche	ofinding oil and gas	Halle-
			in a basin	Wittenberg,
				Germany
16 ⁰⁰	17 30	Baku City Tou	r (The Azerbaijan Carpet M	Iuseum;
10	17	Shirya	nshakh's Palace, Old City)	

10	17	Shirvar	ishakh's Palace, Old City)		
SECOND DAY					
	TOND DI			ctober 16, 2018	
Va				ctober 10, 2010	
ve	nue	GGI – Small hall	es in solving geological and	d goophysical	
	sion	problems		9 . .	
Chai	rman		ssociate Prof. Gulam Baba	yev	
		(Azerbaijan)			
Co-ch:	airman	PhD student Olga Gayda			
10 ⁰⁰	10 ²⁰	Mubasher Ahmad	Static reservoir modeling to evaluate reservoir quality of Samana Suk formation of middle İndus Basin,	Pakistan	
			Pakistan Digital correction of		
10 ²⁰	1040	Petr Dergach	Digital correction of geophone records for recovery of the signal low-frequency component	Russia	
1040	71100	Konul Alizade	4D Seismic Time-Shift Analysis	Azerbaijan	
1100	1120	Nedim Gökhan	Matlab based gravity data processing GUI: Gravpack	Turkey	
Ø			Coffee Break		
12 ⁰⁰	12 ²⁰	Timur Tsagan- Mandzhiev (PhD)	Improving methods of reservoir parameters determination with hydrodynamic analysis	Russia	
12 ²⁰	12 ⁴⁰	Moataz Barakat (PhD)	Contribution of NMR technology to petrophysical evaluation of the Nezzazat reservoirs in centeral	Egypt	

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	1		: 16 66	
			province, gulf of Suez, Egypt	
12 ⁴⁰	13 ⁰⁰	Olga Gaydalenok (PhD student)	Using Google Earth in neotectonic studies	Russia
13 ⁰⁰	$14^{\frac{20}{2}}$,	Lunch	
		77 M 1	The basin modeling	
14^{20}	14^{40}	Kamran Mammadov	researches applying in	Azerbaijan
		(PhD student)	the Kura basin	J
			Analysis of hydrocarbon	
		. 00	systems of sedimentary	
14^{40}	$15^{\underline{00}}$	Daria Savchik	basins in Eastern	Russia
			Siberia. Capabilities and	
			practical experience	
			The Relationship	
		Elif Meriç	between Seismic Lines,	
$15^{\underline{00}}$	15^{20}	(PhD student)	Gravity, Magnetic Maps	Turkey
		(FIID-Studelli)	and Heat Flow in	
			Western Anatolia	
•	40		Geophysical methods for	
15^{20}	15^{40}	Ivan Agapkin	determination properties	Russia
			of frozen soils	
40	00	Mohamed Salem	Ground-penetrating	
15^{40}	16 ⁰⁰	Oudeika	radar and geoelectrical	Turkey
		(PhD student)	numerical modelling	
Q (Coffee Break	
		3/100 3/20	Applying of special	
			software for integrated	
16^{40}	17 ⁰⁰	Kseniya Kanakova	interpretation of seismic	Russia
10	1	Tisom ju Taunuko (u	data (CDP) and well	Tussia
			logs at exploration of	
		<u> </u>	HC fields	
			Improved reservoirs	
4 -00			zones determination in	
17 ⁰⁰	17 ²⁰	Yuliya Pugovkina	Paleozoic formations of	Russia
			Nurol depression	
	7 7 7	WANTED TO	(Tomsk oblast)	
			Electrical resistivity	
17 ²⁰	1740	Alayay Faguat	tomography and 3D	Puggio
1/-		Alexey Faguet	numerical modeling for	Russia
			aquifer mapping in Novosibirsk region	
			GPR and seismic	
			characterization of	
17^{40}	18 ⁰⁰	Furkan Gül	subsurface heat gallery	Turkey
17	10	i urkan Oui	at the Itu Ayazaga	Turkey
			campus, Istanbul	
			Cumpus, Isianoui	

