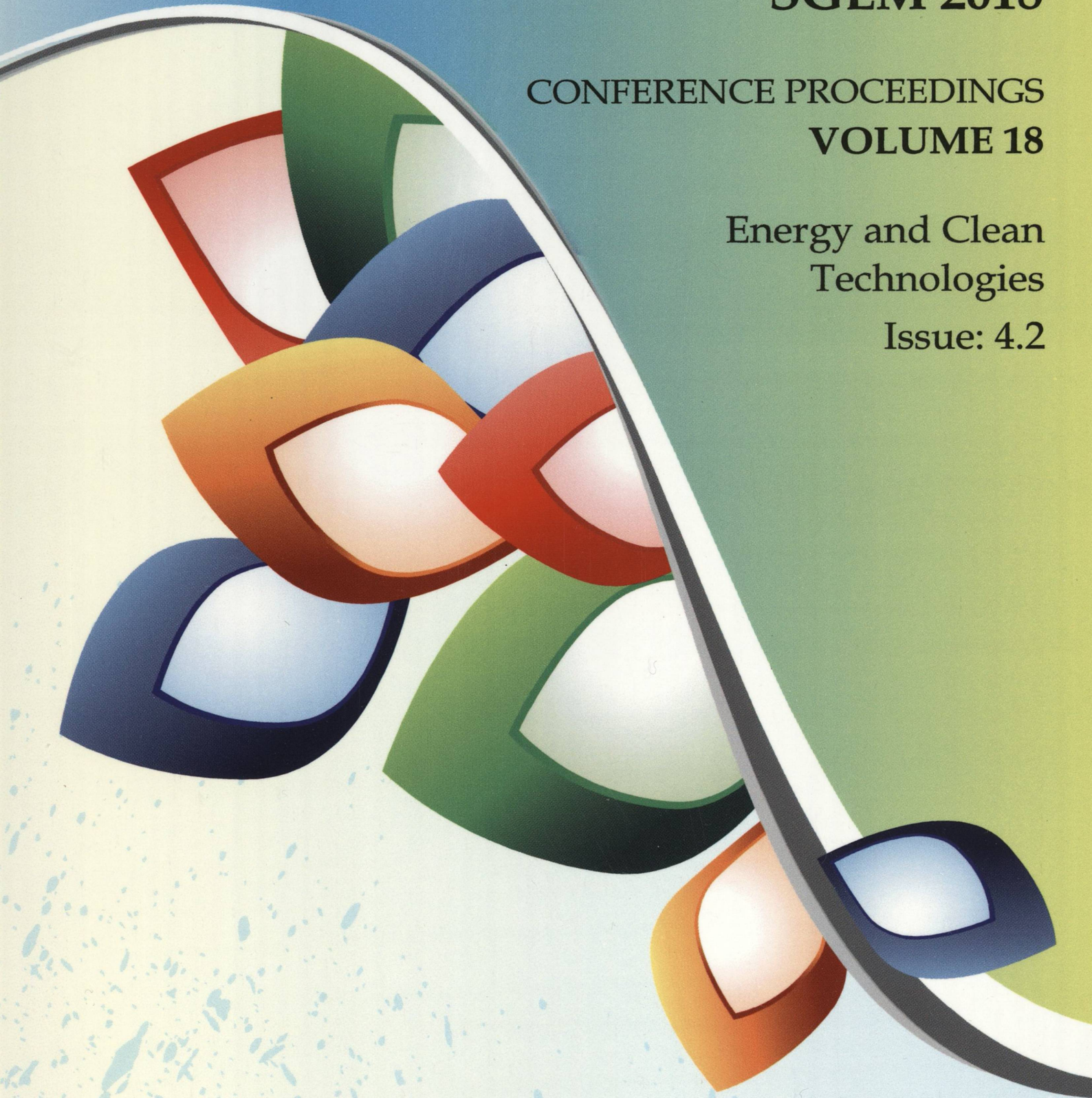


**18th INTERNATIONAL MULTIDISCIPLINARY
SCIENTIFIC GEOCONFERENCE
SGEM 2018**

**CONFERENCE PROCEEDINGS
VOLUME 18**

**Energy and Clean
Technologies
Issue: 4.2**

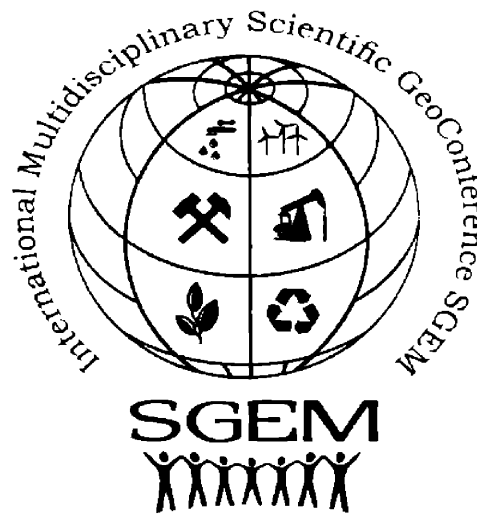


**RECYCLING
AIR POLLUTION AND CLIMATE CHANGE**

**18th INTERNATIONAL MULTIDISCIPLINARY
SCIENTIFIC GEOCONFERENCE
S G E M 2 0 1 8**

CONFERENCE PROCEEDINGS

VOLUME 18



ENERGY AND CLEAN TECHNOLOGIES

ISSUE 4.2

RECYCLING

AIR POLLUTION AND CLIMATE CHANGE

2 July - 8 July, 2018

Albena, Bulgaria

DISCLAIMER

This book contains abstracts and complete papers approved by the Conference Review Committee. Authors are responsible for the content and accuracy.

Opinions expressed may not necessarily reflect the position of the International Scientific Council of SGEM.

Information in the SGEM 2018 Conference Proceedings is subject to change without notice. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of the International Scientific Council of SGEM.

Copyright © SGEM2018

All Rights Reserved by the International Multidisciplinary Scientific GeoConferences SGEM
