

Contents

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

General Session G11

Environmental geosciences

SOCIOECONOMIC INFLUENCE OF NATURAL DISASTERS IN THE WESTERN BALKAN COUNTRIES	1
Abolmasov B., Mihalić S., Hadži-Niković G., Marjanović M., Krkač M.	
NATURAL RESERVOIR SYSTEMS IN THE TERTIARY SECTION OF THE EAST RHODOPE DEPRESSION AND PERSPECTIVES FOR STORAGE OF NATURAL GAS AND CARBON DIOXIDE	7
Balinov V., Doncheva M. and Zaneva-Dobranova E.	
GROUNDWATER VULNERABILITY ASSESSMENT TO CONTAMINATION (ERZENI BASIN, ALBANIA)	15
Beqiraj A. and Cenameri M.	
QANATS BETWEEN MENIKION AND PANGEON MOUNTAINS. A FORGOTTEN AND ENDANGERED RESOURCE FOR LOCAL WATER SUPPLY	23
Blumenstein O., Weingartner H. and Vavelidis M.	
ON THE MINERALOGY, PHYSICAL CHARACTERISTICS AND THE MAIN ELEMENTAL CONTENT OF URBAN ROAD DUST PARTICLES FROM THE HISTORIC CENTRE OF THE CITY OF THESSALONIKI, NORTHERN GREECE	31
Bourliva A., Papadopoulos A., Giouri A., Papadopoulou L., and Kantiranis N.	
ACCUMULATION AND DISTRIBUTION OF ORGANIC MATTER IN SEDIMENTS OF SALT-AFFECTED SHALLOW LAKES AT SZEGED, HUNGARY	39
Bozsó G., Pál-Molnár E., Nyilas T., Hetényi M.	
ENVIRONMENTAL IMPACT OF Pt, Pd, Rh AND Au FROM CATALYTIC CONVERTERS ALONG ROADSIDES: THE CASE OF ATTICA, GREECE	47
Economou-Eliopoulos M. and Sfendoni T.	
PURIFICATION OF MUNICIPAL WASTEWATERS AND PRODUCTION OF ODORLESS AND COHESIVE ZEO-SEWAGE SLUDGE, USING HELLENIC NATURAL ZEOLITE	55
Filippidis A.	
ASSESSMENT OF HEAVY METALS CONCENTRATIONS IN SEDIMENTS OF BOGDANAS RIVER AT THE ASSIROS-LAGADAS AREA, NORTHERN GREECE	63
Giouri A., Christophoridis C., Melfos V. and Vavelidis M.	
ENVIRONMENTAL SYNERGY IN THE ROMANIAN PLAIN (TO THE EAST OF OLT RIVER)	71
Grecu F., Gherghina A., Ghita C., Comanescu L.	
CONTINUOUS EXTRA-FRAMEWORK Na⁺ RELEASE FROM GREEK ANALCIME-RICH VOLCANICLASTIC ROCKS ON EXCHANGE WITH NH₄⁺	81
Kantiranis N., Sikalidis C., Papastergios G., Squires C. and Filippidis A.	

MAGNETIC PROPERTIES OF SOILS AROUND LOCAL POLLUTION SOURCES (CRETE, GREECE)	89
Kokinou E.	
GEOECOLOGY OF THE BLACK SEA COAST OF GEORGIA	97
Kvinikadze M., Kuparadze D., Pataridze D., Khundadze N., Kirakosyan V.	
POLLUTION WITH ARSENIC AND HEAVY METALS OF SOILS AND SOME COMPONENTS OF THE FOOD CHAIN IN THE ENVIRONMENT OF GOLIAM BUKOVETS MINE TAILINGS IMPOUNDMENT, CHIPROVTSI MINING AREA, NW BULGARIA	105
Mladenova V., Kotsev T., Cholakova Z., Schmitt R.-T., Ivanova I., Dimitrova D.	
ENVIRONMENTAL ASSESSMENT OF POTENTIALLY TOXIC TRACE ELEMENTS IN SEDIMENTS OF FILIPPOS B PORT, NORTHERN AEGEAN SEA – A COMPARISON WITH OTHER NATIONAL AND INTERNATIONAL COASTAL REGIONS	113
Papastergios G., Filippidis A., Fernandez-Turiel J.-L., Gimeno D.	
THE IMPACT OF A URANIUM MINING SITE ON THE STREAM SEDIMENTS (CRUCEA MINE, ROMANIA)	121
Petrescu L., Bilal E., Iatan L.E.	
EXAMINATION OF THE GROUNDWATER QUALITY IN A SETTLEMENT OF EASTERN HUNGARY	127
Szabó Gy., Bessenyei É. and Szabó A.	
MEASURE OF HEAVY METAL LOAD IN THE FLOODPLAIN OF THE RIVER TISZA	133
Szabó Sz., Gosztonyi Gy., Prokisch J.	
Special Session S02	
Tectonostratigraphic Terranes in the Balkan region	
THE PALAEOGEOGRAPHIC POSITION OF THE JADAR BLOCK (VARDAR ZONE, NW SERBIA) IN THE EARLY CARBONIFEROUS	141
Korn D., Sudar M., Novak M. and Jovanović D.	
Special Session S03	
Circum Pannonian Terranes – Eastern Alps, Carpathians, Dinarides (tectonostratigraphy, palaeotectonic evolution and present-day structure – presentation of monography TERRANES)	
SUBDUCTION RELATED JURASSIC GRAVITY DEPOSITS IN BÜKK-DARNÓ AREA, NORTHEAST HUNGARY	149
Haas J., Pelikán P., Görög Á., Ozsvárt P., Józsa S., Kövér Sz.	
Special Session S05	
Advances in geology and geodynamic evolution of the Rhodope Massif	
REGIONAL GEOLOGY AND CORRELATION OF THE EASTERN CIRCUM-RHODOPE BELT, BULGARIA-GREECE	157
Bonev N., Magganas A. and Klain L.	
METAOPHIOLITE ASSOCIATION IN THE RHODOPE MASSIF AS A STRATIGRAPHICAL AND STRUCTURAL MARKER	165
Kozhoukharova E.	

