CONTENTS

SECTION "INFORMATICS"

1. A SIMPLE MONITORING SOLUTION FOR LIGNITE MINING PIT, Assit. Constantin Cercel, Assoc. Prof. Florin Grofu, Constantin Brancusi University of Tirgu Jiu, Romania .......................................................... 1

2. ACQUISITION AND CONTROL SYSTEM FOR THE PNEUMATIC TRANSPORT OF FLYASH, Assoc. Prof. Dr. Eng. Grofu Florin, MSc. Eng. Nicusor-Fanel Ciutura, "Constantin Brancusi" University of Targu-Jiu, Romania ............................ 9

3. ANALYSIS OF VIDEO-RECORDING AND OBJECT TRACKING EVALUATION, doc. Ing. Lacezar Licev, CSc., Ing. Marek Babiuch, PhD., Prof. Ing. Radim Farana, CSc., Department of Computer Science, Czech Republic .................. 17

4. ANOTHER PARTITIONING TOOL FOR VERTICAL FRAGMENTATION IN DISTRIBUTED DATABASES, Lect. Adrian Runceanu, Lect. Marian Popescu, Constantin Brancusi University of Tirgu Jiu, Romania .......................................... 25

5. APPLICATION OF RFID TECHNOLOGY FOR THE TRACKING OF THE CUSTOMER MOVEMENT IN THE SHOPPING STORES AREA, Filip Benes, Vladimir Kebo, Jirí Svub, VSB-technical University of Ostrava, Czech Republic ...... 33

6. APPLICATION OF THE RFID TECHNOLOGY IN THE FIELD OF GUN MANAGEMENT FOR THE POLICE OF THE CZECH REPUBLIC, Filip Benes, Vladimir Kebo, Jiri Svub, VSB-technical University of Ostrava, Czech Republic .... 41

7. BEST PRACTICES IN DESIGN OF A BROWNFIELD REVITALIZATION PROJECT DATABASE, Ing. Roman Danel PhD., Assoc. Prof. Ing. Barbara Stalmachova CSc., Assoc. Prof. Dr. Ing. Zdenek Neustupa, VSB - Technical University of Ostrava, Czech Republic .................................................. 49

8. COMPUTER VISUALIZATION AS A TOOL OF THE LEVEL INCREASING OF TECHNOLOGICAL PROCESS, Eng. Adrian Harcar, FMT TUKE with seat in Presov, Slovakia ........................................................................... 57

9. CONTROL SYSTEM FOR "ROTARY INVERTED PENDULUM" DESIGNED BY LQR METHOD AND LYAPUNOV DIRECT METHOD, Lecturer Popescu Ion Marian, Lecturer Runceanu Adrian, Jr. Assist. Alina Dinca, Constantin Brancusi University of Targu Jiu, Romania ................................................................. 65

10. CREATING OF ANNUAL WORK PLAN IN THE SLOVMAG COMPANY LUBENIK, Ing. Dusan Dorcak, PhD., Technical university Kosice, Slovakia .................. 73

11. CREATION OF BROWNFIELD RESTORATION MODELS, Assoc. Prof. Dr. Ing. Zdenek Neustupa, Ing. Roman Danel PhD., Assoc. Prof. Ing. Barbara Stalmachova, CSc., VSB - Technical University of Ostrava, Czech Republic ............................................ 81
12. DETERMINATION OF DEFORMATIONS IN A STRUCTURE ELEMENT MADE OF STRATIFIED COMPOSITE MATERIALS IN DYNAMIC REGIMEN, PhD. ing. Florentina Tocu/ PhD. ing. Oana-Mirela Dobrot/ Prof.dr.ing. Costel Iulian Mocanu, University Dunarea de Jos, Galati, Romania........................................87

13. INFORMATION TECHNOLOGY USABILITY IN DESTINATION MANAGEMENT OF PIENINY, Ing. Beata Stehlikova, PhD., Doc. Ing. Pavel Horovcak, CSc., Ing. Marcela Taušová, Technical University of Kosice, Faculty BERG, Slovakia..........................................................95

14. ELECTRONIC REALIZATION OF THE FRACTIONAL-ORDER SYSTEM, Lubomir Dorcak, Jan Terpak, Ivo Petras, Juraj Valsa, Pavel Horovcak, Emmanuel Gonzalez, Faculty BERG, Institute of Control and Informatization of Production Processes, TU Kosice, Slovakia.........................................................103

15. EXPERIMENTAL MODULE FOR TRAINING WITH NETWORK ANALYZER, Assoc.Prof. Florin Grofu, Assist.Constantin Cercel, Constantin Brancusi University of Tirgu Jiu, Romania..................................................111

16. THE EXPERT SYSTEM FOR BROWNFIELD REVITALIZATION PROJECTS, Assoc. Prof. Ing. Barbara Stalmachova, CSc., Assoc. Prof. Dr. Ing. Zdenek Neustupa, Ing. Roman Danel PhD., VSB - Technical University of Ostrava, Czech Republic..........................................................119

17. EXPLOITATION OF CAD/CAM SYSTEM AT THE ROBOT WORKSPACE DEFINITION, Assoc. prof., Eng. Katarina Monkova, PhD., Assoc. prof., Eng. Peter Monka, PhD., FMT TUKE with seat in Presov, Slovakia........................................................125

18. FLEXIBLE PLAN IN THE SLOVMAG COMPANY LUBENIK, Ing. Dusan Dorcak, PhD., Technical university Kosice, Slovakia..................................................131

19. GRAPHICAL WEB PRESENTATION OF THE THERMOCHEMICAL PROPERTIES WITH WEBSERVICE, Horovcak Pavel, Terpak Jan, Faculty BERG, Institute of Control and Informatization of Production Processes, TU Kosice, Slovakia..........................................................139

