

## CONTENTS

## SECTION "HYDROGEOLOGY, ENGINEERING GEOLOGY AND GEOTECHNICS"

1. **A COPPARISON OF MOHR-COULOMB TO HARD-SOIL BEHAVIOR LAWS IN PILE-SOIL INTERACTION**, M.sc Student Mohammad Mahdi Jalali, Assoc. Prof. Dr. Syed Hasan Golmaei, M.sc Student Mohammad Reza Jalali, Prof. Mir Khalegh Ziatabar Ahmadi, M.sc Student Reza Moradi, Agriculture and Natural Resources of Sari University, **Iran** .....1
2. **A REGIONAL STEADY STATE GROUNDWATER FLOW MODELING OF THE QUATERNARY DEPOSITS USING ISOTOPE-HYDROGEOCHEMICAL DATA, EASTERN PART OF LITHUANIA**, Anicetas Stuopis, prof. Vytautas Juodkazis, prof. Robert Mokrik, Antanas Marcionis, GROTA, **Lithuania**.....9
3. **AN INVESTIGATION OF PASSIVE PILLES THROUGH FINITE ELEMENT METHDO**, M.sc Student Mohammad Mahdi Jalali, Assoc. Prof. Dr. Syed Hasan Golmaei, M.sc Student Mohammad Reza Jalali, Prof. Mir Khalegh Ziatabar Ahmadi, M.sc Student Reza Moradi, Agriculture and Natural Resources of Sari University, **Iran**.....17
4. **APPLIED ATMOGEOCHEMICAL SURVEYED TO IDENTIFY AREAS OF RADON RISK IN RURAL AREAS OF SERBIA**, Milka Vidovic, Vesna Spasic Jokic, Vojin Gordanic , Bojan Gavrilovic and Sasa Rogan, The University of Belgrade, IHM, Department for Ecology and Technoeconomics, **Serbia** .....25
5. **COMPARATIVE ANALYSIS OF THE MOISTURE AND POROSITY INFLUENCE ON THE STATIC AND DYNAMIC ELASTICITY MODULUS**, Assist.Prof.Dr.Eng. DANCIU Ciprian, Prof.Dr.Eng. ARAD Victor, Assoc.Prof.Dr.Eng. MORARU Roland, Assoc.Prof.Dr.Eng.Ec. GOLDAN Tudor, PhD.Stud.Eng. NISTOR Cristian Daniel, University of Petrosani, **Romania** .....33
6. **CONSIDERATION OF VARIABILITY OF SOIL PARAMETERS IN PROBABILISTIC SOIL MODELING**, M. Sci. Nebojsa Davidovic, Prof. Dr. Verka Prolovic, Prof. Dr. Dragan Lukic, Faculty of Civil Engineering and Architecture - Nisi, **Serbia** .....39
7. **DETERMINATION OF OPTIMAL SUPPORTING SYSTEM OF DEEP FOUNDATION PIT BASED ON MULTI-CRITERIA DECISION ANALYSIS**, Prof. Maria Kozlovska, Assist. Prof. Zuzana Strukova, Beata Kovacova, Technical University of Kosice, Civil Engineering Faculty, **Slovakia** .....47
8. **DUMPS IN LATVIA: PRELIMINARY RESEARCH AND REMEDIATION**, Juris Burlakovs, University of Latvia, **Latvia** .....55
9. **EFFICIENT FOUNDATION SOLUTION FOR ECOLOGICAL SYSTEMS OF ELECTRICAL POWER PRODUCTION BY WIND ENERGY**, Assist. Prof.

Alexandra Ciopec, Assoc. Prof. Ciprian Costescu, Politehnica University of Timisoara, <b>Romania</b> .....	<b>63</b>
<b>10. ELECTRICAL RESISTIVITY IMAGING (ERI) INVESTIGATIONS TO IDENTIFY SOIL PROFILE AROUND NECATIBEY SUBWAY STATION, ANKARA, TURKEY</b> , Assist. Prof. Dr. Ozgur Akturk and Prof. Dr. Vedat Doyuran, Akdeniz University, <b>Turkey</b> .....	<b>71</b>
<b>11. ENGINEERING GEOLOGICAL CHARACTERISTICS OF THE TERRAIN ALONG THE ROUTE HIGHWAY CORRIDOR VC SHARES SVILAJ – VUKOSAVLJE</b> , Prof. DSc Nedjo Duric, Andja Dujic, Technical Institute Bijeljina, <b>Bosnia and Herzegovina</b> .....	<b>79</b>
<b>12. EXPERIENCE WITH MATHEMATICAL MODELING IN PROGRAM PLAXIS: DESIGN AND ASSESSMENT OF RETAINING WALLS</b> , Assoc.Prof. Hynek Lahuta, MSc.Ph.D.; Denisa Cihlarova, MSc. Ph.D., VSB-Technical University of Ostrava, <b>Czech Republic</b> .....	<b>87</b>
<b>13. EXPERIMENTAL STUDY REGARDING THE EMPHASIS OF INFLUENCE AREA FOR HEMISPHERICAL CENTRICALLY LOADED FOUNDATIONS</b> , Assoc. Prof. Monica Mirea, Assoc. Prof. Cristina Otilia Voicu, Politehnica University of Timisoara, <b>Romania</b> .....	<b>95</b>
<b>14. GEO-MECHANICAL GRADING OF SAVARSIN AND SOIMOS GRANITES IN VIEW OF THEIR EFFECTIVE USE</b> , Assist.Prof.Dr.Eng. DANCIU Ciprian, Prof.Dr.Eng. ARAD Victor, Assoc.Prof.Dr.Eng.Ec. GOLDAN Tudor, Assoc.Prof.Dr.Eng. MORARU Roland, Ph.D.Stud.Eng. NISTOR Cristian Daniel, University of Petrosani, <b>Romania</b> .....	<b>103</b>
<b>15. GEOSYNTHETIC REINFORCED RETAINING WALLS WITH VEGETATED FACINGS</b> , Assis.Prof. Andreea Luiza Roman, Assis.Prof. Octavian Roman, Politehnica University of Timisoara, <b>Romania</b> .....	<b>111</b>
<b>16. GROUNDWATER AGGRESSIVENESS AS AN IMPORTANT FACTOR OF ENGINEERING-GEOLOGICAL CONDITIONS IN THE KAZAN CITY (RUSSIA)</b> , Assoc. Prof. Nadezda Zharkova, Assis. Prof. Ilnur Khuzin, Kazan (Volga Region) Federal University, <b>Russia</b> .....	<b>117</b>
<b>17. GROUNDWATER DRAINAGE SYSTEM FOR A RESIDENTIAL AREA</b> , PhD. St. Florin-Catalin Miron, PhD. St. Felicia Enache-Niculescu, Politehnica University of Timisoara, <b>Romania</b> .....	<b>127</b>
<b>18. HYDROGEOCHEMISTRY OF GROUNDWATER FROM ABANDONED RADZIMOWICE MINE (SUDETES, SW POLAND)</b> , Henryk Marszalek, Michal Rysiukiewicz, Mirosław Wasik, Maria Rosario Costa, UTAD, <b>Portugal</b> .....	<b>135</b>

