

## Contents

CBGA Council.....	iii
Organizing Committee.....	v
Sponsors.....	vii
Reviewers.....	ix
Prologue.....	xvii

### General Session G01

#### Structural geology and Neotectonics

<b>GEOLOGY OF THE CAUCASUS AND ADJACENT AREAS: 1:2 500 000 SCALE</b>	1
<b>GEOLOGICAL MAP</b>	
Adamia Sh., Chabukiani A., Chkhotua T., Sadradze N., Zakaraia D., Zakariadze G.	
<b>GEOMORPHOLOGICAL AND GEOLOGICAL OBSERVATIONS AT THE COAST OF TRIPITI HILL (HERAKLION HARBOUR, CRETE), IN RELATION TO REPORTED ACTIVE FAULTING</b>	11
Ganas A., Palyvos N., Mavrikas G., Kollias S. and Tsimi C.	
<b>STRUCTURAL INTERPRETATION OF SEISMIC DATA IN POLISH OUTER CARPATHIANS SOUTHWEST AND SOUTHEAST OF KRAKOW</b>	21
Pietsch K., Golonka J., Marzec P. and Florek R.	
<b>PRELIMINARY PETROGRAPHIC DATA ON THE EARLY CRETACEOUS BOEOTHIAN FLYSCH (EXTERNAL HELLENIDES, CENTRAL GREECE); PROVENANCE AND PALAEOGEOGRAPHIC IMPLICATIONS</b>	31
Puglisi D., Kyriakopoulos K., Karakitsios V., Tsipoura-Vlachou M., Barbera G. and Mazzoleni P.	
<b>TECTONO- SEDIMENTARY EVOLUTION OF THE EOCENE TRANSGRESSIVE DEPOSITS IN SW TURKEY: AN OVERVIEW</b>	41
Toker E. and Yağmurlu F.	
<b>VRANCEA AND HINDU KUSH AREAS OF MANTLE EARTHQUAKES: COMPARATIVE TECTONIC ANALYSIS</b>	51
Trifonov V.G., Ivanova T.P., Bachmanov D.M.	

### General Session G02

#### Stratigraphy and Palaeontology

<b>NEW HIPPOPOTAMID FINDS IN EUROTAS VALLEY (LACONIA, GREECE)</b>	57
Athanassiou A. and Bouzas D.	
<b>ON PLIOCENE MAMMAL REMAINS IN THE AREA OF EPANOMI (MACEDONIA, GREECE)</b>	63
Athanassiou A. and Kostopoulos D.S.	
<b>MAASTRICHTIAN DINOSAURS IN SW TRANSYLVANIA (ROMANIA)</b>	69
Codrea V., Jipa-Murza C., Csiki Z., Barbu O.	
<b>BIOSTRATIGRAPHY AND PALAEOENVIRONMENT OF THE UPPER CRETACEOUS FLYSCH SEDIMENTS OF THE MESTIA-TIANETI ZONE OF THE GREATER CAUCASUS FOLD SYSTEM</b>	75
Gavtadze T., Mikadze Kh. and Chkhaidze Z.	

<b>MIocene CHAROPHYTA OF MAOČE, PLJEVLJA (NORTHERN MONTENEGRO)</b>	85
Krstić N., Soulje-Marsche I., Žic J., Đorđević-Milutinović D. and Savić Lj.	
<b>FORAMINIFERAL BIOFACIES ANALYSIS AND PALEOECOLOGICAL DATA ON UPPER CRETACEOUS SEDIMENTS OF THE GAGRA-JAVA ZONE (WESTERN GEORGIA)</b>	91
Mikadze KH.	
<b>PALEOENVIRONMENTAL SETTING OF RUDISTS IN THE UPPER CRETACEOUS (SANTONIAN-CAMPANIAN) DEPOSITS FROM VALEA NEAGRĂ DE CRIS (BOROD BASIN)-NORTHERN APUSENI MTS, ROMANIA</b>	101
Săsăran L., Săsăran E. and Bucur I.I.	
<b>MAMMALIAN REMAINS FROM A NEW SITE NEAR THE CLASSICAL LOCALITY OF PIKERMI (ATTICA, GREECE)</b>	109
Theodorou G.E., Roussiakis S.J., Athanassiou A., Filippidi A.	