Published by STEF92 Technology Ltd., 51 “Alexander Malinov” Blvd., 1712 Sofia, Bulgaria
Total print: 5000

ISBN 978-619-7408-45-4

ISSN 1314-2704

DOI: 10.5593/sgem2018/4.2

**INTERNATIONAL MULTIDISCIPLINARY SCIENTIFIC GEOCONFERENCE SGEM
Secretariat Bureau**

E-mail: sgem@sgem.org | URL: www.sgem.org

ORGANIZERS AND SCIENTIFIC PARTNERS

- THE CZECH ACADEMY OF SCIENCES
- LATVIAN ACADEMY OF SCIENCES
- POLISH ACADEMY OF SCIENCES
- RUSSIAN ACADEMY OF SCIENCES
- SERBIAN ACADEMY OF SCIENCES AND ARTS
- SLOVAK ACADEMY OF SCIENCES
- NATIONAL ACADEMY OF SCIENCES OF UKRAINE
- INSTITUTE OF WATER PROBLEM AND HYDROPOWER OF NAS KR
- NATIONAL ACADEMY OF SCIENCES OF ARMENIA
- SCIENCE COUNCIL OF JAPAN
- EUROPEAN ACADEMY OF SCIENCES, ARTS AND LETTERS
- ACADEMY OF SCIENCES OF MOLDOVA
- MONTENEGRIN ACADEMY OF SCIENCES AND ARTS
- CROATIAN ACADEMY OF SCIENCES AND ARTS, CROATIA
- GEORGIAN NATIONAL ACADEMY OF SCIENCES
- ACADEMY OF FINE ARTS AND DESIGN IN BRATISLAVA
- TURKISH ACADEMY OF SCIENCES
- NIZHNY NOVGOROD STATE UNIVERSITY OF ARCHITECTURE AND CIVIL ENGINEERING, RUSSIAN FEDERATION
- BULGARIAN ACADEMY OF SCIENCES
- BULGARIAN INDUSTRIAL ASSOCIATION
- BULGARIAN MINISTRY OF ENVIRONMENT AND WATER