20. IDENTIFICATION OF SUBSTANCE AND ITS PHASES FOLLOWING CHEMICAL FORMULA IN WEB SERVICE, Doc. Ing. Pavel Horovcak, CSc., Ing. Beata Stehlikova, PhD., Technical University of Kosice, Faculty BERG, Slovakia.................................................................147

21. MATLAB INTERFACE FOR WEB SERVICE PROVIDING THE THERMOCHEMICAL DATA, Terpak Jan, Horovcak Pavel, Monika Zecova, Faculty BERG, Institute of Control and Informatization of Production Processes, TU Kosice, Slovakia..........................................................155
22. MODELING OF MEASURED AND CALCULATED VALUES OF CAPTURED OBJECTS IN IMAGES, doc. Ing. Lacezar Licev, CSc., Ing. Marek Babiuch, PhD., prof. Ing. Radim Farana, CSc., Department of Computer Science, Czech Republic.....................................................................................................................163

23. MONITORING AND DIAGNOSIS OF TEMPERATURE VARIATIONS IN VARIOUS SOLID BODIES BASED ON THERMOGRAPHIC IMAGE PROCESSING, Jr. Assist. Alina Dinca, Constantin Brancusi University of Targu Jiu, Romania........................................................................................................................................171

24. NUMERICAL SYSTEM FOR MEASURING OF Vulcanization TIME, Ilie Borcosi, Nicolae Antonie, Constantin Brancusi University of Tirgu Jiu, Romania.................................................................................................................................177

25. ONLINE MONITORING AND DIAGNOSIS OF THE LIQUID LEVEL IN A TANK THROUGH THERMOGRAPHIC IMAGE PROCESSING, Jr. Assist. Alina Dinca, Assist. Daniela-Lavinia Nebunu, Lecturer Popescu Ion Marian, Constantin Brancusi University of Targu Jiu, Romania..................................................................................................................185

26. OPEN SOURCE HARDWARE AS A FRAMEWORK, Tovarnitchi M. Vasile, Polytechnic University of Bucharest, Romania.................................................................................................................................193

27. PARALLEL INVERSION OF GEOELECTRICAL DATA WITH CLUSTER UNITS AND GRAPHICS PROCESSING UNITS, Anna Pieta, Justyna Bala, AGH - University of Science and Technology, Poland............................................................................................................................199

28. PREREQUISITES FOR THE IMPLEMENTATION OF INFORMATION TECHNOLOGIES IN TOURISM SMALL AND MEDIUM-SIZED ENTERPRISES, Branislav Krsak, Alica Tobisova, Technical University of Kosice, Faculty BERG, Slovakia.................................................................................................................................205

29. PROCESSES MODELLING, WEB SERVICE, AND CLIENT TECHNOLOGIES, Horovcak Pavel, Terpak Jan, Dorcak Lubomir, Faculty BERG, Institute of Control and Informatization of Production Processes, TU Kosice, Slovakia.................................................................................................................................213

30. PROGRAM FOR CALCULATING THE BOUNDARY LAYER THICKNESS AROUND A SHIP'S HULL, Phd. Student. Nicoleta-Gabriela Rodicichin, Prof. Dr. Viorel Andrei, Dunarea de Jos University, Romania.................................................................................................................................219


32. SUGGESTION OF GROUP REPRESENTATIVE WITH REGARD OF PLANT'S PRODUCTION PROGRAM, Assoc. prof., Eng. Katarina Monkova, PhD., Assoc. prof., Eng. Peter Monka, PhD., FMT TUKE with seat in Presov, Slovakia....231
33. SYSTEM AS A BASIC TOOL IN SOLUTION OF TASKS ON THE BASIS OF SYSTEM SCIENCE KNOWLEDGE BASE AND INFORMATICS, Prof. Igor Lesso/Dr. Patrik Flegner/MSc. Katarina Feriancikova, Technical University of Kosice, Slovakia.................................................................237

34. THE IMPACT BEHAVIOUR OF PLANE AND CURVED COMPOSITE MATERIAL PLATES WITH OR WITHOUT REINFORCEMENTS, Prof.dr.ing. Costel Iulian Mocanu/ PhD.ing. Florentina Tocu/ PhD.ing. Oana-Mirela Dobrot, University Dunarea de Jos, Galati, Romania.................................................................245

35. THE INFLUENCE OF THE VARIATION OF THE INCIDENCE WAVE ANGLE OF AN OFFSHORE STRUCTURE LEGS, Phd. ing. Oana-Mirela Dobrot/ Phd.ing. Florentina Tocu/ Prof. dr. ing. Costel Iulian Mocanu, University Dunarea de Jos Galati, Romania.................................................................253

36. THE MATHEMATICAL MODELING OF BIOMIMETIC STRUCTURES USING FUZZY LOGIC, Marian Ionescu, Constantin-Cristinel Vilan, Ilie Borcosi, Constantin Brancusi University of Tirgu Jiu, Romania.................................................................261

37. THE SIMULATION OF CYCLIC CODES USING MATLAB SIMULINK SIMULATION PROGRAMMING ENVIRONMENT, Lecturer Borcosi Ilie, Assistent Daniela-Lavinia Nebunu, Constantin Brancusi University of Targu Jiu, Romania.................................................................269

38. THE USEFULNESS ASSESSMENT OF AN ASSISTIVE SOFTWARE THROUGH ITS ACCESSIBILITY AND USABILITY FEATURES, PhD Student Lecturer Narcisa Isaila, "Dimitrie Cantemir" Christian University, Romania.................................................................277

39. THREE-DIMENSIONAL MODELING OF THE SESAMOID BONES, Hatice Catal/ Assis. Prof. Ozsen Corumluoglu, Yildiz Technical University, Turkey.................................................................283

40. TRANSFORMING THE RAW MATERIAL INDUSTRY THROUGH DIGITALIZATION AND INFORMATIZATION, Miroslav Zelko, PhD., Technical University of Kosice, Faculty BERG, URaIVP, Slovakia.................................................................289