---

<b>19. IMPLEMENTATION OF TDR TECHNOLOGY FOR MONITORING OF NEGATIVE FACTORS OF SLOPE DEFORMATIONS</b> , Assoc. Prof. Marian Drusa, Eng. Phd., Vlastimil Cheben , Eng. Phd., University of Zilina, <b>Slovakia</b> .....	<b>143</b>
<b>20. IMPROVEMENT IN EVALUATION OF NEOGENOUS SOILS BY CPT TESTING</b> , Assoc. Prof. Marian Drusa, Eng. Phd., University of Zilina, <b>Slovakia</b> .....	<b>151</b>
<b>21. INCREASING EFFICIENCY OF A PILE FOUNDATION SOLUTION FOR ECOLOGICAL WIND TURBINE ELECTRICAL POWER GENERATORS</b> , Assis. Prof. Alexandra Ciopec, Assoc. Prof. Ioan Petru Boldurean, Politehnica University of Timisoara, <b>Romania</b> .....	<b>159</b>
<b>22. ITERATIVE PROCEDURE FOR PRIORITIZATION OF GROUNDWATER CONTAMINATION SOURCES</b> , Dr. Grzegorz Gzyl, Jan Bondaruk, Central Mining Institute, <b>Poland</b> .....	<b>167</b>
<b>23. KARST AND ITS OCCURRENCE ON THE SHORES OF THE BRATSK RESERVOIR</b> , Dr. Elena Kozyreva, Dr. Oksana Mazaeva, Dr. Martyna Rzetala, Dr. Andrzej Jagus, Dr hab. M. Rzetala, University of Silesia, <b>Poland</b> .....	<b>175</b>
<b>24. LAKE MOST - LONG-TERM STABILITY ASSESSMENT OF THE FINAL SLOPES OF THE RESIDUAL PIT (FORMER COAL MINE MOST-LEZAKY)</b> , Ing. Petr Valvoda, Brown Coal Research Institute j.s.c., <b>Czech Republic</b> .....	<b>183</b>
<b>25. NEED FOR A SPECIFIC DESCRIPTION OF SOLID ROCKS AND SOILS IN ENGINEERING GEOLOGY</b> , Ing. Roman Vlasek, Ing. Tomas Penaz, Phd., Dr. Ing. Petr Welsler, Prof. Dr. Isik Yilmaz, Ing. Tomas Bouchal, Ph.d, Assoc. Prof. Ing. Marian Drusa, Phd, Doc. Ing. Barbara Stalmachova, Csc., Ing. Milos Duraj, Ph.d., Cumhuriyet University, <b>Turkey</b> .....	<b>191</b>
<b>26. NEW CONCEPTUAL MODEL OF GEOLOGY AND HYDROGEOLOGY OF SW CRETE, BASED ON THE EXTENSION OF TRYPALI UNIT IN THE REGION</b> , Prof. E. Manutsoglu, E. Steiakakis, Technical University of Crete, <b>Greece</b> .....	<b>199</b>
<b>27. NUMERICAL MODELING APPLIED ON THE BEHAVIOR OF ROAD PAVEMENTS</b> , Assoc. Prof. Ciprian COSTESCU, Prof. Florin BELC, Assist. Prof. Paul MARC, Politehnica University of Timisoara, <b>Romania</b> .....	<b>207</b>
<b>28. NUMERICAL MODELLING AND CONSTITUTIVE SOIL MODELS FOR DEEP EXCAVATIONS ANALYSIS</b> , PhD Student Catalin Capraru, Professor Anton Chirica, Technical University of Civil Engineering Bucharest, <b>Romania</b> .....	<b>215</b>
<b>29. NUMERICAL SIMULATION OF COAL MEASURE ROCKS STRESS-RELIEF</b> , Dr. Sergey Serdyukov, St. Alexey Zinovyev, Ph.D. St. Andrey Patutin, Institute of Mining, Siberian Branch, <b>Russia</b> .....	<b>223</b>

<b>30. PARAMETERS OF REHABILITATION AND ADAPTABILITY OF HYDRO POWER PLANTS TO DURABLE MODES OF OPERATION</b> , Nikolay ZHECHEV, Assoc. Prof. Dr. Eng., Manager, Rafail Ltd, Минно-Геоложки Университет Св. Иван Рилски, <b>Bulgaria</b> .....	<b>231</b>
<b>31. REGIONAL HYDROGEOCHEMICAL MAPPING: AN ECOLOGICAL STATUS OF NATURAL RADIONUCLIDES AND OTHER TOXIC ELEMENTS</b> , Vojin Gordanic, Milka Vidovic, Vesna Spasic Jokic, Ivana Trajkovic, Sasa Rogan, The University of Belgrade, IHTM, Department for Ecology and Technoeconomics, <b>Serbia</b> .....	<b>237</b>
<b>32. SPECIFIC CUTTING ENERGY IN THE FULL-FACE TUNNELING</b> , Dr. Edita Lazarova, Prof. Vitazoslav Krupa, DSc., Institute of Geotechnics, Slovak Academy of Sciences, <b>Slovakia</b> .....	<b>245</b>
<b>33. STABILITY ANALYSIS OF THE NEW PROPOSAL THE SLOPES LIBOUS II - NORTH BY FINITE ELEMENT METHOD</b> , Assoc.Prof. Hynek Lahuta, MSc.Ph.D.;Assoc.Prof. Robert Korinek, MSc.Ph.D, Assoc.Prof.Eva Hrubesova, Dr.Ph.D Lukas Juris, MSc., VSB-Technical University of Ostrava, <b>Czech Republic</b> .....	<b>253</b>
<b>34. STUDY CONCERNING THE USE OF WASTE PRODUCTS RESULTING FROM THERMO-ELECTRIC POWER STATIONS IN THE WESTERN ROMANIA</b> , Assoc. Prof. Monica Mirea, Assoc. Prof. Cristina Otilia Voicu, Politehnica University of Timisoara, <b>Romania</b> .....	<b>261</b>
<b>35. STUDY OF MECHANICAL CHARACTERISTICS OF GRANITES FROM PORCENI AND MERI AND THE DETERMINATION OF THE CORRELATION RELATIONSHIPS BETWEEN THEM</b> , Dr.Eng. NISTOR CatalinI, Assoc.Prof.Dr.Eng.Ec. GOLDAN Tudor, Assist.Dr.Eng. DANCIU Ciprian, University of Petrosani, <b>Romania</b> .....	<b>267</b>
<b>36. STUDY REGARDING THE BEARING CAPACITY OF TRUNCATED CONE AND HEMISPHERICAL FOUNDATIONS REALIZED IN PUNCHED HOLES</b> , Assoc. Prof. Monica Mirea, Assoc. Prof. Cristina Otilia Voicu, Politehnica University of Timisoara, <b>Romania</b> .....	<b>275</b>
<b>37. TECHNICAL – ECONOMIC FEASIBILITY OF THE GEOTECHNICAL INVESTIGATIONS EXECUTED FOR THE IBAR HPPS FOR THE PRELIMINARY DESIGN LEVEL</b> , Marko Babovic, Jelena Milosevic, Branislav Babic, Bozica Sandic, Electric Power Industry of Serbia, <b>Serbia</b> .....	<b>283</b>
<b>38. TECTONIC AND SEISMIC RELIEF FORMS IN THE NORTHERN MONGOLIAN ALTAI</b> , Dr. Sofya Platonova, Institute for water and environmental problems, <b>Russia</b> .....	<b>291</b>