			(October 16, 2018	
Vei	Venue GGI – Great hall				
Sess	ions	_	ologies in prospecting for n processes; geological risk a	*	
Chairman		Dr. Sc. (Geolmin.), Academician Akper Feyzullayev (Azerbaijan)			
Co-cha	irman		ciences Valery Ershov (Rus		
1000	10 ²⁰	Olga Loktionova	Geological model and oil-gas-potential of the	Russia	
			Lower and Middle		
10 ²⁰	10 ⁴⁰	Hassan Tamassoki	Identification of iron anomaly and lineaments using remote sensing (ASTER & OLI) in Haji-Gak area, Afghanistan	Afghanistan	
10 ⁴⁰	11 ⁰⁰	Maksim-Solovev (PhD)	Seismogeological methods for identifying Paleozoic oil and gas prospects in the southeast of West Siberia	Russia	
1100	11 ²⁰	Alexander Kalinin (PhD)	Seismogeological criteria for Upper Jurassic reservoir prediction of the southeast regions of West Siberia	Russia	
Of a	Y	0000	Coffee Break		
			Fresh groundwater		
1200	12 ²⁰	Nurlan Suvarov	resources of the Kusar foothill plain and prospects for their use	Azerbaijan	
12 ²⁰	1240	Keti Benashvili (PhD)	Structural-Geological Position and Genesis of Upper Svaneti Gold Occurrences	Georgia	
	V V		Microfacies and		
10	7 7 7	YY I II II I A I	dolomitization of the	7	
1240	1300	Hamid Hajinia	Asmari Formation in the East Paydar Oil Field,	Iran	
1300	1420		SW of Iran Lunch		
13-	14		Seismotectonic		
14 ²⁰	14 ⁴⁰	Alaa Hamdon (PhD)	evaluation of the earthquake dated at 12 Nov.2017 at Iraqi- Iranian border	Iraq	
14 ⁴⁰	15 ⁰⁰	Reyhankhanim Ganiyeva	Study of genesis of sedimentary bodies lateral growth in South Caspian Basin	Azerbaijan	

15 ⁰⁰	15 ²⁰	Ekaterina Markina	Sedimentary modelling using Dionisos Flow software: Prognosis of reservoirs distribution	Russia
15 ²⁰	15 ⁴⁰	Nino Kobakhidze	Structural and Stratigraphic Architecture in Paleogene Extensional Sedimentary Basin: An Example from the Eastern Achara-Trialeti Fold-and-Thrust Belt, Georgia	Georgia
15 ⁴⁰	16 ⁰⁰	Valery Ershov (PhD)	Mud volcanoes of Sakhalin Island advance for the last ten years	Russia
W	Y		Coffee Break	
16 ⁴⁰	17 ⁰⁰	Oleg Filippov	Geomechanical modeling of the stressed state in the vicinity of the well	Russia
17 ⁰⁰	17 ²⁰	Svitlana Stadnichenko (PhD)	Pore Space Evolution Related to Fluid (Brine)- Rock Interaction Processes: Case Study in Kopylivska Gas Field (Dnipro-Donets Depression, Ukraine)	Ukraine
17 ²⁰	1740	Olga Emelianenko	Petroleum system evaluation of the regions with complex tectonic settings	Russia
1740	1800	Valery Ershov (PhD)	About the relation between mud volcanic activity and earthquakes	Russia