41. USAGE OF VIRTUAL REALITY FOR PRESENTATION OF FULL LIFECYCLE OF OPENCAST MINES WITH SUPPORT OF INTERNET OF THINGS, Assoc. Prof. Dr. Ing. Oldrich Kodym, Ing. Tomas Martoch, Ing. Lukas Kubac, Ing. Roman Danel, Ph.D., Assoc. Prof. Dr. Ing. Zdenek Neustupa, VSB - Technical University of Ostrava, Czech Republic.................................................................297

42. USING 3D MODELS FROM MULTIDETECTOR COMPUTED TOMOGRAPHY IMAGES FOR DIAGNOSTIC OF HALLUX-VALGUS, Hatice Catal, Assist. Prof. Ozsen Corumluoglu, Yildiz Technical University, Turkey.................................................................305

43. USING PETRI NETS TO MODELLING UNDERGROUND MINE INERTING, Ing. Vladislav Vancura, Ph.D., Ing. Lukas Otte, Ph.D., Ing. Roman Danel,
Ph.D., ass. prof. Oldrich Kodym, Ing. Zdenek Seliga, MTA Ostrava, s.r.o., Czech Republic

44. VALIDATION OF POTENTIAL FLOW CALCULATION AROUND A SHIP’S HULL, Phd. Student. Nicoleta-Gabriela Rodicichin, Prof. Dr. Viorel Andrei, Dunarea de Jos University, Romania

45. VIRTUAL REALITY IN MINING PROCESSES CONTROL, Vladimir Kebo, VSB-technical University of Ostrava, Czech Republic

46. WEB PLATFORM FOR AGRICULTURAL MECHANIZATION TECHNOLOGIES, Dr. Eng. Vergil Marian Muraru, PhD Student Ciprian George Pirna, Math. Petru Cardei, Dr. Eng. Cornelia Muraru-Ionel, INMA Bucharest, Romania

SECTION "GEOINFORMATICS"

1. 3D EVALUATION MODEL OF THE UNDERGROUND SPACE RESOURCES IN THE CENTRAL AREA OF BEIJING, CHINA, Dr. Yi Tian, Prof. Jian-ping Chen, School of Land Sciences and Technology, China University of Geosciences, China

2. CLOUD APPLICATION FOR WATER RESOURCES MODELING, Assist. Prof. Dr. Blagoj Delipetrev, Assist. Prof. Dr. Marjan Delipetrev, Faculty of Informatics, FYR of Macedonia

3. DEVELOPMENT OF APPLICATION FOR DISCOVERING AND BINDING TO PUBLISHED GEOSPATIAL PROCESSES IN DISTRIBUTED ENVIRONMENTS, Evgeny V. Shulkin, Ph.D Sergey M. Krasnopeyev, Pacific Geographical Institute, Far Eastern Branch of the Russian Academy of Sciences, Russia

4. EXPERT SYSTEM FOR LANDSCAPE ASSESSMENT BASED ON GIS, Vilem Pechanec, Jan Brus, Palacky University, Czech Republic

5. GEOGRAPHIC INFORMATION SYSTEMS FOR BOTANICAL GARDEN - STEPS OF DESIGN AND REALIZATION, Ing. Zdena Dobesova, Ph.D., Palacky University, Czech Republic

6. GOES SYSTEM IMPLEMENTED INTO SOFIA MUNICIPALITY, Dr. Nina Dobrinkova, PhD. St. Valentin Marinov, BAS, Bulgaria

7. LOCATION BASED SERVICES AND MONITORING PHYSIOLOGICAL CHARACTERISTICS DURING THE SPORT PERFORMANCE FOR OBESITY AND HEALTHY REASONS, Rostislav Netek, Dr. Jaroslav Burian, Dr. Vilem Pechanec, Dept. of Geoinformatics, Palacký; University in Olomouc, Czech Republic
8. SPATIAL ANALYSIS OF THE DRENICA COAL BASIN – FIELD SKENDERAJ, KOSOVO, Prof. Asoc. Dr. Naser Peci, Prof. Asoc. Dr. Behxhet Shala, Mr. sc. Halime Hajra, Prof. Asoc. Dr. Blerim Baruti, University of Prishtina, Faculty of Mining and Metalurgy, Kosovo

9. THE PECULIARITIES OF THE DIGITAL SURFACE MODEL CREATION FROM THE DATA ACQUIRED BY SMALL FORMAT PHOTOGRAPHY, MSc. Jana Svobodova Ph.D., MSc. Jakub Mirijovsky, MSc. Helena Kilianova Ph.D., Palacky University in Olomouc, Czech Republic

10. THE SPATIAL EXPRESSION OF AN UNCERTAINTY FOR THE QUALITY ASSESSMENT OF THE DIGITAL ELEVATION MODELS, RNDr. Jan Brus, Mgr. Jana Svobodova, Ph.D., Palacky University in Olomouc, Czech Republic

11. THE USE OF GIS IS SHOWN IN TAKING DECISIONS REGARDING ON ENVIRONMENTAL ENGINEERING PROJECTS, Phd. Gabriel Badescu; Phd. Stud. Rodica Badescu; Prof. Marcel Darja; Prof. Mircea Ortelecan; Associate Professor, Ovidiu Stefan; Associate Professor, Nicolae Pop; Associate Professor, Ioel Samuel Veres, Technical University of Cluj Napoca, Baia Mare University Center North, Romania

12. VISUAL PROGRAMMING FOR NOVICE PROGRAMMERS IN GEOINFORMATICS, Ing. Zdena Dobesova, Ph.D., Palacky University, Czech Republic

SECTION "MICRO AND NANO TECHNOLOGIES"