### General Session G03

#### Applied geology (engineering geology, hydrogeology, urban geology, etc.)

<b>GROUND SURFACE MOVEMENTS IN THE AREA OF SALT EXPLOITATION IN TUZLA (BOSNIA AND HERZEGOVINA)</b>	121
Čeliković R., Dervišević R., Sijerčić I., Salihović R., Mancini F., Stecchi F.	
<b>PROTECTION MEASURES AGAINST GEOLOGICAL FAILURES, DURING THE CONSTRUCTION OF THESSALONIKI - KAVALA SECTION OF EGNATIA HIGHWAY IN N. GREECE</b>	131
Chatzangelou M. and Christaras B.	
<b>STATISTICS TO IMPROVE RESULTS OF WELL-LOGGING INTERPRETATION IN RESERVOIR ROCKS: TWO CASES FROM THE CARPATHIAN FOREDEEP</b>	141
Jarzyna J. and Kazmierczuk M.	
<b>THE ANALYSIS OF RESERVOIR HETEROGENEITY FROM WELL LOG DATA</b>	149
Malureanu I.I., Batistatu V.M., Neagu D.-D.M.	
<b>SHALLOW GROUND WATERS AND THE FORMATION OF CARBONATE SOILS IN SOUTHEAST BULGARIA – A STUDY IN PROGRESS</b>	155
Panayotova M., Dimitrov I., and Kashilska Z.	
<b>ROCKFALL SUSCEPTIBILITY ZONING AND EVALUATION OF ROCKFALL HAZARD AT THE FOOT HILL OF MOUNTAIN ORLIAGAS, GREECE</b>	165
Papathanassiou G., Valkaniotis S. and Chatzipetros A.	
<b>PILOT STUDY FOR ARTIFICIAL RECHARGE OF THE SOUTH-EASTERN MESAORIA AQUIFER (CYPRUS), USING TERTIARY TREATED WASTEWATER</b>	173
Voudouris K., Kaklis T., Constantinou C.A., Evaggelatos F., Papageorgiou S., Mentes A., Irakleous Th., Panagiotou Ch.	

### General Session G04

#### Mineral sciences, Petrology, Geochemistry, Isotope geology and Volcanology

<b>MAPPING THE SPATIAL DISTRIBUTION OF PRECIPITATION, BIOLOGICAL SOILING, AND DECAY ON MONUMENTS IN NORTHERN IRELAND: TOWARDS UNDERSTANDING LONG-TERM STONE RESPONSE TO MOISTURE</b>	183
Adamson C.S., McCabe S., McAllister D., Smith B.J., Warke P.A.	