THIRD DAY

(V			October 17, 2018	
Ven	nue	GGI – Great hall		
Session		New approaches and methods in investigation of the Earth's crust		
Chairman Co-chairman		PhD in Earth Sciences, (Azerbaijan) PhD Abdelnasser Moh	Associate Prof. Orhan Abla amed (Egypt)	Dasov
10 ⁰⁰	10 ²⁰	Abdelnasser Mohamed (PhD)	Seismic site characterization for earthquake hazard mitigation at a planned	Egypt

			industrial city, Aswan, Egypt	
10 ²⁰	10 ⁴⁰	Sercan Kayın (M.Sc)	Paleomagnetic reconstruction of the Varto Fault Zone, Eastern Turkey	Turkey
10 ⁴⁰	11 ⁰⁰	Viktoriia Osypenko (PhD)	Accessory minerals trace element geochemistry as a tool for carbonatites genetic features study	Ukraine
11 ⁰⁰	11 ²⁰	Bobur Janibekov	Tectonic stress and geodynamic condition of ore-grade gold formation of Auminzatau mountains (Central Kyzyl Kum)	Uzbekistan
	y		Coffee Break	
12 ^{<u>00</u>}	12 ²⁰	Ian Savitskii	Features the petrophysical characteristics of terrigenous and carbonate reservoirs using X-ray tomography core	Russia
12 ²⁰	12 ⁴⁰	Gulzat Kadyralieva	Features of the rock massif in the zones of influence of tectonic disturbances in the gold deposits of Kyrgyzstan	Kyrgyzstan
1240	1300	Emin Gurbanov (PhD student)	A statistical and graphical study of reservoir core samples from Absheron fields	Azerbaijan
1300	14 ²⁰	W 11 11	Lunch	
14 ²⁰	1440	Aleksander Serdyukov (PhD)	The surface wave phase velocity estimation based on S-transform	Russia
1440	1500	Ekaterina Kaneva (PhD)	Petrographic, mineragraphic and crystal-chemical methods integration: charoititic rocks of Murun massif	Russia
			(Russia) case	
15 ⁰⁰	15 ²⁰	Sabuhi Mammadov (PhD)	Ore distribution, types, paragenesis and sulfidation state evolution of the ore fluid of the Gedabek deposit	Azerbaijan
15 ²⁰	15 ⁴⁰	Sofya Mezhelovskaya (PhD)	U-Pb zircon dating of precambrian sedimentary	Russia

			complexes	
15 ⁴⁰	16 ⁰⁰	Nadezhda Kanygina	Zircon age determinations of the schists from the Koyandy complexes (the Zheltau terrane, Southern Kazakhstan)	Russia
Q (V		Coffee Break	
16 ⁴⁰	17 ⁰⁰	Najiba Hozeh	Evaluation of environmental damage caused by the extraction placer iron deposits using remote sensing techniques in Sangan Khaf area, Iran	Iran
17 ^{<u>00</u>}	17 ²⁰	Daniel Kalmar (PhD student)	Moho depth determination from P receiver function analysis in the Carpathian Basin	Hungary
17 ²⁰	17 ⁴⁰	Hadi Karimi	Mineralogical, geochemical and petrological study of mafic and ultramafic rocks in northeast of Sefid Sang	Afghanistan
17 ⁴⁰	1800	Stepan Berzin (PhD)	Fragments of the oceanic crust in the Revdinsky massif of the Ural platinum belt (Middle Ural, Russia)	Russia

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	(X			O	ctober 17, 2018
	Ver	nue	GGI – Hall no. 311		
	Sess	sion	Information technologi problems	es in solving geological an	d geophysical
	Chair	rman	PhD in Earth Sciences T	ofig Rashidov (Azerbaijan)	
	Co-cha	irman	PhD student Elif Meriç	(Turkey)	
	10 ⁰⁰	10 ²⁰	Anna Tseplyaeva	Investigation of fracturing using seismic data for geological modeling of basement rocks	Russia
	10 ²⁰	10 ⁴⁰	Aytek Ersan	Production of Landslide Susceptibility Map of Vezirköprü District, Samsun (North Turkey)	Turkey
	10^{40}	$11^{\frac{00}{}}$	Nisar Ahmed	Frequency-dependent p	Pakistan