1. ALLAN VARIANCE ANALYSIS OF THE MINIATURIZED SENSORS IN A STRAP-DOWN INERTIAL MEASUREMENT UNIT, Assoc. Prof. Teodor Lucian Grigorie - PhD, Eng. Radu Obreja - PhD Student, Eng. Dragos George Sandu - PhD Student, Senior Lecturer PhD Jenica Ileana Corcau, University of Craiova, Romania

2. EXPERIMENTAL ASPECTS OF THE PHOSPHORUS EFFECT ON COMPOSITE HARDNESS NI-P/SIC IN THE PRESENCE OF TEMPERATURE, Assoc. Prof. Minodora Maria Pasare, Dr. Aurora Catalina Ianasi, CONSTANTIN BRANCUSI UNIVERSITY, TG-JIU, Romania

3. HALLOYSITE-TIO2 NANOCOMPOSITES: SYNTHESIS AND CHARACTERIZATION, Assist. Prof. Dr. Dimitris Papoulis, Prof. Dr. Sridhar Komarmeni, Dr. Dionisios Panagiotaras, and Dr. Hiroaki Katsuki, Geology Department, University of Patras, Greece

4. INTEGRATED ROADMAP FOR THE NANOTECHNOLOGY WATER PURIFICATION IN RUSSIA, Junior research fellow Veselitskaya Nataliya, Foresight Centre of ISSEK HSE, Russia; research fellow Vishnevskiy Konstantin, Foresight
5. INVESTIGATION OF CORROSION RESISTANCE OF CHROME BASED NANO-COMPOSITION COATINGS IN THE CONDITIONS OF OIL PRODUCTION, G.Yar-Mukhamedova, E.Yar-Mukhamedov, Center of Earth Science, Metallurgy and Beneficitation, Kazakhstan.................................475

6. INVESTIGATION OF DEGRADATION MICROSTRUCTURE IN FERRITIC STELE AND THEIR IMPACT THE CREATION ON CRACK OF THE SYSTEM OF PIPES IN POWER PLANTS, Ass. Prof. Dr MURSEL RAMA, Asco. Prof. Dr RRAHIM MAKSUTI, University of Prishtina, Kosovo..............................481

7. IODIDE REMOVAL WITH MEMBRANE CONTACTORS FROM WELLS WATER, Dr. Ing. Mihaela Emanuela Craciun, University Politehnica Bucharest, Romania.........................................................487

8. PHOTOCATALYTIC ACTIVITY OF NANOCRISTALLINE GAHNITE (ZNAL204) SYNTHESIZED BY BALL MILLING, Dr. Martin Fabian, Alexander Eliyas, Nina G. Kostova, Jaroslav Briancin, Peter Balaz, Institute of Geotechnics SAS, Slovakia........................................................................491

9. STRENGTH OPTIMAL DESIGN OF THE FIBER FEINFORCED COMPOSITE ON MICROSCOPIC LEVEL, Eva Kormanikova, Kamila Kotrasova, TU of Kosice, Slovakia.........................................................499

10. THE INFLUENCE OF INFILTRATION PARAMETERS ON MULLITE MATRIX COMPOSITES, Dr. Stefania Stoleriu, Cristina Netoiu, Alexandra Carabat, Prof. Ecaterina Andronescu, University POLITEHNICA of Bucharest, Romania........507

11. THE PHYSICAL BASES OF ELECTROLYTIC FORMATION OF CHROMIUM-SILICON DIOXIDE NANO COMPOSITE SYSTEMS IN ELECTROLYTIC COATINGS, G.Sh.Yar-Mukhamedova, A.M.Darisheva, A.A. Mamaeva, M.Moldabaev, S.P.Zabotsev, Center of Earth Science, Metallurgy and Beneficitation, Kazakhstan.........................................................515

SECTION "HYDROLOGY AND WATER RESOURCES"

1. A COMPARATIVE ANALYSIS OF TWO FLOOD WAVE PROPAGATION MODELS, Erika BEILICCI, Robert BEILICCI, "Politehnica" University of Timisoara, Romania.........................................................523

2. A COMPARISION OF FIELD OBSERVATION DATA WITH NUMERICAL MODELING IN THE CLOGGED DRAINAGE SYSTEMS, M.sc Student Mohammad Reza Jalali; Prof. Mir Khalegh Ziaatabar Ahmadi; M.sc Ghasem Aghajani; Assist. Prof. Dr. Ali Shahnazari; M.sc Mohammad Ahmadi, Agriculture and Natural Resources of Sari University, Iran.................................531
3. A REVIEW OF THE MOST COMMONLY USED METHODS FOR UNGAUGED CATCHMENTS FLOOD FLOW ESTIMATION IN SERBIA, Aleksandra Ilic, dr Jasna Plavsic, dr Borislava Blagojevic, Faculty of Civil Engineering and Architecture, Serbia

4. AN ANALYSIS OF SEVERAL WATER QUALITY MODELS, PhD.eng. Codruta-Adelina PEPA, Dr.eng. Marie-Alice GHITESCUC, Politehnica University of Timisoara, Romania

5. ANALYSIS OF FLOODS CAUSED BY FAILURE OF DEFENSE SYSTEMS, dr. Codruta Badaluta - Minda, prof. Gh. Cretu, Politehnica University, Timisoara, Romania

6. ANALYSIS OF WATER RESOURCES QUALITY IN UPPER PART OF HRON RIVER, Dr. Marta Bara, Dr. Yvetta Veliskova, Institute of Hydrology, Slovak Academy of Sciences, Slovakia

7. BEGA RIVER BIOMONITORING BY USING BENTHIC ALGAE AS BIOINDICATORS, Biologist Muntean Hanelore, University of Politechnics Timisoara, Romania

8. BUILDING AN ADVANCED HYDROLOGIC MODEL USING SOFTWARE DEVELOPED BY U.S. ARMY CORPS OF ENGINEERS, Dr. Eng. Severin CAZANESCU, Dr. Eng. Adriana PIENARU, Dr. Eng. Raluca MANEA, Dr. Eng. Ana VIRSTA, IPCT INSTALATII SRL, Romania