INTERNATIONAL SCIENTIFIC COMMITTEE

Energy and Clean Technologies

- PROF. JEFFREY L. COLLETT, USA
- PROF. GIULIANO DALL'O', ITALY
- PROF. DR. PINJING HE, CHINA
- PROF. CASIMIRO PIO, PORTUGAL
- PROF. DSC KOSTADIN GANEV, BULGARIA
- PROF. DSC DIMITER SYRAKOV, BULGARIA
- PROF. DR. CHRISTOS S. ZEREFOS, GREECE

- PROF. DR. TERCIO AMBRIZZI, BRAZIL
- PROF. DSC SERGEY GANDZHA, RUSSIA
- PROF. DR DIMITER IVANOV, DSC, BULGARIA
- ASSOC. PROF. PETER FRIGAARD, DENMARK

CONFERENCE PROCEEDINGS CONTENTS**RECYCLING**

- 1. ANALYSIS OF PHYSICOCHEMICAL PROPERTIES AND MORPHOLOGY OF FUEL MIXTURES BASED ON DIESEL AND PYROLYSIS OIL**, Ph.D. Robert Jasiewicz, Ph.D. Magdalena Szmukala, Maritime University of Szczecin, Poland.....3
- 2. ASSESSMENT OF PACKAGING WASTE RECYCLING IN POLAND**, Assoc. Prof. Mohamed Alwaeli, Ph.D, D.Sc. Eng., Silesian University of Technology, Poland..... 11
- 3. CHALLENGES IN DEVELOPING DECISION SYSTEMS SUPPORTING WASTEWATER MANAGEMENT IN A CONTEXT OF CIRCULAR ECONOMY**, Ph.D. Eng. Karolina Jaderko, Central Mining Institute (GIG), Poland ... 17
- 4. COMPARATIVE ANALYSIS OF PHYSICOCHEMICAL PARAMETERS OF MUNICIPAL WASTE SLUDGE IN THE LIGHT OF ORGANIC RECYCLING**, PhD Eng. Monika Czop, PhD Eng. Agnieszka Petryk, Silesian University of Technology, Poland.....25
- 5. COMPARISON OF HEAVY METALS LEACHABILITY FROM COMBUSTION WASTES USING BATCH LEACHING TESTS**, Dr. Eng. Joanna Fronczyk, Eng. Anna Szwader, Warsaw University of Life sciences - SGGW, Poland.....33
- 6. DETERMINATION OF COMBUSTIBLE SULFUR CONTENT IN SEWAGE SLUDGE**, Ileana Nicolescu, Bogdan Stanescu, Agnes Serbanescu, Mona Barbu, Alina Gina Traistaru, National Research and Development Institute for Industrial Ecology - ECOIND, Romania.....41
- 7. ECONOMY OF PACKAGING AND WASTE FROM PACKAGING ON THE EXAMPLE OF THE WOOD INDUSTRY**, PhD Student, MSc. Eng. Dorota Palka, PhD Magdalena Tutak, Silesian University of Technology, Poland.....49
- 8. EFFECT OF THE NATURE OF FIBERS ON THE MECHANICAL PROPERTIES OF PLASTER IN PRESENCE OF SUPERPLASTICIZER**, Khaled Benyounes, Noureddine Mesboua, Siham Dani, Aicha Missaoui, Universite M Hamed Bougara Boumerdes, Algeria57
- 9. EVALUATION OF ECONOMIC RETURN ON INVESTMENT TO NEW PRODUCTION TECHNOLOGY**, Assoc. Prof. Katarina Culkova, PhD., M.Sc. Jan Kosco, PhD., Assoc. Prof. Jan Spisak, PhD., M.Sc. Ingrid Kanuchova, M.Sc. Eva Mihalikova, PhD., Technical University of Kosice - Faculty BERG, Slovakia65