ALPINE POLYPHASE METAMORPHISM IN METAPELITES FROM SIDIRONERO COMPLEX (RHODOPE DOMAIN, NE GREECE)	173
Mposkos, E., Krohe, A. and Baziotis, I.	

Special Session S07

Danube valley geological structure, neotectonic activity and evolution during the Pliocene-Pleistocene time

THE LOWER DANUBE VALLEY. GEOLOGICAL STRUCTURE AND EVOLUTION DURING THE PLIOCENE-QUATERNARY	183
---	-----

Enciu P.

SEISMOTECTONIC MODEL ON GEOLOGICAL DATA FOR 1892 DULOVO EARTHQUAKE, LOWER DANUBE VALLEY	191
--	-----

Shanov S. and Radulov A.

Special Session S09

Geology of the Pieniny Klippen Belt and the role of zones with extensive shortening in the structure of orogenic belts

GEOLOGY AND TECTONICS OF THE VRŠATEC KLIPPEN AREA (PIENINY KLIPPEN BELT, WESTERN SLOVAKIA)	197
---	-----

Bučová J., Plašienka D. and Mikuš V.

LATEST JURASSIC – EARLIEST CRETACEOUS MASS MOVEMENTS IN THE POLISH PART OF THE PIENINY KLIPPEN BELT AND SILESIA UNIT (OUTER FLYSCH CARPATHIANS)	209
--	-----

Krobicki M., Golonka J. and Słomka T.

TECTONICS OF THE KLIPPEN BELT AND MAGURA NAPPE IN THE EASTERN PART OF THE PIENINY MTS. (WESTERN CARPATHIANS, POLAND AND SLOVAKIA) – NEW APPROACHES AND RESULTS	221
---	-----

Oszczypko N., Jurewicz E. and Plašienka D.

CALCAREOUS NANNOPLANKTON BIOSTRATIGRAPHY OF THE TERMINAL SEDIMENTS OF THE MAGURA BASIN – A CASE STUDY OF THE POLISH SECTOR (OUTER WESTERN CARPATHIANS)	231
---	-----

Oszczypko-Clowes M.

PRELIMINARY RESULTS OF PROVENANCE ANALYSES OF EXOTIC MAGMATIC AND METAMORPHIC ROCK PEBBLES FROM THE EOCENE FLYSCH DEPOSITS OF THE MAGURA NAPPE (KRYNICA FACIES ZONE, POLISH OUTER CARPATHIANS)	241
---	-----

Salata D. and Oszczypko N.

RELATIONSHIP BETWEEN THE ?CRETACEOUS “BLACK SHALES” AND CRETACEOUS OCEANIC RED BEDS OF THE GRAJCAREK SUCCESSION-A GEOCHEMICAL APPROACH (PIENINY KLIPPEN BELT, WEST CARPATHIANS, POLAND)	249
--	-----

Wójcik-Tabol P. and Oszczypko N.

Special Session S13

Neogene palaeoenvironmental reconstructions and climatic records in South-Eastern Europe

PLANKTONIC FORAMINIFERAL BIOSTRATIGRAPHY AND PALAEOENVIRONMENTAL IMPLICATIONS OF A MIDDLE MIOCENE TRANSGRESSIVE SEQUENCE ON THE IONIAN ZONE OF LEVKAS ISLAND, IONIAN SEA, GREECE	259
---	-----

Antonarakou, A., Drinia, H., Kontakiotis, G.