- 39. THE DEVELOPMENT TRENDS OF GROUNDWATER HORIZON SURFACE DEPRESSION AND SEA WATER INTRUSION IMPACT IN LIEPAJA CITY**, Juris Burlakovs, Dzintars Lacis, University of Latvia, **Latvia**.....**297**
- 40. THE INVESTIGATION OF ALTERATION IN GUNYUZU (ESKISEHIR - TURKEY) GRANITE USING MINERALOGICAL-PETROGRAPHICAL AND PHYSIQUE-MECHANICAL METHODS**, Yildiz A., Bagci M., Dumlupunar, I., Demirbilek M., Kibici Y., Gurcan S., Ilbeyli N., Afyon Kocatepe University, **Turkey**.....**303**
- 41. THE MECHANISM OF TRANSPASSIVE DISSOLUTION OF ASS N25 AUSTENITIC STAINLESS STEEL IN SULPHURIC ACID SOLUTION**, Assis. Prof. Dr. Nushe Lajci, Prof. Emeritus. Dr. Mirjana Metikos-Hukovic, Dr. Zeljka Petrovic, Faculty of Mining and Metallurgy, University of Prishtina, **Kosovo** .....**313**
- 42. THE PHYSICAL-MECHANICAL CHARACTERIZATION OF THE AGGREGATES FROM THE JIU RIVER AS A DEPENDING FUNCTION ON THE RELATIONSHIPS BETWEEN THEM**, Dr.Eng. NISTOR Catalin, Assist.Dr.Eng. DANCIU Ciprian, Assoc.Prof.Dr.Eng.Ec. GOLDAN Tudor, University of Petrosani, **Romania** .....**325**
- 43. THE RELATION OF THE SURFACE GEOLOGICAL STRUCTURE AND FLOODPLAINS AS IMPORTANT CRITERION FOR FOUNDATION ENGINEERING**, Prof. Ing. Darja Kubeckova, Ph.D., Assoc. Prof. Ing. Karel Kubeckaka, Ph.D., Ing. Tomas Penaz, Ph.D. , Assoc. Prof. Ing. Marian Marschalko, Ph.D , Prof. Dr. Isik Yilmaz, Ing. Tomas Bouchal, Ph.D, Assoc. Prof. Ing. Marian Drusa, PhD., Ing. Miroslava Bendova, Ph.D. , Ing. Milos Duraj, Ph.D., VSB-Technical University Ostrava, **Czech Republic** .....**331**
- 44. THE ROLE OF ENGINEERING-GEOLOGICAL ZONES IN FOUNDATION ENGINEERING**, Assoc. Prof. Ing. Karel Kubecka, Ph.D., Prof. Ing. Darja Kubeckova, Ph.D., Ing. Tomas Penaz, Ph.D., Assoc. Prof. Ing. Marian Marschalko, Ph.D, Prof. Dr. Isik Yilmaz, Ing. Tomas Bouchal, Ph.D, Assoc. Prof. Ing. Marian Drusa, PhD., Ing. Miroslava Bendova, Ph.D., Ing. Milos Duraj, Ph.D., VSB-Technical University Ostrava, **Czech Republic** .....**339**
- 45. VERIFYING THE STABILITY OF A 28 M HIGH PILE – WALL FROM AN EXCAVATION SITE USING FINITE ELEMENT METHOD**, Ph.D. Student Beniamin SINGEORZAN, Ph.D. Student Clara Beatrice VILCEANU, Ph.D. Student Carla SCARLAT, Politehnica University of Timisoara, **Romania** .....**347**

## **SECTION "MINERAL PROCESSING"**

- 1. ACTIVATION OF NATURAL BENTONITE FROM THE SLOVAK DEPOSIT**, Tomas Schutz, Dr. Annamaria Mockovciakova, Dr. Zuzana Orolinova, Dr. Anna Zorkovska, Assoc. Prof. Pavol Hudec, Institute of Geotechnics, Slovak Academy of Sciences, **Slovakia** .....**357**

<b>2. DECOMPOSITION OF FLOTATION PROCESS – PRECONDITION FOR MATHEMATICAL MODELING</b> , Prof Dr Shyqri kelmendi, Prof Dr Izet Zeqiri, Mr Sci Rafet Zeqiri,, University of Prishtina, <b>Kosovo</b> .....	<b>365</b>
<b>3. HEAT TRANSFER IN ROTARY KILN FROM DEVA CEMENT FACTORY</b> , Assoc. Prof. Susana Arad, Prof. Victor Arad, University of Petrosani, <b>Romania</b> .....	<b>373</b>
<b>4. INFLUENCE OF CHANGES TECHNOLOGY IN THE MINE CSM STONAVA ON QUALITATIVE AND QUANTITATIVE INDICATORS.</b> , Ing. Vlastimil Repka, Ph.D., Ing. Petr Dospiva, Ing. Radim Repka, VSB - Technical university of Ostrava, <b>Czech Republic</b> .....	<b>381</b>
<b>5. INFLUENCE OF MULTIVALENT IONS FOR ELECTROKINETIC POTENTIAL OF QUARZ AND FELDSPAR</b> , Ing. Barbora Vaclavikova, prof. Ing. jiri Vidlar, CSc., RNDr. Vaclav Dombek, CSc., VSB-Technical University of Ostrava, <b>Czech Republic</b> .....	<b>387</b>
<b>6. INFLUENCE OF SODIUM ISOPROPYL XANTHATE ON THE RECOVERY OF COPPER AND PRECIOUS METALS FROM ORE DEPOSIT TENKA-3</b> , Mr Ivana Jovanovic, Dr Vladan Milosevic, Mr Dejan Tododrovic, Prof. dr Ljubisa Andric, Mr Zoran Bartulovic, Sonja Milicevic, Institute of Mining and Metallurgy Bor, <b>Serbia</b> .....	<b>395</b>
<b>7. LEACHING OF STRONTIUM SULFATE CONCANTRATE IN THE PRESENCE OF NITRIC ACID</b> , Dr. Ibrahim Utku Ermis, MTA (Mineral Research and Exploration) General Directorate, <b>Turkey</b> .....	<b>401</b>
<b>8. MECHANOCHEMICAL ACTIVATION OF BROWN COAL UNDER MILD ALKALINE LEACHING CONDITIONS</b> , Dr. Silvia Dolinska, Dr. Anton Zubrik, Dr. Michal Lovas, Dr.Ingrid Znamenackova, Dr. Marek Matik, Dr Ludmila Turcaniova, Institute of Geotechnics, Slovak Academy of Sciences, <b>Slovakia</b> .....	<b>409</b>
<b>9. NEW TECHNOLOGIES FOR GRANULAR MATERIALS THERMAL TREATMENT</b> , Imrich Kostial, Dusan Nascak, Jan Mikula, Jan Glocek, Technical University of Kosice, FBERG, VRP, <b>Slovakia</b> .....	<b>415</b>
<b>10. STUDY OF MAGNESIA -SPINEL BASED COMPOSITIONS DERIVED FROM DIFFERENT RATIOS OF PURE MAGNESIA/ALUMINA AND ADDITIVES</b> , P. Lampropoulou, C.Katagas, D.Papoulis, Geology Department, University of Patras, <b>Greece</b> .....	<b>425</b>