10. EVALUATION OF THE ELECTROWASTE MANAGEMENT SYSTEM IN POLAND , Prof. Barbara Bialecka, M.Sc. Kordian Rudzinski, Central Mining Institute (GIG), Poland	73
11. FACTORS CONTRIBUTING TO TECHNOSPHERE , Prof. Dr. Sci. Aleksander Lipaev, Ludmila Alekseeva, Rezeda Sabirova, Almetyevsk State Oil Institute, Russia	81
12. HYDRAULICITY OF METALLURGICAL SLAGS , Prof. Ing. Alena Pribulova, PhD., Assoc. Prof. Ing. Peter Futas, PhD., Assoc. Prof. Ing. Dana Baricova, PhD., Assoc. Prof. Ing. Jozef Petrik, PhD., Technical University of Kosice, Slovakia	89
13. INVESTIGATION OF THE EFFECT OF TAILINGS CHARACTERISTICS ON PASTE BACKFILL PROPERTIES , Ferdi Cihangir, Ayhan Kesimal, Tekin Yilmaz, Ercument Koc, Yunus Akyol, Karadeniz Technical University, Turkey	97
14. INVESTIGATION OF THE POTENTIAL USE OF DAM TAILINGS AS PASTE BACKFILL MATERIAL IN A COPPER MINE , Assoc. Prof. Dr. Bayram Ercikdi, Karadeniz Technical University, Turkey.....	105
15. POSSIBLE USES OF COAL IN CIRCULAR ECONOMY , Prof. Mihai Cruceru, Prof. Bogdan Marian Diaconu, Dr. Bruno Valentim, Dr. Lucica Anghelescu, Constantin Brancusi University of Targu-Jiu, Romania.....	113
16. RECENT APPROACHES REGARDING THE SELECTION OF APPROPRIATE METHODS FOR THE CHARACTERIZATION AND ANALYSIS OF USED OILS IN ORDER TO ASSESSMENT OF THE METALS CONTENT , Lidia Kim, Bogdan Stanescu, Adriana Cuciureanu, Madalina-Georgeta Arama, Gina Alina Traistaru, National Research and Development Institute for Industrial Ecology - ECOIND, Romania.....	121
17. RECIRCULATION OF ASH AND SLAG WASTE AT THE CERAMIC BRICK PRODUCTION , Assoc. Prof. Dr. Korolev E.A., Assoc. Prof. Dr. Eskin A.A., Assoc. Prof. Dr. Barieva E.R., Kazan (Volga Region) Federal University, Russia	129
18. RECYCLING POSSIBILITIES OF THE SLAG FROM CUPOLA FURNACE , Assoc. Prof. Ing. Dana Baricova, PhD., Prof. Ing. Alena Pribulova, PhD., Assoc. Prof. Ing. Peter Futas, PhD., Technical University of Kosice, Slovakia.....	137
19. RECYCLING OF SELECTED PLASTIC COMPONENTS FROM VEHICLES OVER THEIR LIFETIME , Dr.h.c. mult. prof. Ing. Miroslav Badida, PhD., Ing. Tibor Dzuro, PhD., doc. Ing. Lydia Sobotova, PhD., Ing. Anna Badidova, Ing. Alzbeta Mikulova, Technical University of Kosice, Slovakia.....	145
20. RECYCLING OF USED FILAMENT FROM 3D PRINTING , Assoc. prof. Ing. Jiri Fries, Ph.D., Ing. Antonin Durna, VSB-Technical University of Ostrava, Czech Republic.....	153