9. CLIMATE CHANGE IMPACT UPON MAXIMUM FLOW IN SIRET RIVER BASIN, Dr. Ciprian Corbus, Dr. Rodica Paula Mic, Dr. Marius Matreata, Dr. Viorel Chendes, National Institute of Hydrology and Water Management, Romania


11. COMPARISON OF SEMI-DISTRIBUTED AND DISTRIBUTED APPROACHES OF THE HYDROLOGICAL RAINFALL-RUNOFF MODELLING AND DETERMINATION OF MORPHOLOGICAL AND MORPHOMETRIC CHARACTERISTICS OF WATERSHEDS, Ing. Stepan Vizina, Ing. Vlasta Hradilek, Czech University of Life Sciences Prague, Czech Republic

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>DEVELOPMENT OF SMALL HYDROELECTRIC PLANTS IN SLOVAKIA</td>
<td>Prof. Adriana Csikosova, PhD. Assoc. prof. Maria Antosova, PhD. Assoc. Prof. Katarina Culkova, PhD., Technical University, BERG Faculty Kosice, Slovakia</td>
<td>619</td>
</tr>
<tr>
<td>14</td>
<td>DISCHARGE AREA CHANGE QUANTIFICATION AND DISTRIBUTION OF BASIC QUALITY INDICATORS ALONG CHANNEL GABCIKOVO TOPOLNIKY</td>
<td>Dr. Yvetta Veliskova, Renata Dulovicova, Institute of Hydrology Slovak Academy of Sciences, Slovakia</td>
<td>625</td>
</tr>
<tr>
<td>15</td>
<td>DROUGHT RISK ASSESSMENT IN LIBYA BY STATISTICAL METHODS</td>
<td>Martina Zelenakova, Ibrahim Gargar, Pavol Purcz, Technical University of Kosice, Slovakia</td>
<td>633</td>
</tr>
<tr>
<td>16</td>
<td>ECONOMICAL ASPECTS WATER RESOURCES MANAGEMENT AND APPROPRIATE PATTERN FOR AGRICULTURAL WATER DEMAND MANAGEMENT IN IRAN</td>
<td>Mohsen Barahamiaa, A. Kalantarb, Inom Normatovc, Academy of science, Tajikistan</td>
<td>641</td>
</tr>
<tr>
<td>17</td>
<td>ESTIMATION OF EXTREME FLOODS WITH A NEW DISTRIBUTED HYDROLOGICAL MODEL</td>
<td>Phd.ing. Ramona Receau, Phd.ing. Pepa Adelina, Prof. dr.ing. Jacques-Andre Hertig, Universite de Lausanne, Swaziland</td>
<td>649</td>
</tr>
<tr>
<td>18</td>
<td>EVALUATION OF POINT-SOURCE POLLUTION HAZARD IN THE UPPER HRON RIVER BASIN</td>
<td>Dr. Marta Bara, Dr. Yvetta Veliskova, Darina Takacova, Institute of Hydrology, Slovak Academy of Sciences, Slovakia</td>
<td>655</td>
</tr>
<tr>
<td>19</td>
<td>EVALUATION OPTIMIZATION TECHNIQUES APPLIED ON OPTIMAL DESIGN OF THE WATER DISTRIBUTION SYSTEMS IN IRRIGATION</td>
<td>Assoc. Prof. Milan Cisty, PhD., Ing. Zbynek Bajtek, PhD, Slovak University of Technology Bratislava, Slovakia</td>
<td>663</td>
</tr>
<tr>
<td>20</td>
<td>FLOOD IMPACT ASSESSMENT USING HYDRAULIC MODELLING: A CASE STUDY FROM STONAVKA AND OLOSE RIVER CONFLUENCE AREA, CZECH REPUBLIC</td>
<td>Michal Podhoranyi, Ivan Mudron, VSB - Technical University Ostrava, Slovakia</td>
<td>671</td>
</tr>
<tr>
<td>21</td>
<td>FLOOD RISK ASSESSMENT AS PART OF FLOOD DEFENCE</td>
<td>Martina Zelenakova, Lenka Ganova, Pavol Purcz, Technical University of Kosice, Slovakia</td>
<td>679</td>
</tr>
<tr>
<td>22</td>
<td>FORMING CONDITIONS FOR FLASH FLOODS</td>
<td>Drd. Laura Alexoaie, Drd. Daniel Mihut Codea, University of Polytechnics Timisoara, Romania</td>
<td>687</td>
</tr>
<tr>
<td>23</td>
<td>FREQUENCY ANALYSIS OF FLUID IN RECTANGULAR GROUND-SUPPORTED TANK</td>
<td>Kamila Kotrasova, Eva Kormanikova, TU of Kosice, Slovakia</td>
<td>693</td>
</tr>
</tbody>
</table>
24. GROUNDWATER RECHARGE PREDICTION BY SIMULATION OF UNSATURATED SOIL ZONE WATER FLOW AND SYNTHETIC ATMOSPHERIC TIME SERIES, Dipl.-Geoinf. Martin Meyer, Dipl.-Hydrol. Jana Sallwey, Dipl.-Ing. Issa Hasan, Prof. Peter-Wolfgang Graeber, TU Dresden, Germany

25. HYDRODYNAMICS OF GROUNDWATER IN LOESS. CASE STUDY: THE INTERFLUVIAL AT THE WEST OF GALATI-ROMANIA, Prof. PhD. Monica Flutar, SCOALA DOCTORALA DE GEOGRAFIE, Romania