## **SECTION "OIL AND GAS EXPLORATION"**

<b>1. BIODEGRADATION OF OIL SLUDGE USING BACTERIAL ORGANISMS</b> , Ing. Hana Kasakova; Dr. Hana Vojtkova; Ing. Radim Jablonka, VSB - Technical University of Ostrava, <b>Czech Republic</b> .....	<b>435</b>
---	------------

---

<b>2. DETERMINATION OF THE OPTIMAL MIXTURES OF ROMANIAN CRUDES OIL FOR PROCESSING</b> , Assoc. Prof. Timur Chis, Ovidius University Constanta, <b>Romania</b> .....	<b>441</b>
<b>3. DEVELOPMENT OF ENHANCED COALBED METHANE SIMULATOR FOR COAL-BEARING FORMATION</b> , Dr. Sohei Shimada, The University of Tokyo, <b>Japan</b> .....	<b>449</b>
<b>4. HYDROCARBON NON-ECONOMIC ACCUMULATIONS AND SHOWS IN THE SOUTHERN PART OF CENTRAL NORTH BULGARIA</b> , Assistant Prof. Nikola Botoucharov, PhD, Софийски университет, <b>Bulgaria</b> .....	<b>457</b>
<b>5. INNOVATIVE METHOD OF HIGH-VISCOSITY OIL PRODUCTION</b> , Oryngozhin Ye.S., Moldabayeva G.Zh., Geology Of Petroleum And Gas, <b>Kazakhstan</b> .....	<b>463</b>
<b>6. INVESTIGATION AND EVALUATION OF HORIZONTAL WELLS</b> , Igembaev I. B., Geology Of Petroleum And Gas, <b>Kazakhstan</b> .....	<b>471</b>
<b>7. JOINING OF NON-ALLOYED STEEL PIPES USED IN INDUSTRIAL PRACTICE BY COLD METAL TRANSFER PROCESS</b> , Dr. Eng. Radu Alexandru Rosu, Assoc. Prof. Dr. Mihaela Popescu, Politehnica University of Timisoara, <b>Romania</b> .....	<b>481</b>
<b>8. MODELLING OF METHANE FLOW IN POROUS ENVIRONMENT WITH ONE ACTIVE DEGASSING BOREHOLE LOCATED IN THE CAVERN USING THE CFD PROGRAMME FLUENT</b> , Pavel Stasa, Vladimir Kebo, Vladimir Strakos, Petra Fuchsikova, VSB-technical University of Ostrava, <b>Czech Republic</b> .....	<b>487</b>
<b>9. ORGANIC GEOCHEMICAL PROPERTIES OF BINGOL KARLIOVA (East of TURKEY) COALS</b> , Assist. Prof. Orhan Kavak, Assoc. Prof. Selami Toprak, Dicle University, <b>Turkey</b> .....	<b>495</b>
<b>10. SOLID EXPANDABLE TUBULAR - SET TECHNOLOGY FOR DRILLING PROGRAMS</b> , Ing. Maria Jarolimova, Ing. Dagmar Cechova, Ph.D., Ing. Ondrej Cermak, Ing. Jaroslav Struna, Ing. Jiri Kostrhun, Ing. Kamil Ozana, VSB - Technical University of Ostrava, <b>Czech Republic</b> .....	<b>503</b>
<b>11. THE EFFICIENCY COMPARISON OF DEGASSING POROUS ENVIRONMENT BY TWO DIFFERENT OPTIONS OF DEGASSING USING MODELLING AND SIMULATION</b> , Pavel Stasa, Vladimir Kebo, Vladimir Strakos, Petra Fuchsikova, VSB-technical University of Ostrava, <b>Czech Republic</b> .....	<b>511</b>
<b>12. THE LABORATORY RESEARCH OF CO2 INFLUENCE TO CEMENT LABELS USED IN DRILLING INDUSTRY</b> , Martin Klempa, Michal Porzer, Petr Bujok, Jindrich Sancer, Petr Panek, VSB-Technical Univerzity of Ostrava, <b>Czech Republic</b> .....	<b>519</b>

**13. THE SECOND PALEOZOIC COAL OF TURKEY, DIYARBAKIR-HAZRO COALS AND THEIR PROPERTIES**, Assist. Prof. Orhan Kavak, Assoc. Prof. Selami Toprak, Dicle University, **Turkey** .....527

**SECTION "APPLIED AND ENVIRONMENTAL GEOPHYSICS"**

**1. AIRBORNE GEOPHYSICAL SURVEY IN THE REGION OF ARTANA (KOSOVO)**, MUSA SHABANI, Selim Frangu, Altin Karriqi, Qamil Suka, Halim Halili, Trepça, **Kosovo** .....537

**2. APPLICATION OF FINITE-DIFFERENCE REFRACTION MIGRATION TO STUDY OF THE EARTH CRUST STRUCTURE**, Dr. Oleksandra Verpakhovska, Prof. Vitalii Pilipenko, Elena Pylypenko, Institute of Geophysics of National Academy of Sciences of Ukraine, **Ukraine** .....545

**3. BACKGROUND NOISE MEASUREMENTS IN THE INDUSTRIAL AREA OF SULMONA, CENTRAL ITALY**, Dr. Alessio Rinaldini, Dr. Mariano Ciucci, Dr. Alessandra Marino, Dr. Sergio Bellagamba, Dr. Giuseppe Buccheri, INAIL, **Italy** ...555

**4. GEOELECTRICAL MEASUREMENTS WITH TERRAMETER SAS 1000**, Blagica Doneva, Marjan Delipetrev, Todor Delipetrov, Gjorgji Dimov, Faculty of Natural and Technical Sciences, **FYR of Macedonia** .....563

**5. GROUND OSCILLATIONS DURING STRONG EARTHQUAKES**, Assist. Prof. Dragan Zlatkov, Prof. Slavko Zdravkovic, Milovan Stanojev, Faculty of Civil Engineering and Architecture in Nis, **Serbia** .....569

**6. IMPACT OF OUTDOOR ENVIRONMENTAL HEALTH AWARENESS PROGRAM ON THE KNOWLEDGE, ATTITUDES, AND BEHAVIORS OF CHILDREN IN GAZA, PALESTINE**, Assoc. Prof. Dr. Abdelnaser Omran, Dr. Amal Sarsour, Dr. Yehia Abed, Dr. Abd. Hamid Kadir Pakir, University Sains Malaysia, **Malaysia** .....577

**7. INVESTIGATION OF THE BEHAVIOR OF A FULL SCALE STRUCTURE UNDER DYNAMIC LOAD INCLUDING INTERACTION SOIL-FOUNDATION**, Prof. Slavko Zdravkovic, Prof. Verka Prolovic, Assist. Prof. Dragan Zlatkov, Assist. Prof. Biljana Mladenovic, Nikola Romc, Faculty of Civil Engineering and Architecture in Nis, **Serbia** .....585