<b>CAMPONITES FROM THE DITRĂU ALKALINE MASSIF, ROMANIA: GEOCHEMISTRY AND PETROGENESIS</b>	191
Batki A. and Pál-Molnár E.	
<b>CRYSTALLIZATION CONDITIONS OF THE XANTHI PLUTONIC COMPLEX (RHODEPO MASSIF, N. GREECE): GEOTHERMOMETRY AND GEOBAROMETRY</b>	199
Christofides G., Papadopoulou L., Soldatos, T. and Koroneos, A.	
<b>HYDROTHERMAL METHANE FLUXES FROM THE SOIL AT SOUSAKI (GREECE)</b>	209
D'Alessandro W., Brusca L., Kyriakopoulos K., Martelli M., Michas G., Papadakis G., Salerno F.	
<b>THE BLACK SEA – AN ENERGY CROSSROADS AND/OR AN UNCONVENTIONAL ENERGY AND RESOURCE CENTER IN EUROPE</b>	217
Dimitrov D., Dimitrov P., Peychev V.	
<b>U/Pb ZIRCON GEOCHRONOLOGY ON TTG ROCKS FROM SOUTH CARPATHIANS (ROMANIA): INSIGHTS INTO THE GEOLOGIC HISTORY OF THE GETIC CRYSTALLINE BASEMENT</b>	225
Dobrescu A., Tiepolo M., Negulescu E., Dordea D.	
<b>PETROLOGICAL AND PETROCHEMICAL CHARACTERISTICS OF THE ROCKS OF THE KUSHLA CALDERA, EAST RHODEPO MASSIF</b>	233
Georgiev S., Yordanov B. and Nedalkov R.	
<b>RECOGNITION AND DECAY OF THE UPPER DEVONIAN DOLOMITE LITHOLOGICAL MORPHOLOGICAL TYPES IN ARCHITECTURAL HERITAGE</b>	245
Hodireva V. and Sidraba I.	
<b>THE BEHAVIOUR OF AMORPHOUS SILICA-RICH ROCKS AS CEMENTITIOUS ADDITIVES IN SCREED MORTARS</b>	255
Kavouri S., Stamatakis M.G., Kafritsa E., Fragoulis D.	
<b>THE GEOCHEMISTRY AND PETROGENESIS OF VOLCANIC ROCKS WITHIN OPHIOLITIC FORMATIONS AT THE NORTHEAST OTHRIS REGION, GREECE</b>	263
Koutsovitis P. and Magganas A.	
<b>ORGANIC MATTER COMPOSITION AND MATURITY OF THE CALLOVIAN (MIDDLE JURASSIC) SEDIMENTS FROM LITHUANIA</b>	271
Marynowski L., Zatoń M. and Karwowski Ł.	
<b>THE EFFECT OF MONTMORILLONITE MODIFICATION BY Cr(III)-COMPOUNDS ON ITS MICROCRYSTALLINE STRUCTURE AND ELECTROSURFACE PROPERTIES</b>	281
Mokrousova O. and Moraru V.	
<b>RECORD OF TWO ALPINE HIGH-P METAMORPHIC EVENTS IN THE TITAROS OPHIOLITE COMPLEX OF THE PELAGONIAN ZONE (GREECE)</b>	289
Mposkos, E., Baziotis, I. and Krohe, A.	
<b>PRELIMINARY RESULTS ON XENOLITHS IN BASALTIC ANDESITE SUBVOLCANIC BODY IN THE VICINITY OF KROUMOVGRAD, EASTERN RHODOPES, BULGARIA</b>	299
Nedalkov R.	
<b>MINERALOGICAL–GEOCHEMICAL STUDY OF URANIUM BEARING GRANITE PHASES IN PARANESTI AREA, N. GREECE</b>	307
Pergamalis F., Karageorgiou E. D., Koukoulis A. and Katsikis J.	
<b>GROSSULAR/HYDROGROSSULAR IN RODINGITES FROM OTHRYS OPHIOLITE (CENTRAL GREECE): RAMAN SPECTROSCOPY AS A TOOL TO DISTINGUISH IT FROM VESUVIANITE</b>	317
Perraki M., Karipi S., Rigopoulos I., Tsikouras B., Pomonis P. and Hatzipanagiotou K.	

<b>Fe-Mn NODULAR CONCRETIONS ASSOCIATED WITH MIDDLE JURASSIC OCEANIC MELANGE (ARGOLIS, GREECE)</b>	<b>323</b>
Photiades A.D.	
<b>GEOCHEMICAL CHARACTERISTICS OF THE AMPHIBOLITES (OPHIOLITIC METABASITES) FROM THE SERIFOS METAMORPHIC CORE COMPLEX, ATTIC-CYCLADIC METAMORPHIC BELT, CYCLADES, GREECE</b>	<b>333</b>
Stouraiti C.	
<b>PRELIMINARY DATA ON THE CRYSTAL-CHEMICAL CHARACTERISTICS OF BERYL FROM CER MT. (SERBIA)</b>	<b>341</b>
Tančić P., Poznanović M. and Dimitrijević R.	
<b>GEOCHEMICAL CHARACTERISTICS OF NATURAL WATERS CONTAMINATED BY HEXAVALENT CHROMIUM, IN EASTERN STREEA HELLAS, GREECE</b>	<b>347</b>
Vasilatos Ch., Megremi I. and Economou-Eliopoulos M.	
<b>MORPHOGENETIC TYPES OF ORE BODIES, ORE TEXTURES AND CRYSTALLIZATION MECHANISMS IN THE HYDROTHERMAL MADAN DEPOSITS, CENTRAL RHODES</b>	<b>355</b>
Vassileva R. D., Atanassova R., Bonev I.K.	