26. HYDROGEOCHEMICAL INVESTIGATION AND ENVIRONMENTAL STATUS OF GROUND WATER AND WATER ACCUMULATIONS IN THE NEOGENE-QUATERNARY SEDIMENTS OF BELA CRKVA, Milka Vidovic, Vojin Gordanic, Vesna Spasic, Bojan Gavrilovic and Ivana Trajkovic, The University of Belgrade, IHTM, Department for Ecology and Technoeconomics, Serbia

27. HYDROLOGIC EFFECT OF URBANIZATION, Drd. Eng. Ramona-Maria Rusu, Drd. Raluca Vaduva, Prof. Dr. Eng. Gheorghe Cretu, Polytechnic University of Timisoara, Romania


29. IMPACT OF CLIMATE CHANGE ON AGRICULTURAL WATER USE IN ARID AND SEMI-ARID REGIONS, PhD St. Mohsen Barahami, Prof. Inom Normatov, Academy of science, Tajikistan

30. IMPLEMENTATION OF A GLOBAL CIRCULATION MODELING SYSTEM FOR THE BLACK SEA BASIN, PhD St. Robert Toderascu, Prof. Eugen Rusu, Dunarea de Jos University of Galati, Romania


32. INVESTIGATING THE UNDERGROUND WATER FLOW IN DRAINS THROUGH FINITE ELEMENT METHOD, M.sc Student Mohammad Reza Jalali; M.sc Student Mohammad Mehdi Jalali; Assoc. Prof. Dr. Syed Hasan Golmaei; Prof. Mir Khalegh Ziatabar Ahmadi, Agriculture and Natural Resources of Sari University, Iran

33. LAND USE PLANNING TO REDUCE THE IMPACT OF FLOODING IN URBAN AREAS, PhD Student Raluca Vaduva, PhD Student eng. Ramona Maria Rusu, Politehnica University of Timisoara, Romania
34. MANAGEMENT AND PERSPECTIVES OF USING OF UNDERGROUND FRESHWATERS FROM TRANSBOUNDARY AQUIFERS IN ARMENIA, Dr. Marine Nalbandyan, IGS, National Academy of Sciences, Armenia, Armenia.........769

35. NATURAL METHODS OF WASTEWATER TREATMENT, Elena Kozlova; Radmila Kucerova; Pavlina; Krecmerova;, VSB-Technical University of Ostrava, Czech Republic..........................................................777

36. OXYGEN CONDITIONS IN ANTHROPOGENIC LAKES OF THE SILESIAN UPLAND (SOUTHERN POLAND), MSc Maksymilian Solarski, MSc Alicja Pradela, Prof. Mariusz Rzetala, University of Silesia, Poland............................................785

37. POLLUTION SOURCES AND PREVENTION MEASURES OF THE IZVORUL MUNTELUI LAKE, Drd. Ciobanu Alexandru Iulian, Universitatea Al. I Cuza, Romania..........................................................................................793

38. SEASONAL VARIATIONS OF SOME HEAVY METAL IN SUSPENDED PARTICULATE MATTER AND PHYSIOCHEMICAL PROPERTIES OF DERBENDIKHAN RESERVOIR, KURDISTAN REGION-IRAQ., Dr. Rezan O. Rasheed, Univ. of Sulaimani, Iraq.................................................................801

39. SHORT, MEDIUM AND LONG TERM STOCHASTIC ANALYSIS OF THE SUCEAVA RIVER POLLUTION EVOLUTION IN THE HOMONYMOUS CITY, PhD. Candidate, Assistant Andrei-Emil Briciu, PhD. Dumitru Mihaila, Eng. Doina Mihaila, Alexandru Ioan Cuza University, Stefan cel Mare University, Romania..................................................................................809

40. STRATEGIES OF WATER RESOURCES USE IN THE HYDROGRAPHIC AREA OF THE BISTRITA RIVER, Drd. Ciobanu Alexandru Iulian, Universitatea Al. I Cuza, Romania.................................................................817

41. STUDY ON THE CURRENTS VARIABILITY AND PATTERNS IN THE BLACK SEA, PhD St. Robert Toderascu, Assist. Prof. Liliana Rusu, Dunarea de Jos University of Galati, Romania........................................................................825

42. SURFACE WATER QUALITY MODELLING IN THE ISKAR BASIN: METHODOLOGY AND FIRST RESULTS, Ir. Pol Magermans, Ir. Etienne Everbecq, Tayeb Bourouag, Dir. Jean-Francois Deliege, Aquapole - University of Liege, Belgium..................................................................................833

43. TESTING OF MATERIALS FOR MEMBRANE SEPARATION OF VOLATILE ORGANIC COMPOUNDS FROM CONTAMINATED WATERS, J. Suchankova, L. Herecova, P. Danihelka, D. Micek, VSB-Technical University of Ostrava, Czech Republic..................................................................................841

44. THE EVALUATION OF CLIMATE EVOLUTION TENDENCY AND OF WATER-TABLE LEVELS IN THE AREA COVERED BY FANTANELE-SAGU
IRRIGATION SYSTEM, PhD. St. Eng. Alina Gabor, Prof. Dr. Eng. Eugen Teodor Man, Assist. Prof. Dr. Eng. Rares Halbac-Cotoara-Zamfir, Politehnica University of Timisoara, Romania .................................................................849

45. THE INFLUENCE OF ANTHROPOGENIC FACTORS IN POLLUTION OF GROUNDWATER IN THE REGION OF BURIMI, Assoc. Prof. Dr. Sabri Avdullahi, Assoc. Prof. Dr. Islam Fejza, Assoc. Prof. Dr. Ahmet Tmava, Ass. Prof. Dr. Afrim Koliqi, Asist. MSc. Festim Kutllovci, University of Prishtina, Kosovo .................................................................871

46. THE INFLUENCE OF DISPERSION COEFFICIENTS ON SIMULATION RESULTS, Dr. Ing. Bakos Mihaela, Dipl. Ing. Isacu Monica, Dr. Ing. Girbaciu Irina Alina, Dr. Ing. Girbaciu Cristian Adrian, Politehnica University of Timisoara, Romania .................................................................879