**8. MAGNETIC PARTICLES AND POLLENS IN INDOOR AND OUTDOOR SETTLED DUST FROM SEVERAL BULGARIAN CITIES – ENVIRONMENTAL IMPLICATIONS**, Ass. Prof. Petar Petrov, Rayna Yankova, Assoc. Prof. Diana Jordanova, Assoc. Prof. Neli Jordanova, Tsenka Tsacheva, НИИГГ, БАН, **Bulgaria** .....593

**9. MAGNETISM OF ROAD DUST FROM SIX BULGARIAN CITIES AS A TOOL FOR ENVIRONMENTAL MONITORING OF URBAN POLLUTION**,

Ass.Prof. Petar Petrov, Assoc. Prof. Neli Jordanova, Assoc. Prof. Diana Jordanova, BAS, **Bulgaria** .....601

**10. MASW TO MAP SHEAR-WAVE VELOCITY OF THE SOUTHERN KUMLUCA-ANTALYA**, Dr. Buket Ekinci, Gulsen Akan, Prof. M. Erkan Karaman, Prof. A. Ergun Turker, State Hydraulic Works, 13th Regional Directorate, 07098, Antalya, Turkey, **Turkey** .....609

**11. MODELS OF THE NORMAL GEOMAGNETIC FIELD IN THE REPUBLIC OF MACEDONIA**, Marjan Delipetrev, Blagica Doneva, Todor Delipetrov, Blagoj Delipetrev, Faculty of Natural and Technical Sciences, **FYR of Macedonia** .....615

**12. PRELIMINARY RESULTS OF DISPERSIVE WAVE VS MEASUREMENTS IN A GRANITIC URBAN ENVIRONMENT OF PORTO, PORTUGAL**, Assist. Prof. Rui Moura, Ruslan Umaraliev, Dr. Giancarlo Dal Moro, Prof. Fernando Noronha, Department of Geology - Faculty of Sciences of Porto University, **Portugal** .....625

**13. REGIONAL MODELS OF THE GEOPHYSICAL FIELDS IN THE REPUBLIC OF MACEDONIA**, Blagica Doneva, Krsto Blazev, Marjan Delipetrev, Todor Delipetrov, Gjorgi Dimov, Faculty of Natural and Technical Sciences, **FYR of Macedonia** .....635

**14. THE APPLICATION OF PIEZOELECTRIC TRANSDUCERS IN THE STRUCTURAL HEALTH MONITORING OF REINFORCE CONCRETE STRUCTURES**, Prof. dr Dragoslav Stojic, Prof. dr Tamara Nestorovic, Nemanja Markovic, Faculty of Civil Engineering and Architecture, **Serbia** .....641

**15. THE DETERMINATION OF THE DYNAMIC ELASTIC MODULI BY MASW AND SEISMIC REFRACTION METHOD**, Dr. Buket Ekinci, State Hydraulic Works, 13th Regional Directorate, **Turkey** .....649

**16. THE EMPIRICAL RELATIONSHIPS BETWEEN DYNAMIC PENETRATION TEST (DPT) AND SEISMIC VELOCITIES**, Dr. Osman UYANIK, Dr. N. Ayten UYANIK, Dr. Buket EKINCI, State Hydraulic Works, 13th Regional Directorate, **Turkey** .....655

**17. WHAT ARE THEY: EDDIES OR WAVES?** Dr. Tatyana Belonenko, Prof. Dr. Victor Foux, Saint Petersburg State University, **Russia** .....661

**SECTION "GEODESY AND MINE SURVEYING"**

**1. 3D MODELLING USING LASER SCANNING TECHNOLOGY**, Ph.D. Stud. Maria- Roberta Gridan; Assoc. Prof. Carmen Grecea, Politehnica Timisoara, **Romania**.....671

**2. ANALYZING THE ACCURACY OF STABLE CADASTRE NETWORK FROM THE PERSPECTIVE OF CURRENT USE**, Ing. Hana Stankova;, Ph.D., Ing.

Pavel Cernota, Ph.D., Ing. Ondrej Matas, Ing. Jiri Pospisil, Ing. Lucie Pospisilova, VSB-Technical University of Ostrava, **Czech Republic**.....677

**3. ASPECTS REGARDING THE USE OF GNSS TECHNOLOGY IN LOCAL NETWORKS IN ROMANIA AND COMPARATIVE STUDY WITH THE USE OF THE ROMANIAN POSITION DETERMINATION SYSTEM (ROMPOS)**, Phd. Gabriel Badescu; Phd. Stud.Rodica Badescu, Prof. Marcel Darja, Prof. Mircea Ortelecan, Assoc. Prof. Ovidiu Stefan, Assoc. Prof. Nicolae Pop. Phd. Stud. Tudor Salagean, Technical University of Cluj Napoca, Baia Mare University Center North, **Romania** .....685

**4. AZIMUTH DETERMINATION AND ANALYSIS ON THE REPEAT STATIONS NETWORK IN CROATIA**, MSc. Danijel Sugar, Prof. Dr. Tomislav Basic, Prof. Dr. Zeljko Bacic, Faculty of Geodesy, **Croatia (Hrvatska)** .....693

**5. CONSIDERATIONS IN MAKING TOPOGRAPHIC SUPPORT NETWORK IN UNDERGROUND**, Assoc. prof. Ovidiu Stefan, lect. Gabriel Badescu, Technical University Cluj-Napoca University Center North Of Baia Mare, **Romania** ..... 701

**6. DEFORMATION MONITORING WITH TERRESTRIAL LASER SCANNING: MEASUREMENT AND PROCESSING OPTIMIZATION THROUGH EXPERIENCE**, MSc. Timothy Nuttens, Prof. Dr. ir. Alain De Wulf, Prof. Dr. ir. Greet Deruyter, MSc. Cornelis Stal, Ghent University, Department of Geography, **Belgium** .....707

**7. DETERMINATION OF EXTENT OF THE SUBSIDING AREAS IN THE CZECH PART OF UPPER SILESIAN BASIN**, Pavel Kadlecik, Vlastimil Kajzar, Tomas Marek, Charles University in Prague, Faculty of Science, **Czech Republic** ...715

**8. DISPLACEMENT AND DEFORMATION ANALYSIS FOR HYDROPOWER BUILDINGS**, Assist. Lecturer Alexandra Popa, Prof. Maricel Palamariu, 1 Decembrie 1918 University of Alba Iulia, **Romania** .....723

**9. EVALUATION OF COSTS OF THE BASIC GEODETIC SURVEYS CARRIED OUT DURING THE DEPOSITION OF REMNANTS OF UNUSED ENERGY BY-PRODUCTS OF CEZ THERMAL POWER STATIONS**, Ing. Alena Strakova/Ing. Yveta Tomaskova, Ph.D., VSB - TU Ostrava, **Czech Republic** .....731