- 21. RECYCLING OF MSW AT THE SITE OF PRODUCTION FOR ENERGY GENERATION**, Ph.D. Maciej Neugebauer, Ph.D. Krzysztof Nalepa, Prof. Piotr Solowiej, Ph.D. Joanna Halacz, Ph.D. Maciej Wesolowski, University of Warmia and Mazury in Olsztyn, Poland161
- 22. RESOURCES MANAGEMENT AND ECO-EFFICIENCY - CRITICAL METALS, AN EXAMPLE**, SR I, Dr. Alina BUTU, SR II, Dr. Steliana RODINO, SR, Dr. Gina FIDLER, SR I, Dr. Marian BUTU, National Institute of Research and Development for Biological Sciences, Romania167
- 23. STEAM GASIFICATION OF WASTE TIRES FOR THE PURPOSE OF METHANOL PRODUCTION**, Assoc. Prof. Dr. Andrey Matveev, Prof. Dr. Alexey Dubinin, Prof. Dr. Sergey Shcheklein, Ural Federal University, Russia175
- 24. STUDY OF THE PHYSICO-MECHANICAL AND THERMAL PROPERTIES OF SELF-COMPACTING CONCRETES MADE FROM HIGH ALUMINA REFRACTORY BRICKS WASTE FILLERS**, Prof. Mohammed Saidi, Imane Djefour, Rafik Amazigh Boucetta, Billal Laichaoui, Boumerdes University, Algeria183
- 25. STUDY OF THE POSSIBILITY OF INCREASING MANUFACTURE WASTE ASPHALT SHINGLES ADDITIVE TO HOT MIX ASPHALT**, Dr. Eng. Piotr Zielinski, Cracow University of Technology-Faculty of Civil Engineering, Poland191
- 26. SYNTHESIS OF MAGNETOACTIVE COMPOUND BASED ON REDOX INTERACTIONS OF IRON(II) CATIONS WITH PERMANGANATE IONS**, Prof. Dr. Yuriy Khabarov, Assoc. Viacheslav Veshnyakov, Postgraduate Nikolay Kuzyakov, Student Evgeniy Skripnikov, Northern Arctic Federal University, Russia199
- 27. THE STUDY OF SERPENTINIZED ULTRAMAFICS FROM THE KARELIAN-KOLA REGION AND THE PRODUCTION OF A MG-RICH-SILICATE REAGENT ON THEIR BASIS FOR THE REMOVAL OF HEAVY METALS FROM SOLUTIONS**, Ph. D. Ilyina V.P., Ph. D. Kremenetskaya I.P., Ph. D. Gurevich B.I., Assis. Klimovskaya E.E., Ph. D. Ivashevskaya S.N., Institute of geology of KarRC RAS, Russia207
- 28. THE STUDY OF SYNTHETIC CAST IRON QUALITY MADE FROM STEEL SCRAP**, Assoc. Prof. Ing. Peter Futas, PhD., Prof. Ing. Alena Pribulova, PhD., Assoc. Prof. Ing. Jozef Petrik, PhD., Assoc. Prof. Marcela Pokusova, PhD., Ing. Andrea Junakova, PhD., Technical University of Kosice, Slovakia215
- 29. TOXIC SUBSTANCES IN HAZARDOUS HOUSEHOLD WASTE**, Assoc. Prof., PhD Vitalii Ishchenko, Prof., PhD, DSc Eng. Volodymyr Pohrebennyk, Assoc. Prof., PhD Eng. Bohdan Borowik, PhD Eng. Pawel Falat, Assoc. Prof., PhD Eng. Aigul Shaikhanova, University of Bielsko-Biala, Poland223

- 30. USAGE OF BOTTOM ASH FROM COAL COMBUSTION TO REPLACE NATURAL AGGREGATE IN MANUFACTURING OF BUILDING MATERIALS**, Dr. Lucica Anghelescu, Prof. Mihai Cruceru, Prof. Bogdan Marian Diaconu, Dr. Bruno Valentim, Constantin Brancusi University of Targu-Jiu, Romania.....231
- 31. USE OF WASTE WATER AT SCHOOLS**, Ing. Marek Teichmann, Ph.D., Ing. Natalie Szeligova, Assoc. Prof. Ing. et Ing. Frantisek Kuda, CSc., VSB-Technical University of Ostrava, Czech Republic239
- 32. UTILIZATION OF RECYCLED MATERIALS IN ROAD CONSTRUCTION**, Phd Stanislav Majer, Bartosz Budzinski, West Pomeranian University of Technology in Szczecin, Poland.....247
- 33. WASTE REDUCTION AND RECYCLING – A CASE STUDY FOR ROMANIA**, Ph.D. Eng. Doru Lucian Manea, Ph.D. Eng. Elena Elisabeta Manea, Ph.D. Eng. Florin Nenciu, M.Sc. Eng. Alexandra Tiganila, M.Sc. Eng. Alexandra Gheorghe, Global Innovation Solution SRL, Romania.....253
- 34. WHOLENESS OF BRIQUETTES MADE FROM RECYDLED SILICON CARBIDE DURING HANDLING IN EARLY STAGE**, Ing. Radka Pernicova Ph.D., Ing. Tomas Kolomaznik, Czech Technical University in Prague - Klokner Institute, Czech Republic.....259