PALAEOCLIMATE RECONSTRUCTIONS FOR THE LATE MIOCENE IN SOUTHEAST BULGARIA USING POLLEN DATA FROM THE TUNDZHA BASIN 269

Ivanov D.

PALAEOENVIRONMENTAL RECONSTRUCTION AND CLIMATE CHANGE IN SOUTH EASTERN EUROPE (NEOGENE KARLOVO LIGNITES, CENTRAL BULGARIA) 279

Stefanova M., Marinov S.P. Zdravkov A. and Kortenski J.

Special Session S15

Tertiary potassic and ultrapotassic magmatism along the Carpathian-Balkan-Dinaride chain: petrological processes and geodynamics

MINERALOGY OF THE PLIOCENE TRACHYTE AND ITS CARBONATITIC MINETTE INCLUSIONS IN OSTRVICA, F.Y.R. MACEDONIA 287

Yanev Y., Boev B., Iliev Tz., Pecskay Z., Karadjov M. and Boev I.

Special Session S20

Marine mineralization associated with volcanic arc and other environments, with emphasis on the Aegean and Black Sea

FOSSILIZED MICROORGANISMS PRESERVED AS FLUID INCLUSIONS IN EPITHERMAL VEINS, VANI Mn-Ba DEPOSIT, MILOS ISLAND, GREECE 297

Ivarsson M., Kiliass S.P., Broman C., Naden J. and Detsi K.

GEOLOGICAL SETTINGS AND CONDITIONS OF GENESIS OF VOLCANOGENIC DEPOSITS OF NON-FERROUS METALS IN PALEOISLAND ARC ENVIRONMENTS 309

Kekelia S., Sosson M., Kekelia M., Asatiani G., Kuloshvili S., Sadradze N., Gagnidze N., Razmadze A.

Special Session S21

Metallogeny along the Carpathian-Balkan region

PENTLANDITE MINERALIZATION RELATED TO ALBANIAN OPHIOLITES 317

Çina A.

ARSENIC DISTRIBUTION IN LATERITE DEPOSITS OF THE BALKAN PENINSULA 325

Eliopoulos D.G. and Economou-Eliopoulos M.²

SOURCES OF BASE, PRECIOUS AND RARE METALS DURING THE TETHYAN PHANEROZOIC EVOLUTION OF CAUCASUS AND PONTIDES 333

Gugushvili V., Popkhadze N., Beridze T. and Khutsishvili S.

FLUIDS RELATED TO REMOBILIZATION OF MESOZOIC SULFIDE MINERALIZATION IN THE EPTADENDRO-RACHI REGION IN EASTERN RHODOPE, THRACE, GREECE 343

Melfos V., Chatzikirkou A., Michailidis K. and Voudouris P.

A REVIEW OF AGE CONSTRAINTS OF EPITHERMAL PRECIOUS AND BASE METAL DEPOSITS OF THE TERTIARY EASTERN RHODOPES: COINCIDENCE WITH LATE EOCENE-EARLY OLIGOCENE TECTONIC PLATE REORGANIZATION ALONG THE TETHYS 351

Moritz R., Márton I., Ortelli M., Marchev P., Voudouris P., Bonev N, Spikings R. and Cosca M.

THE STRUCTURAL-METALLOGENIC MAPS OF ORE DISTRICTS OF F.Y.R. of MACEDONIA 359

Volkov A.V., Serafimovski T., Alekseev V. Yu and Tasev G.

MOLYBDENITE OCCURRENCES IN GREECE: MINERALOGY, GEOCHEMISTRY AND DEPOSITIONAL ENVIRONMENT 369

Voudouris P., Melfos V., Moritz R., Spry P.G., Orтели M., Kartal T.

Special Session S23

Gemology

PRELIMINARY INVESTIGATIONS OF INCLUSIONS IN SOME TOPAZ CRYSTALS FROM VOLODARSK-VOLYNSKI MASSIF (WESTERN UKRAINE) 379

Dumańska-Słowik M., Natkaniec-Nowak L., Tobała T. and Bąk E.

THE TOKAJ MTS. OBSIDIAN – ITS USE IN PREHISTORY AND PRESENT APPLICATION 385

Hovorka D. and Illášová, E.

GEM MINERALS AND MATERIALS FROM THE NEOLITHIC AND CHALCOLITHIC PERIODS IN BULGARIA AND THEIR IMPACT ON THE HISTORY OF GEMMOLOGY 391

Kostov R.I.

Special Session S24

Natural stones, usage and testing

CLIMATE CHANGE AND WET WINTERS: TESTING THE DIFFUSION OF SOLUBLE SALTS IN BUILDING STONE UNDER SATURATED CONDITIONS 399

McCabe S., Smith B.J., McAlister J.J., Viles H.A., Curran J.M., Crawford T.