47. THE REHABILITATION AND MODERNIZATION OF FANTANELE-SAGU ARAD IRRIGATION SYSTEM, PhD. St. Eng. Alina Gabor, Prof. Dr. Eng. Eugen Teodor Man, Assist. Prof. Dr. Eng. Rares Halbac-Cotoara-Zamfir, Politehnica University of Timisoara, Romania .................................................................857

48. THE EVOLUTION OF REGIME OF NAVIGATION ON INTERNATIONAL RIVERS – DANUBE CASE, Prof. dr. Cristian JURA, National Council for Combating Discrimination and Christian University Dimitrie Cantemir, Romania .................................................................863

49. THE RISK ASSESSMENT OF SURFACE WATER QUALITY DETERIORATION, Martina Zelenakova, Technical University of Kosice, Slovakia .................................................................887

50. TRANSFORMATION OF LAKES IN SUBSIDENCE BASINS IN THE SILESIAN UPLAND (SOUTHERN POLAND), Dr. Robert Machowski, Dr. Martyna A. Rzetala, Prof. US dr. hab. Mariusz Rzetala, University of Silesia, Poland .................................................................895

51. WATER EXCESS MANAGEMENT IN CARAS-SEVERN COUNTY (ROMANIA), Assist. Prof. Rares Halbac-Cotoara-Zamfir, Politehnica University of Timisoara, Romania .................................................................903

52. WATER MANAGEMENT IN BANAT REGION, BEGA VECHE BASIN, Assist. Prof. Rares Halbac-Cotoara-Zamfir, Politehnica University of Timisoara, Romania .................................................................911

53. WATER TREATMENT IN HOUSEHOLDS, Ing. Radmila Pesatova, Ing. Martina Jurokova, doc. Dr. Ing. Radmila Kucerova, VSB - Technical University of Ostrava, Czech Republic .................................................................919

54. WATER STORAGE BASIN FOR THE SKI RESORT „GUTAIUL DOAMNEI CAVNIC”, ROMANIA, Beilicci Robert, Beilicci Erika, “Politehnica” University of Timisoara, Romania .................................................................925
SECTION "MARINE AND OCEAN ECOSYSTEMS"

1. ASSESSMENT OF THE NAVIGATION CONDITIONS IN THE COASTAL SECTOR AT THE ENTRANCE OF THE DANUBE DELTA, PhD Angela Ivan and Prof Eugen Rusu, "Dunarea de Jos" University of Galati, Romania.................................935

2. BIO RESOURCES USEFUL FOR HEALTH FROM MARINE ECOSYSTEMS, Rodica Sirbu, Dumitru Octavian Unc, Ticuta Negreanu Pirjol, Bogdan Negreanu Pirjol, Manuela R. Apetroaei, University Ovidius, Faculty of Pharmacy, Department of Chemistry, Romania.................................................................943

3. COMPARATIVE STUDIES ON THE INDICATORS OF CONTAMINATION OF MARINE ECOSYSTEM AT ROMANIAN SEASIDE, Rodica Sirbu, Tania Zaharia, Ticuta Negreanu Pirjol, Bogdan Negreanu Pirjol, Gabriela M. Parashiv, Manuela R. Apetroaei, University Ovidius, Faculty of Pharmacy, Department of Chemistry, Romania.................................................................949

4. GAS HYDRATES AND BOTTOM INSTABILITY: BLACK SEA, BULGARIA, Assoc. Prof. Dr. Atanas Vasilev, Assoc. Prof. Dr. Emanuil Kozhuharov, Institute of Oceanology BAS, Varna, Bulgaria.................................................................957

5. SEASONAL VARIATION OF BACTERIAL ABUNDANCE, BIOMASS AND MORPHO-STRUCTURAL DIVERSITY IN LITTORAL SANDY SEDIMENTS ON THE ROMANIAN BLACK SEA COAST, Dan Razvan Popoviciu, Prof. Dr. Ioan I. Ardelean, Ovidius University, Constanta, Romania.................................................................965

6. STUDY OF SEDIMENTATION RATES AND OIL COMPONENTS' ACCUMULATION IN THE SEDIMENT CORES OF THE SEA OF AZOV AND THE DON RIVER USING THE METHOD OF RADIOISOTOPES, Dr. Andrey Kuznetsov, Prof. Yury Fedorov, Prof. Paul Fattal, Southern Federal University, Russia.................................................................973

7. SEDIMENTOLOGICAL AND GEOCHEMICAL CHARACTERISTICS OF HOLOCENE LAGOONAL DEPOSITS, AMVRAKIKOS GULF, WESTERN GREECE, Assist. Prof. Pavlos Avramidis, Assist. Prof. Dionisios Panagiotaras, Dr Paraskevi Lampropoulou, Assist. Prof. Dimitrios Papoulis, Prof. Nikolaos Kontopoulos, Technological Educational Institute of Patras, Greece.................................................................979

8. SEISMICITY AND MUD VOLCANISM: BLACK SEA, BULGARIA, Assoc. Prof. Dr. Atanas Vasilev, Assoc. Prof. Dr. Emanuil Kozhuharov, Institute of Oceanology BAS, Varna, Bulgaria.................................................................987


7. E-LEARNING USING EDUCATIONAL SOFTWARE – A FEASIBLE ALTERNATIVE FOR TRAINING AND LEARNING, 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 ..................................................1077

8. ENVIRONMENTAL SCIENCE CURRICULA MODEL FOR MULTILAYEDER EDUCATION SYSTEM: INTEGRATIVE AND DISCIPLINARY INTERACTION, Prof. Raimonds Ernestins, University of Latvia, Latvia .................................................................1085