**10. FINDINGS FROM NEW MONITORING TECHNIQUES USED ON SIDE SLOPES OF THE BROWN COAL MINE CSA. LITVINOVSKA UHELNA A.S. – REFLECTORLESS MEASUREMENT**, Doc. Ing. Milan Mikolas, Ph.D., Ing. et Ing. Josef Blin, Ing. Pavel Bartak, Ph.D., Ing. Pavla Foitova Dernerova, Ing. Ondrej Cermak, Ing. Jiri Kostrhun, VSB - Technical University of Ostrava, **Czech Republic** .....739

**11. INTRODUCING THE GIS CONCEPT IN CASE OF THE MINING CADASTRE IN ROMANIA**, Lecturer Magdolna Eva Koncsag, Assistant Lecturer Alexandra Popa, 1 December 1918 University Alba Iulia, **Romania** .....747

<b>12. MEASUREMENT OF GEOMETRY AND CHECKING OF ALIGNMENT OF THE MAIN MINE VENTILATOR DRIVE IN THE CSM – SOUTH MINE BY MEANS OF LASER MEASUREMENT</b> , doc. Ing. Milan Mikolas, Ph.D., Ing. Rostislav Dandos;, Ing. Jiri Pospisil, Ing. Marie Subikova, Ing. Ondrej Matas, VSB-Technical University of Ostrava, <b>Czech Republic</b> .....	<b>755</b>
<b>13. METHODS OF DETECTING THE UNDERGROUND INFRASTRUCTURE OBJECTS</b> , Assist. Prof. Dr. Mladen Zrinjski, Assoc. Prof. Dr. Djuro Barkovic, Sergej Baricevic, Meng Geod. Et Geoinf., Faculty of Geodesy, <b>Croatia (Hrvatska)</b> .....	<b>763</b>
<b>14. ROMANIAS ALIGNMENT WITH EUROPEAN STANDARDS IN GEODESY</b> , Assistant Eng. Clinci Tudorel Silviu, Lecturer Eng. Badea Ana-Cornelia, PhD, Assoc. Prof. Eng. Badea Gheorghe, PhD, Tehnical University of Civil Engineering Bucharest-Faculty of Geodesy, <b>Romania</b> .....	<b>771</b>
<b>15. STUDY ON THE SURFACE INSTABILITY OF THE SALT EXPLOITATION IN OCNA MURES AREA</b> , Prof. Victor Arad, Assoc. Prof. Ioel Veres, Assoc Prof. Susana Arad, Raluca Rotaru Ph. D. Student, University of Petrosani, <b>Romania</b> .....	<b>779</b>
<b>16. GYROTHEODOLITE ZERO TORSION POSITION AND ITS EFFECT ON AZIMUTH PINPOINT DURING THE CONNECTING SURVEYS AND ORIENTATION MEASUREMENTS</b> , Ing. Jitka Muckova, Ph.D., Ing. Pavel Cernota Ph.D., Ing.Pavel Bartak, Ph.D., VSB - Technical University of Ostrava, Faculty of Mining and Geology, <b>Czech Republic</b> .....	<b>787</b>
<b>17. TERRESTRIAL LASER SCANNING USED FOR 3D MODELING</b> , PhD. Eng. Ioan Sorin Herban, PhD. Student Eng. Clara Beatrice Vilceanu, Politehnica University of Timisoara, <b>Romania</b> .....	<b>795</b>
<b>18. TESTING OF MEASURING FREQUENCY OF ELECTRO-OPTICAL DISTANCE METERS</b> , Assoc. Prof. Dr. Djuro Barkovic, Assist. Prof. Dr. Mladen Zrinjski, Martina Pesa, Meng Geod. Et Geoinf., Faculty of Geodesy, <b>Croatia (Hrvatska)</b> .....	<b>805</b>
<b>19. THEORETICAL CONSIDERATIONS ON THE ZONES OF INFLUENCE OVER THE TOPOGRAPHY OF THE TAILINGS DAM NO.2 FROM VALEA MICA, ZLATNA TOWN, ALBA COUNTY</b> , Eng. Balaneanu Flavius PhD. St., Eng. Balaneanu Ecaterina PhD. St., Prof. Arad Victor PhD., University Of Petrosani, <b>Romania</b> .....	<b>813</b>
<b>20. USING MODERN TOPO-GEODETIC TECHNOLOGIES IN THE PROCESS OF MONITORING BUILDING'S DEFORMATIONS</b> , Asisstant PhD. Floarea Maria Brebu/Asisstant PhD. Radu Bertici/Asisstant PhD. Alina Corina Bala, Politehnica University of Timisoara, <b>Romania</b> .....	<b>821</b>
<b>21. USING TERRESTRIAL LASER SCANNING TECHNOLOGIES FOR HIGH CONSTRUCTION MONITORING</b> , Asisst. PhD. Alina Corina Bala, Assist. PhD.	

Floarea Maria Brebu, PhD. St. Anca-Maria Moscovici, Politehnica University of Timisoara, **Romania** .....829

**22. VERIFICATION OF PARAMETERS OF TOTAL STATION ACCURACY BY DISTANCE MEASUREMENT WITH A PASSIVE REFLECTION**, Ing. Pavel Franek, Ing. PhD. Pavel Cernota, Ing. PhD. Hana Stankova, Assoc.Prof. Dr. Ing. Zdenek Neustupa, Mgr. Hana Frankova, VSB - Technical University of Ostrava, **Czech Republic** .....837

**SECTION "PHOTOGRAMMETRY AND REMOTE SENSING"**

**1. COMPARISON OF RESULTS OF DIFFERENT POLARIMETRIC SAR DATA DECOMPOSITION PROCEDURES**, Msc Jacek Strzelczyk, PhD Stanislaw Porzycka, AGH University of Science and Technology, **Poland** .....847

**2. COMPARISON OF SOIL PROPERTIES ESTIMATION FROM MULTI-RESOLUTION SATELLITE IMAGES**, Assoc. Prof. Borislav D. Marinov, Assoc. Prof. Margarita P. Mondeshka, UACG, **Bulgaria** .....855

**3. DIGITAL PHOTOGRAMMETRY FOR PRODUCTION OF TOPOGRAPHIC MAPS AND ORTHOPHOPLANS**, PhD Student Vanya Petrova, UACG, **Bulgaria** .....863

**4. DOCUMENTATION OF HISTORICAL BUILDINGS WITH TERRESTRIAL LASER SCANNING METHOD: THE CASE STUDY OF ARMENIAN CHURCH IN SIVRIHISAR, IN ESKISEHIR-TURKEY**, Res. Assist. Resul Comert, Res. Assist. Dr. Ugur Avdan, Emre Senkal, Anadolu University, **Turkey** .....871

**5. ORTOFOTOMAPS USE AND SYSTEM GNSS POSITION DETERMINATION ROMPOS PROJECT MANAGEMENT MINE CLOSURE IN MARAMURES COUNTY**, Phd.Gabriel Badescu; Phd. Stud.Rodica Badescu; Prof. Darja, Marcel;Prof.Ortelean, Mircea; Associate Professor Ovidiu Stefan; Technical University of Cluj Napoca, Baia Mare University Center North, **Romania** .....879