AIR POLLUTION AND CLIMATE CHANGE

- 35. AGRO-CLIMATIC RISKS AND AGRICULTURAL PRODUCTION: BELGOROD OBLAST**, Assoc. Prof. Maria Lebedeva, Assoc. Prof. Olga Krymskaya, Assoc. Prof. Alexander Solovyov, Prof. Dr. Yury Chendev, Grad. student Olga Tolstopyatova, Belgorod National Research University, Russia267
- 36. AIR QUALITY ANALYSIS OF BOTOSANI TOWN**, PhD. Student Alexandra Horomnea, Prof. Univ. Dr. Vasile Efros, Stefan cel Mare University of Suceava, Romania.....275
- 37. AIR QUALITY MONITORING IN DIFFERENT FUNCTIONAL URBAN AREAS**, Ing. Dusan Jandacka, PhD., doc. Ing. Daniela Durcanska, CSc., Ing. Dasa Kovalova, PhD., University of Zilina - Faculty of Civil Engineering - Department of Highway engineering, Slovakia.....283
- 38. AN ANALYSIS OF 2006 – 2015 DECADE WEATHER IN ROMANIA**, Assist. Prof. Dr. Eng. Rares Halbac-Cotoara-Zamfir, Politehnica University of Timisoara, Romania.....291

- 39. ANALYSE OF DROUGHT SENSITIVITY INDEX IN SIMNIC CONDITIONS**, Dr. Paunescu Ramona Aida, at Agricultural Research and Development Station Simnic, Romania297
- 40. ANALYSIS OF O₂/N₂ SEPARATION PARAMETERS ON APPLICABILITY OF MEMBRANE SYSTEM WITH GAS RECIRCULATION TO OXY-COMBUSTION PROCESSES**, Ph.D. Grzegorz Wiciak, M.Sc. Krzysztof Grzywnowicz, Prof. Leszek Remiorz, Silesian University of Technology, Poland.....305
- 41. ANALYSIS OF TEMPORAL VARIATION OF NO₂ CONCENTRATIONS IN AN URBAN AREA**, Assoc. Prof. Dr. Spiru Paraschiv, Ass. Prof. Dr. Simona-Lizica Paraschiv, Prof. Dr. Marian Bordei, Assoc. Prof. Dr. Viorel Dragan, Dunarea de Jos University of Galati, Romania.....313
- 42. ASSESSMENT OF CLIMATE CONDITIONS AT THE RZESZYW-JASIONKA AIRPORT AND THEIR INFLUENCE ON THE SECURITY OF AIR OPERATIONS**, Dr Małgorzata Kirschenstein, Robert Ambroziak, MSc., Pawel Tyburek, Eng., Air Force Academy Poland, Poland321
- 43. ASSESSMENT OF THE ENVIRONMENTAL IMPACT OF REFRIGERATED CONTAINERS TRANSPORTED BY SEA**, PhD. Ewelina Zloczowska, Maritime University of Szczecin, Poland329
- 44. ASSESSMENT OF THE POSSIBLE IMPACT OF THE CURRENT CLIMATE FLUCTUATIONS ON THE SNOW DENSITY – PRELIMINARY RESULTS**, Assist. Prof. Dr. Dimitar Nikolov, Assist. Prof. Dr. Cvetan Dimitrov, Assist. Prof. Dr. Lilia Bocheva, National Institute of Meteorology and Hydrology- Bulgarian Academy of Sciences, Bulgaria337
- 45. ATMOSPHERIC AIR POLLUTION STUDIES USING THE ISOTOPE MASS-SPECTROMETRY**, Assoc. Prof. Dr. Galina Simonova, Assoc. Prof. Dr. Yuriy Volkov, Senior research scientist Valerii Kozlov, Leader electronic eng. Vladimir Shmargunov, Postgraduate student Daria Kalashnikova, Institute of Monitoring of Climatic and Ecological Systems SB RAS, Russia.....343
- 46. AUTO TRANSPORTATION - AN IMPORTANT FACTOR IN POLLUTION GROWTH AND IN ATMOSPHERIC CHANGES**, Assist. PhD. Student. Eng. Valentin Amortila, Prof. Dr. Eng. Elena Mereuta, Assist. Dr. Eng. Daniel Ganea, Assist. PhD. Eng. Costel Humelnicu, Assoc. Prof. Dr. Eng. Sorin Ciortan, Dunarea de Jos University of Galati, Romania349
- 47. CAUSES AND EFFECTS OF LOW-STACK EMISSION IN SELECTED REGIONS OF POLAND**, MSc. Kinga Stecula, PhD Student, PhD Eng. Magdalena Tutak, Silesian University of Technology, Poland.....357
- 48. CHAOTIC BEHAVIOR IN THE TIME SERIES OF POLLUTION CONCENTRATION**, Radko Kriz, University of Hradec Kralove, Czech Republic.....365