SPATIAL DISTRIBUTION OF SALT PENETRATION IN WEATHERED SANDSTONE 407

McKinley J., Keaney A., McCabe S., Curran J. and Smith B.

HIGH ACIDIC SULPHATE SALT PRODUCTION ON THE CAVE WALL IN THE YOSHIMI HYAKU-ANA HISTORIC SITE, CENTRAL JAPAN 413

Oguchi C., Takaya Y., Yamazaki, M., Ohnishi R., Thidar A. and Hatta T.

THE CURRENT STATE OF CONSERVATION OF ROMANIAN STONE MONUMENTS 421

Sandu I., Brânzilă M., Iancu O.-G., Sandu I.G., Vasilasche V. and Sandu A.V.

Special Session S25

Weather modification

STUDY OF A MESOSCALE CONVECTIVE COMPLEX OVER WESTERN AND SOUTHERN BALKANS 429

Foris D.

Special Session S26

Measurements and modeling of biologically active UV solar radiation: towards balancing between risks and benefits

OVERVIEW OF THE UV ACTIVITIES IN BELGIUM SINCE THE END OF THE EIGHTIES 437

Gillotay D., Bolsée D., Depiesse C. and Stevens F.

Special Session S28

Geotourism

THE GEOTOURIST DEVELOPMENT ON THE EXAMPLE OF THE AREA OF JASIENIOWA MT. (WESTERN CARPATHIANS FLYSCH, POLAND) 445

Dmytrowski P. and Górna M.

GEOLOGICAL AND GEOMORPHOLOGICAL VALUES OF THE CASTLE HILL GEOLOGICAL AND EDUCATIONAL TRAIL SITUATED IN SZANDA (NORTHERN HUNGARY)	453
Dobos A. and Gali.Z	
THE BEST GEOTOURISTIC OBJECTS OF THE SILESIAN UNIT, OUTER FLYSCH CARPATHIANS IN THE VICINITY OF KRAKOW, POLAND	459
Doktor M., Golonka J., Waškowska A. and Słomka T.	
THE MANAGEMENT OF A SUSTAINABLE TOURISTIC ACTIVITY AT THE LACU- ROȘU TOURISTIC RESORT – WITHIN THE “BICAZ GORGE– HĂȘMASUL MARE” NATIONAL PARK	467
Dombay Șt., Magyari-Saska Zs. and Seer M.	
UNDERGROUND GEOTOURISTIC ROUTES IN THE MAŁOPOLSKA DISTRICT	473
Dzięgiel M.	
THE GEOTOURIST ASSESSMENT OF THE VOLCANIC SITES IN VTÁČNIK MTS. (SLOVAKIA, WESTERN CARPATHIANS)	483
Gorna M. and Golonka J.	
PHENOMENON OF MUD VOLCANOES IN WESTERN ROMANIA AS A GEOTURISM OBJECT	491
Madeja G. and Mrowczyk P.	
Special Session G29	
Promoting geoconservation in South-Eastern Europe – Geoparks	
BUZAU LAND GEOPARK. STEPS IN BUILDING A NEW GEOPARK IN ROMANIA	503
Andrasanu A.	
VULNERABLE GEOSITE PROTECTION AND MANAGEMENT IN GEOPARKS - A CASE STUDY OF TAFONE IN LESVOS PETRIFIED FOREST GEOPARK	513
Zouros N. and Gumus E.	
Special Session S30	
Underwater geoarchaeology: an interdisciplinary field bridging marine geosciences and underwater archaeology	
UNDERWATER GEOARCHAEOLOGICAL SURVEY IN FRONT OF THE DANUBIAN ISLAND "PACUIUL LUI SOARE" (ROMANIA) USING REMOTE SENSING TECHNIQUES – PRELIMINARY RESULTS	519
Caraivan G., Fulga C., Chera C.	
Special Session S32	
The use and applications of GPS and InSAR to geohazards across South-Eastern Europe	
THE USE OF GNSS TECHNOLOGIES FOR APPLICATION IN MINING, GEOLOGY AND GEODESY IN BULGARIA	525
Kostyanov S., Valev G., Majdrakov M., Jelev V., Avdev S., Bliznakov A., Stoyanov V., Atanasova E.	
CONTRIBUTION OF INSAR AND KINEMATIC GPS DATA TO SUBSIDENCE AND GEOHAZARD MONITORING IN CENTRAL MACEDONIA (N. GREECE)	535
Mouratidis A., Briole P., Astaras A., Pavlidis S., Tsakiri M., Ilieva M., Rolandone F. and Katsambalos K.	
Author index	547