**6. PHOTOGRAMMETRIC METHOD FOR GEOMORPHOLOGICAL MODELLING. A BASE KNOWLEDGE FOR PROPOSALS FUTURE PROJECTS OF RESTORATION AND RECLAMATION OF AN ABANDONED MINE SITE IN SARDINIA (ITALY).**, Dr. Maddalena Fiori, Dr. Carlo Matzuzzi, Italian National Council of Researches, **Italy** .....887

**7. PRELIMINARY RESULTS OF GROUND DEFORMATIONS MONITORING WITHIN MINING AREA OF "PROSPER-HANIEL" COAL MINE**, Stanislaw Porzycka, Jacek Strzelczyk, AGH University of Science and Technology, **Poland**.....895

**8. STATISTICAL COMPARISON OF URBAN 3D MODELS FROM PHOTO MODELING AND AIRBORNE LASER SCANNING**, MSc. Cornelis Stal, Prof. Dr. ir. Alain De Wulf, Prof. Dr. Philippe De Maeyer, Prof. Dr. Rudi Goossens, MSc. Marijn

Hendrickx, MSc. Timothy Nuttens, Dr. Frederik Tack, Ghent University, Department of Geography, **Belgium** .....901

**9. UAV PHOTOGRAMMETRY IN FLUVIAL GEOMORPHOLOGY**, MSc. Jakub Mirijovsky, MSc. Ales Vavra, Palacky University in Olomouc, **Czech Republic** ....909

**10. USING DIGITAL FILTERS FOR IMAGE VECTORIZATION**, Assoc. Prof. Dr. Plamen Maldzhanski, UACG, **Bulgaria** .....917

## **SECTION "CARTOGRAPHY AND GIS"**

**1. 3D MODELING OF THE HISTORICAL BUILDINGS AND ARCHEOLOGICAL SITES**, Assoc. Prof. Dimen Levente, Lecturer Borsan Tudor, Lecturer Herban Sorin, 1 Decembrie 1918, University of Alba Iulia, **Romania** .....925

**2. 3-DIMENSIONAL MODELING FOR ASSESSMENT OF THE TOURISTIC POTENTIAL**, Lecturer PhD. Eng. Ioan Sorin Herban, PhD. Student Eng. Adrian Alionescu, Politehnica University of Timisoara, **Romania** .....933

**3. ADVANCED PROCEDURE FOR GERMAN WIDE HIGH RESOLUTION MONITORING OF SETTLEMENT DEVELOPMENT ON BASIS OF TOPOGRAPHICAL GEODATA SETS**, Dr. Gotthard Meinel, Leibniz Institute of Ecological Urban and Regional Development, **Germany** .....939

**4. ANALYSIS AND STRUCTURAL MODELING OF NATIONAL ADDRESSING SYSTEMS**, Perparim Ameti, Ymer Kuka, Besim Ajvazi, Milaim Sylka, University of Prishtina, **Kosovo** .....949

**5. ANALYSIS OF SUBURBAN PROCESSES ON THE EXAMPLE OF CITY OF PRAGUE (CZECH REPUBLIC)**, Dipl. Ing. Milan Marsalek, Dipl. Ing. Katerina Krovakova, Ass. Prof. Katerina Berchova, Ph.D., Ass. Prof. Jan Skalos, Ph.D., Marketa Nemcova, Czech University of Life Sciences Prague - Faculty of Environmental Sciences, **Czech Republic** .....957

**6. APPLICATION OF GIS TO THE MODEL OF THE OLD MINING OBJECTS AND THEIR EXPLOITATION IN TOURISM**, Ing. Ladislav Hvizdak, PhD., Mgr. Mario Molokac, PhD., TUKE F BERG, **Slovakia** .....965

**7. APPLICATION OF TOPOLOGICAL RULES AND SPATIAL ANALYSIS FOR IDENTIFICATION OF CADASTRAL ISSUES**, Assistant Eng. Clinci Tudorel Silviu, Lecturer Eng. Badea Ana-Cornelia, PhD, Associate Professor Eng. BADEA GHEORGHE, PhD, Tehnical University of Civil Engineering Bucharest-Faculty of Geodesy, **Romania** .....973

**8. APPLICATION OF FUZZY LOGIC FOR LOCATION SELECTION IN REGULATION PLAN**, M.Sc. Jusuf Topoljak, Prof. Dr. Zikrija Avdagic, Dr. Almir

Karabegovic, Faculty of Civil Engineering University of Sarajevo, **Bosnia and Herzegovina** .....**981**

**9. CARTOGRAPHIC EVALUATION OF TOWN PLANS**, Mgr. Barbora Hladisova, Ing. Zdena Dobesova, Ph.D., Palacky University, **Czech Republic** .....**989**

**10. CONSTITUTE WORKING FOR THE DEVELOPMENT OF URBAN INFORMATION SYSTEM OF OSMANIYE AND AN OVERVIEW OF THESE SYSTEMS**, DSc Ceren Avci, Assist. Prof. Dr. S. Savas Durduran, Selcuk university, **Turkey** .....**997**

**11. DAMAGE ASSESSMENT AND 3D VISUALIZATION: AN EXAMPLE OF THE STEP PYRAMID, EGYPT**, Prof. Valdis Seglins, Dr.stud. Agnese Kukela, University of Latvia, **Latvia** .....**1005**

**12. ECOTONES - CHALLENGE IN VISUALISATION OF LANDSCAPE HETEROGENEITY**, Jan Brus, Vilem Pechanec, Helena Kilianova, Palacky University, **Czech Republic** .....**1013**

**13. ENTERPRISE SERVICE BUS FOR GEOWEB SERVICES**, Jan Ruzicka, Katerina Ruzickova, VSB - Technical University of Ostrava, **Czech Republic**.....**1021**

**14. EVALUATION OF SELECTED FLOOD EVENTS IN THE SLOVAK REPUBLIC IN THE ENVIRONMENT OF GEOGRAPHICAL INFORMATION SYSTEMS**, MSC.Marcela Gergeloa, PhD, Assoc. prof. Zofia Kuzevicova, PhD., Assoc. prof. Stefan Kuzevic, PhD., Assoc. prof. Erik Weiss, PhD., MSc. Branislav Krsak, PhD., Technical University of Kosice, **Slovakia** .....**1029**

**15. EVOLUTION OF REAL ESTATE ADVERTISING IN ROMANIA**, Lecturer Ph.D.Nemes I., Lecturer Ph.D. Barliba Luminita Livia, Lecturer Ph.D. Barliba C., USAMVB Timisoara Romania, **Romania** .....**1035**

**16. EYE-TRACKING METHODS FOR INVESTIGATION OF CARTOGRAPHIC PRINCIPLES**, Mrg. Alzbeta Brychtova, Mgr. Stanislav Popelka, Ing. Zdena Dobesova, Ph.D., Palacky University, **Czech Republic** .....**1041**

**17. FUZZY APPROACH OF RURAL AND URBAN AREAS DELIMITATION MODELING IN GIS**, MSc. Vit Paszto, MSc. Lukas, Marek, BSc. Jiri Sedonik, Department of Geoinformatics, Palacky University in Olomouc, **Czech Republic**.....**1049**