- 49. CLADOCERA REMAINS IN SHORT CORES FROM TWO SMALL NORTHERN LAKES (BOLSHEZEMELSKAYA TUNDRA, RUSSIA),** PhD Student Aisylu Ibragimova, Assoc. Prof. Dr. Larisa Frolova, Oleg Tumanov, Assoc. Prof. Dr. Larisa Nazarova, Kazan (Volga Region) Federal University, Russia373
- 50. CLIMATE CHANGE ADAPTATION MEASURES FOR RURAL SPACE - THE AGRICULTURAL APPROACH,** PhD. Candidate Cristina Halbac-Cotoara-Zamfir, Politehnica University Timisoara, Romania.....381
- 51. COMPARATIVE ANALYSIS OF THE MEMBRANE SYSTEM WITH LACK OF GAS RECIRCULATION AND SYSTEM WITH GAS RECIRCULATION CONCERNING ENERGY CONSUMPTION OF THE O₂/N₂ SEPARATION PROCESS IN POLYMER MEMBRANES FOR OXY-COMBUSTION SYSTEMS APPLICATION,** Ph.D. Grzegorz Wiciak, M.Sc. Krzysztof Grzywnowicz, Prof. Leszek Remiorz, Silesian University of Technology, Poland387
- 52. CONSIDERATION REGARDING INSTABILITY INDICES OF THE ALADIN MODEL AND RADAR STRUCTURES ASSOCIATED UNDER THE FRAMEWORK OF CONVECTIVE SITUATIONS IN WESTERN ROMANIA DURING THE INTERVAL 2005-2009,** Mircov Vlad Dragoslav, Okros Adalbert, Cozma Antoanela, Nicolin Alma, Vlad Marazan, Banat University of Agricultural Sciences and Veterinary Medicine King Michael I of Romania from Timisoara, Romania.....395
- 53. DEVELOPMENT OF INDOOR AIR QUALITY MONITORING SYSTEM FOR UNDERGROUND TRANSPORTATION,** Eng. Drd. Dima Mihai, Assoc. Prof. Dr. Surugiu Maria Claudia, Eng. Drd. Chihaiia Adrian, POLITEHNICA University of Bucharest, Romania.....403
- 54. ECOLOGICAL IMPACT ON WELDING REHABILITATION OF CASTINGS,** PhD. Chivu Oana, PhD. Babis Claudiu, PhD. Semenescu Augustin, PhD. Dimitrescu Andrei, PhD. Petrescu Valentin, POLITEHNICA University of Bucharest, Romania.....411
- 55. EFFECT OF GLOBAL WARMING ON THE REHABILITATION'S METHOD OF CEMENT CONCRETE PAVEMENTS,** Ing. Dominika Hodakova, Dr. Andrea Zuzulova, Dr. Silvia Capayova, Dr. Tibor Schlosser, Ing. Marek Branis, Slovak University of Technology Bratislava, Slovakia419
- 56. ENHANCING NAUTICAL STUDENTS ENVIRONMENTAL CONSCIENCE. AN ADDITIONAL LECTURE ON AIR EMISSIONS FROM SHIPS,** Assoc. Prof. Dr. Brindusa-Cristina CHIOTOROIU, Constanta Maritime University, Romania427
- 57. ENVIRONMENTAL POLLUTION IN THE CASE OF METAL ALLOY CASTING,** PhD. Chivu Oana, PhD. Babis Claudiu, PhD. Semenescu Augustin, PhD. Dimitrescu Andrei, PhD. Negoita Olivia, POLITEHNICA University of Bucharest, Romania.....435