## **General Session G05**

### **Seismology, Geophysics and Physics of the Earth's interior**

<b>STATISTICAL TIDAL TOMOGRAPHY OF THE VRANCEA INTERMEDIATE-DEPTH SEISMIC ZONE</b>	<b>363</b>
Cadicheanu N. and van Ruymbeke M.	
<b>NUCLEAR MAGNETIC RESONANCE (NMR) AND MERCURY POROSIMETRY MEASUREMENTS FOR PERMEABILITY DETERMINATION</b>	<b>371</b>
Jarzyna J. and Puskarczyk E.	
<b>SHEAR WAVE Q DETERMINATION FOR THE UPPER CRUST OF WESTERN AND CENTRAL SLOVENIA</b>	<b>377</b>
Kastelic V., Kiratzi A., Benetatos C., Živčić M., and Bajc J.	
<b>APPLICATION OF SKELETONIZATION ON GEOPHYSICAL IMAGES</b>	<b>387</b>
Kokinou E., Panagiotakis C., Sarris A.	
<b>SEISMIC IMAGE OF THE TOP OF JURASSIC STRUCTURE UNDER POLISH OUTER CARPATHIANS IN THE ZONE SOUTHEAST OF KRAKOW</b>	<b>393</b>
Marzec P., Pietsch K., Golonka J. and Florek R.	
<b>PROBABILITIES OF EARTHQUAKE OCCURRENCE IN THE CORINTH GULF AND ITS VICINITY INFERRRED FROM COMBINED INFORMATION</b>	<b>403</b>
Tsapanos T., Koravos G., Tsapanos M. and Burton P.W.	

## **General Session G06**

### **Meteorology, Climatology and Atmospheric environment**

<b>CLIMATOLOGICAL ASSESSMENT OF ATMOSPHERIC INSTABILITY INDICES FOR SOUTHEASTERN EUROPE</b>	<b>411</b>
Philippopoulos K., Karvounis G. and Deligiorgi D.	
<b>EVOLUTION OF DROUGHT SEVERITY FOR A 118-YEAR PERIOD IN THE REPUBLIC OF MOLDOVA</b>	<b>421</b>
Potop V.	