**18. GIS – AN EFFICIENT SUPPORT FOR URBAN PLANNING – FRAMEWORK OF TIMISOARA, ROMANIA**, Assoc. Prof. PhD. Eng. Carmen Grecea, PhD. Eng. Cosmin Constantin Musat, PhD. St. Eng. Clara Beatrice Vilceanu, Politehnica University of Timisoara, **Romania** .....**1057**

**19. GIS AND CARTOGRAPHY FOR BIOCLIMATOLOGICAL RESEARCH: ATLAS OF PHENOLOGICAL CONDITIONS OF CZECHIA**, Ales Vavra, Dr.

Alena Vondrakova, Lenka Hajkova, Dr. Vit Vozenilek, Palacky University in Olomouc, <b>Czech Republic</b> .....	<b>1065</b>
<b>20. GIS OF PRECIOUS METAL DEPOSITS OF THE MAGADAN REGION: DEVELOPMENT AND CREATION</b> , Dr. Irina Golubenko, North-East Interdisciplinary Scientific Research Institute of Far East Branch of the RAS, <b>Russia</b> .....	<b>1073</b>
<b>21. INTEGRATION AND DISTRIBUTION OF 2D AND 3D GEOSPATIAL DATA USING MULTIMEDIA TOOLS</b> , Assoc. Prof. Slobodanka Kljucanin , Mirza Ponjavic, Faculty of Civil Engineering, University of Sarajevo, <b>Bosnia and Herzegovina</b> .....	<b>1079</b>
<b>22. LAND USE EVOLUTION, CHANGE AND OPTIMIZATION; A CASE STUDY FROM CEBOVSKY POTOK UPPER RIVER-BASIN</b> , Ivan Mudron, Michal Podhoranyi, Juraj Cirbus, Branislav Devecka, Pavel Belaj, Pavel Kukuliac, VSB - Technical University Ostrava, <b>Slovakia</b> .....	<b>1087</b>
<b>23. MANAGING SPATIAL DATA REGARDING THE ROMANIAN ROAD NETWORK USING GIS TECHNOLOGY</b> , Lecturer Ph.D. Ioan Sorin HERBAN, Associate Professor Ph.D. Carmen GRECEA, Associate Professor Ph.D. Levente DIMEN, Politehnica University of Timisoara, <b>Romania</b> .....	<b>1095</b>
<b>24. MAP DRAWING OF THE SOCIO-HUMAN REALITIES.CASE STUDY – THE PERCEPTION OF THE RURAL LIFE</b> , Assist. Nadia-Elena Vacaru, University ”Al. I. Cuza”, Iasi, <b>Romania</b> .....	<b>1103</b>
<b>25. MAPPING THE USE OF RENEWABLE ENERGY IN THE TERRITORY OF THE KOSICE SELF-GOVERNING REGION</b> , Assoc. prof. Zofia Kuzevicova, PhD., MSc. Marcela Gergelova, PhD., MSc. Branislav Krsak, PhD., Assoc. prof. Stefan Kuzevic, PhD., MSc. Ladislav Mixtaj, PhD., Technical University of Kosice, <b>Slovakia</b> .....	<b>1111</b>
<b>26. NON-CONTACT CONTROL OF MAPS BY SIGHT ONLY</b> , Rostislav Netek, Dept. of Geoinformatics, Palacky University in Olomouc, <b>Czech Republic</b> .....	<b>1117</b>
<b>27. PHENOLOGICAL ANALYSIS OF THE LANDSCAPE WITH THE SUPPORT OF GEOGRAPHIC INFORMATION TECHNOLOGIES</b> , dr. Vilem Pechanec, Ales Vavra, dr. Jana Svobodova, dr. Jakub Mirijovsky, Palacky University in Olomouc, <b>Czech Republic</b> .....	<b>1125</b>
<b>28. RELIEF DEPICTION OF GRASSLANDS IN BANAT AREA IN VIEW OF THEIR MANAGEMENT</b> , Lecturer Ph.D. Barliba C.,Lecturer Ph.D. Barliba Luminita Livia, Lecturer Ph.D.Nemes I., Associate Ph.D.Popescu C., USAMVB Timisoara Romania, <b>Romania</b> .....	<b>1133</b>

- 29. SOCIAL NETWORK ANALYSIS OF SPATIAL DATA: THE CASE OF KONYA**, Assist. Prof. Dr. S. Savas Durduran, DSc Ceren Avci, Selcuk university, **Turkey** .....1139
- 30. SOME ELEMENTS OF PROJECT MANAGEMENT USING DEDICATED SOFTWARE IN THE LAND SURVEYING WORKS**, Lecturer Eng. Badea Ana-Cornelia, PhD, Associate Professor Eng. Badea Gheorghe, PhD, Assistant Eng. Clinci Tudorel Silviu, Technical University of Civil Engineering - Faculty of Geodesy, **Romania** .....1147
- 31. SPATIAL ANALYSES OF EPIDEMIOLOGICAL DATA: CASE STUDY IN OLOMOUC REGION**, MSc. Lukas Marek, MSc. Vit Paszto, MSc. Pavel Tucek, PhD., Department of Geoinformatics, Palacky University in Olomouc, **Czech Republic**.....1155
- 32. STUDIES OF FORMING INFORMATION SYSTEM OF SULEYMAN DEMIREL UNIVERSITY ULUBORLU SELAHATTIN KARASOY VOCATIONAL SCHOOL**, S. Savas Durduran, Sadi Tulu, Saban Inam, Erhan Sener, Suleyman Demirel University, **Turkey** .....1163
- 33. THE APPLICABILITY OF THE MODEL THREE DIMENSIONAL SURVEYING FOR THE PROTECTION OF HISTORICAL AND CULTURAL HERITAGE: AN EXAMPLE OF THE PROVINCE OF KONYA SILLE**, DSc. Sercan Bulbul, DSc. Ceren Avci, Selcuk Universty, **Turkey** .....1169
- 34. THE INFLUENCE OF OBSERVER LINE GEOMETRY ON RESULTS OF VISIBILITY ANALYSIS**, Katerina Ruzickova, Jan Ruzicka, Juraj Cirbus, VSB - Technical University of Ostrava, **Czech Republic** .....1177
- 35. THE THREE-DIMENSIONAL MAP FOR THE BLIND AND VISUALLY IMPAIRED PEOPLE**, Assoc. Prof. Slobodanka Kljucanin, Elvedin Kasumovic, Faculty of Civil Engineering, University of Sarajevo, **Bosnia and Herzegovina** .....1185
- 36. USING GIS ANALYSIS IN TRANSPORTATION NETWORK**, Lecturer Herbei Mihai Valentin, Lecturer Nemes Iacob, University of Agricultural Sciences and Veterinary Medicine Timisoara, **Romania** .....1193
- 37. USING GIS FOR STRATEGIC ENVIRONMENTAL ASSESSMENT (CASE STUDY: CLUJ-NAPOCA METROPOLITAN AREA, ROMANIA)**, Assoc. Prof. Muntean Liviu, Lecturer Mihaiescu Radu, Assoc. Prof Dimen Levente, 1 Decembrie 1918, University of Alba Iulia, **Romania** .....1201