		(PhD student)	wave attenuation and dispersion to assess the low gas saturation in the upper indus basin Pakistan	
11 ⁰⁰	11 ²⁰	Lili Czirok (PhD student)	Analysis of tectonic and geomorphological variations using GIS	Hungary
Of the second	Y		Coffee Break	
1200	12 ²⁰	Ahmed Elnazer Ahmed Abdelfattah (PhD)	Landsat image enhancement integrated with SAR image for geologic studies	Egypt
12 ²⁰	12 ⁴⁰	Evgeny Zvonarev	Creation of the database as the foundations for studying the cork of the deposit on the fields	Russia
12 ⁴⁰	13 ^{<u>00</u>}	Orkhan Najafov	Studying of exogenic geological processes in the coastal zone of lake Gyrmyzy by the method of electrical prospecting	Azerbaijan
$13^{\frac{00}{}}$	$14^{\frac{20}{2}}$		Lunch	

	Y			C	October 17, 2018
	Ven	iue	GGI – Small hall		
	Sessions		Using advanced technologies in prospecting for minerals; Geological events and processes; geological risk assessment		
ŀ	Chairman		Dr. Sc. (Geolmin.), Academician Akper Feyzullayev (Azerbaijan)		
	Co-chairman		PhD Keti Benashvili (Georgia)		
	1000	1020	Volodymyr Ilyenko	Geoelectrical investigations in the Ukraine	Ukraine
		7 7 7		The preliminary tidal analysis based on the	
	10 ²⁰	1040	Ulfat Sadiyev	CG-5 Autograv gravity measurements at Lenkaran (Azerbaijan) station	- Azerba <mark>i</mark> jan
	10 ⁴⁰	11 ^{<u>00</u>}	Yevheniia Anpilova (PhD)	Assimilation potential of geological media as basic index of enviroment tecnogenic changes	Ukraine
	11 ^{<u>00</u>}	11 ²⁰	Khayrulla Khamidov	Observations of modern movements in the Fergana geodynamic range	Uzbekistan

		Coffee Break		
12 ⁰⁰	12 ²⁰	Cevza Altınbaş	Distribution of quaternary tectonic deformation along the coast of the Gulf of Gökova: inference from uplifted shorelines	Turkey
12 ²⁰	12 ⁴⁰	Farkhod Artikov	Effects of the operating regime of reservoirs on the state of local seismicity	Uzbekistan
12 ⁴⁰	13 ^{<u>00</u>}	Tatyana Bobina	Risks of development of limits in corps of weathering in the processing of mineral deposit fossils by open way	Russia
$13^{\underline{00}}$	$14^{\frac{20}{2}}$		Lunch	

		October 17, 2018	
$15^{\frac{00}{}}$	$16^{\frac{30}{}}$	Poster session	
W	Y	Coffee Break	
17 ⁰⁰	18 ⁰⁰	Discussion of the Conference results and certificate giving ceremony	

FOURTH DAY

	October 18, 2018
1000	• Mud volcano "Dashgil" • Gobustan National Park The Gobustan State Reserve located west of the settlement of Gobustan, about 40 miles southwest of the centre of Baku was established in 1966 when the region was declared as a national historical landmark of Azerbaijan in an attempt to preserve the ancient carvings, mud volcanoes and gas-stones in the region. Gobustan State Reserve is very rich in archeological monuments, the reserve has more than 6,000 rock carvings, which depict primitive people, animals, battle-pieces, ritual dances, bullfights, boats with armed oarsmen, warriors with lances in their hands, camel caravans, pictures of sun and stars, on the average dating back to 5,000-20,000 years. In 2007, the cultural landscape of rock carvings of Gobustan was included in the list of monuments of the World Cultural Heritage of UNESCO.
$18^{\frac{00}{}}$	Gala Night

Information technologies in solving modern problems of Geology and Geophysics