<b>A CLIMATIC INVESTIGATION OF PRECIPITATION AMOUNT ASSOCIATED WITH 500-HPA CYCLONES WHICH ARE AFFECTING THE GREEK TERRITORY DURING WARM PERIOD OF THE YEAR</b>	429
Spanos S. and Spiliopoulos M.	
<b>General Session G07</b>	
<b>Earth sciences and Society (teaching and education, health, sustainable development, etc.)</b>	
<b>DETERMINANTS OF THE DEMAND FOR GRANITES IN THE DOMESTIC MARKET OF GREECE</b>	435
Papadopoulos A., Christofides G. and Koroneos A.	
<b>IS IT POSSIBLE TO USE NATURAL RESOURCES IN A SUSTAINABLE MANNER AFTER INTENSIVE EXPLOITATION?</b>	443
Shtiza A.	
<b>General Session G08</b>	
<b>Physical geography, Sedimentology, Quaternary geology, karst and speleology</b>	
<b>TYPES OF LITHOLOGICAL SEQUENCES AND SUCCESSIONS IN THE TUFF AND GYPSUM SUBFORMATIONS OF LOW BADENIAN FROM PIATRA VERDE (SLĂNIC-TEIȘANI)</b>	449
Frunzescu D.	
<b>LITHOSTRATIGRAPHY OF THE PLEISTOCENE DEPOSITS OF GEORGIAN SECTOR OF THE BLACK SEA</b>	457
Jaoshvili G., Popkhadze L., Tvalchrelidze M.	
<b>SEDIMENTARY SETTING OF ADRIATIC FLYSCH FORMATION (MIDDLE EOCENE-MIDDLE MIocene), SOUTHEASTERN MONTENEGRO AS REVEALED BY TURBIDITE SEQUENCES</b>	463
Kilibarda, Z., Čadjenović, D., Milutin, J., and Radulović, N.	
<b>APPLICATION OF REGIONALIZED VARIABLE THEORY IN ANALYSIS OF MORPHOLOGICAL PHENOMENA OF THE HERZEGOVINA KARST</b>	469
Marijanović P., Prskalo M., Čolak A.	
<b>GEOMORPHOLOGICAL CHARACTERISTICS OF KRATOVO-ZLETOVO PALAEOVOLCANIC AREA</b>	475
Milevski I.	
<b>EVALUATION OF SEA-LEVEL RISE IMPACT ON CEMENTED AND UNCEMENTED BEACH. CASE STUDY FROM THASSOS ISLAND, GREECE</b>	483
Psomiadis D., Albanakis K., Tsourlos P.	
<b>THE IMPACT OF LANDSLIDES ON THE LANDSCAPE EVOLUTION ON THE ISLAND OF ANDROS</b>	491
Rozos D., Alexouli-Livaditi A., Vouvalidis K., Livaditis G.	
<b>General Session G09</b>	
<b>Remote sensing and information technologies in geosciences</b>	
<b>MULTI-PROXY ANALYSES OF SUBATLANTIC PEAT BOG SEDIMENTS FROM THE WESTERN TATRA MTS. (POLAND)</b>	503
Kłapyta P. and Kołaczek P.	

<b>RECENT MICRO-TECTONIC MOVEMENT FROM THREE KARST CAVES, SLOVENIA</b>	<b>513</b>
Šebela S., Košťák B. and Stemberk J.	
<b>THE LATEST PALEOGEOGRAPHICAL REALITIES OF THE PANNONIAN BASIN IN THE LATE QUATERNARY: THE RELICT PANNONIAN LAKE, ITS SUCCESSOR AND THE FINALIZATION OF THE DANUBE WAY IN THE UPPER HOLOCENE</b>	<b>519</b>
Ticleanu M., Nicolescu R., Gheuca I., Emil R., Ion A., Cociuba I.	
<b>MONITORING MINERAL EXTRACTION AND PROCESSING SITES IN WEST AND SOUTH WEST ROMANIA BY REMOTE SENSING-DERIVED INFORMATION AND LABORATORY ANALYSES</b>	<b>527</b>
Vîjdea A.-M., Bindea G., Zoran M., Coltoi O. and Dumitrica C.	

## **General Session G10**

### **Marine geology and Oceanography**

<b>A PROPOSED METHODOLOGY FOR COASTAL RISK MANAGEMENT</b>	<b>537</b>
Cherif I., Alexandridis T.K., Bilas G., Karapetsas N., Silleos G.N.	
<b>RHEOLOGICAL ANALYSIS OF A SUB-MARINE LANDSLIDE IN THE MARMARA SEA (TURKEY)</b>	<b>545</b>
Gokceoglu C., Tunusluoglu M.C., Gorum T., Gokasan E., Tur H., Tekkeli A.B., Batuk F., Alp H.	
<b>THE MORPHO-TECTONIC STRUCTURE OF KOS-NISYROS-TILOS VOLCANIC AREA BASED ON ONSHORE AND OFFSHORE DATA</b>	<b>557</b>
Nomikou P. and Papanikolaou D.	
<b>SPATIAL AND TEMPORAL VARIATIONS IN THE GEOCHEMISTRY OF SUSPENDED PARTICULATE MATTER IN THE SHALLOW DELTAIC EMBAYMENT OF NORTHERN THERMAIKOS GULF, GREECE</b>	<b>565</b>
Tsomanoglou K., Tsirambides A., Albanakis K., Krasakopoulou E., Papageorgiou, A., Anagnostou Ch.	
<b>Author index.....</b>	<b>573</b>