9. EXPERIMENTAL LEARNING IN HIGHER EDUCATION, USING SIMULATION GAMES AS LEARNING TOOL., Patrycja Pudlo, Beata Gavurova, University of Economics in Bratislava, The Faculty of Business Economics with seat in Kosice, Slovakia ..........................................................1093

10. GEARING ENGLISH FOR SPECIFIC PURPOSES TEACHING TO THE REQUIREMENTS OF ENGINEERING PRACTICE, Rimma Bielousova, MA, PhD Faculty of Manufacturing Technologies of the Technical University of Kosice with the seat in Prešov, Slovakia ..................................................1101

11. INTERNATIONAL TRAINING IN WELDING, Assoc. Prof. Dr. Mihaela Popescu, Dr. Radu Alexandru Rosu, Politehnica University of Timisoara, Romania ...............................................................1105

12. INVESTING IN EDUCATION – A FORM OF USING THE HUMAN RESOURCES OF A TERRITORY, Assis. Nadia-Elena Vacaru, University "Al. I. Cuza", Iasi, Romania .................................................................1111

13. MAIN ISSUES REGARDING OF MODERN TEACHING TECHNIQUES IN GEODESY, Associate Professor Eng. Badea Gheorghe, PhD, Lecturer Eng. Badea Ana-Cornelia, PhD, Assistant Eng. CLINCI TUDOREL SILVIU, MSc, Technical University of Civil Engineering Bucharest, Romania ...............................................................1117

14. MODEL FOR POSSIBLE ETHICS IN INTERNATIONAL COOPERATION IN HIGHER EDUCATION, Prof. univ. dr. Adrian Gorun, Prof.dr. eng. Cirtina Liviu Marius , PhD student Vaduva Andreea Mihaela, Constantin Brancusi University of Tg Jiu, Romania .................................................................1125

15. THE PLAN OF MARKETING RESEARCH INTENDED TO MAKE THE COMMUNICATION MARKETING MIX MORE EFFECTIVE, Ing. Marketa Rolcikova; Ph.D., Ing. Yveta Tomaskova Ph.D.; Ing. Alena Strakova, VSB - TU Ostrava, Czech Republic .................................................................1131
16. PROFESSIONAL CERTIFICATION IN ATD CZECH REPUBLIC, O.S., Vlastimil Moni, Frantisek Helebrant, Pavel Nemeckek, Iva Kudelova, Brown Coal Research Institute, Czech Republic...

17. RENEWABLE ENERGY APPROACHES TO THE ENERGY POLICIES OF BLACK SEA AND THE IMPORTANCE OF EDUCATION IN ENVIRONMENTAL KNOWLEDGE, Seray Gokay Toksoz, Isilay Ulusoy, Prof. Dr. Ali Kahriman, Okan University, Vocational University, Kadikoy Istanbul, Turkey...

18. S.P.S.I. CONCEPT AND ITS USE IN ORDER TO INCREASE THE QUALITY OF THE ECONOMIC-MANAGEMENT EDUCATION, doc. Ing. Peter Kuzmisin, DrSc., Technical University of Kosice, Slovakia...

19. SOME ASPECTS OF VERIFICATION AND EVALUATION OF STUDENTS KNOWLEDGE AFTER COMPLETED COURSES RELATED TO THE 3D MODELLING, Eng. Adrian Harcar, FMT TUKE with seat in Presov, Slovakia...

20. TERRITORIAL INSERTION OF PRIVATE UNIVERSITIES IN THE ROMANIAN EDUCATION SYSTEM, Prof. Ioan Ianos, Daniela Zamfir, Prof. Cristian Braghina, Andreea-Loreta Cercleux, University of Bucharest, CICADIT, Romania...

21. THE EFFECT OF GROUP THERAPY ON ASSERTIVE BEHAVIOUR, Assist. Prof. Dr. Pervin Nedim Bal, Ass. Prof. Dr. Battal Odabasi, Istanbul Aydin University, Turkey...

22. THE EFFECTS OF STORIES ON MORAL DEVELOPMENT (A CASE STUDY), Assist. Prof. Dr. Pervin Nedim Bal, Ass. Prof. Dr. Mualla Murat, Istanbul Aydin University, Turkey...

23. THE MERGER BETWEEN UNIVERSITY-SCALE SAVINGS AND DESAVINGS, Assoc. Prof. PhD. Eugenia Grecu, Politehnica University of Timisoara, Romania...

24. THE PROSPECT OF THE DIPLOMAS UNEMPLOYMENT, Assoc. Prof. PhD. Eugenia Grecu, Politehnica University of Timisoara, Romania...

25. THE RELATIONSHIP BETWEEN THE LEARNING STYLES OF STUDENTS(12TH GRADE) AND ACADEMIC SUCCESS LEVEL (OSYS), Yrd. Doc. Dr. Battal Odabasi, Yrd. Doc. Dr. Pervin Nedim Bal, Istanbul Aydin University, Turkey...

26. THE ROLE OF COMPETENCE DEVELOPMENT IN THE PROCESS OF EDUCATION, Lucie Krcmarska, Igor Cerny, Marketa Rolcikova, Michal Vanek, Jana Magnuskova, VSB-Technical University of Ostrava, Czech Republic...
27. UNIVERSITY ETHOS AND UNIVERSITY INTERNATIONAL COOPERATION, Prof.univ dr. Adrian Gorun, Prof.dr. eng. Cirtina Liviu Marius, PhD student Vaduva Andreea Mihaela, Constantin Brancusi University of Tg Jiu, Romania ................................................................. 1223

28. USE OF THE BIOLOID ROBOTIC KIT IN THE TEACHING OF AUTOMATION AND PROGRAMMING LANGUAGES, Ing. Michal Repka Ph.D., Ing. Roman Danel, Ph.D., Assoc. Prof. Dr. Ing. Zdenek Neustupa, VSB - Technical University of Ostrava, Czech Republic ................................................................. 1229