- 58. FEATURES OF HEAVY METALS ACCUMULATION IN THE SNOW COVER OF THE RUSSIAN NORTH URBANIZED TERRITORIES ON THE EXAMPLE OF ARKHANGELSK**, Assoc. Prof. Chagina N., Assoc. Prof. Nikitina M., Assoc. Prof. Aivazova E., Assoc. Prof. Onokhina N., Jr. Res. Sobolev N., Northern Arctic Federal University, Russia.....443
- 59. FREQUENCY AND TREND OF THE PRECIPITATION AMOUNTS OF THE RAINY PERIODS LASTING 2-4 DAYS, IN MARAMURES, ROMANIA**, Lecturer Dr. Serban Eugenia, Lecturer Dr. Tudose Traian, Babes-Bolyai University, Romania.....451
- 60. GREENHOUSE GASES WORLDWIDE: RELATIVE CHANGES, COMPARISONS, VARIATION CAUSES**, Assoc. Prof. Dr. Simona Condurache-Bota, Assist. Prof. Dr. R. Drasovean, Prof. Dr. G. Murariu, Prof. Dr. M. Voiculescu, Preuniv. Prof. G. Condurache-Bota, University "Dunarea de Jos", Romania459
- 61. HEALTH RISK ASSESSMENT IN DEVELOPMENT THE AIR QUALITY MONITORING PROGRAMS FOR THE AREAS AFFECTED BY PRODUCTION, PREPARATION AND PRIMARY OIL REFINING**, Anastasiia Kokoulina, Prof. Irina May, Federal Scientific Center for Medical and Preventive Health Risk Management Technologies, Russia467
- 62. IDENTIFICATION OF POSSIBLE DROUGHT TOLERANCE SOURCES AT SIMNIC TESTED WHEAT ASSORTMENT**, Dr. Paunescu Ramona Aida, Dr. Paunescu Gabriela, Dr. Babeanu Cristina, Agricultural Research and Development Station Simnic, Romania475
- 63. INFLUENCE OF LOCAL ATMOSPHERIC CONDITIONS ON POLLUTANTS TRANSPORT IN A COASTAL TOURIST AREA**, Associate Prof. PhD Brindusa-Cristina CHIOTOROIU, PH Dr.st. Eng. Manuela Rossemary APETROAEI, Eng. Viorel Mihai TANASE, Constanta Maritime University, Romania483
- 64. INFLUENCE OF SELECTED METEOROLOGICAL ELEMENTS ON THE SAFETY OF FLIGHT OPERATIONS IN THE ASPECT OF VARIABILITY OF LONG-TERM DATA**, Dr Malgorzata Kirschenstein, Robert Ambroziak, MSc., Paulina Lukas, Eng., Air Force Academy Poland, Poland.....491
- 65. INFLUENCE OF SELECTED O₂/N₂ SEPARATION PARAMETERS OF POLYMER MEMBRANE ON ENERGY CONSUMPTION OF THE PROCESS IN CASCADE SYSTEM WITH LACK OF GAS RECIRCULATION FOR APPLICATION IN OXY-COMBUSTION**, PhD. Grzegorz Wiciak, M.Sc. Krzysztof Grzywnowicz, Prof. Leszek Remiorz, Silesian University of Technology, Poland499

- 66. INULIN IMPACT ON CO₂ AND CH₄ BALANCE IN HOLSTEIN FRIESIAN CROSSBREED CALVES RUMEN**, Mg. env. Inga Grinfelde, Prof. Dr. med. vet. Aija Ilgaza, Mg. med. vet. Sintija Jonova, Mg. med. vet. Astra Arne, Assoc. prof. Dr. med. vet. Kaspars Kovalenko, Latvia University of Life Sciences and Technologies, Latvia507
- 67. LONG-TIME MEASUREMENTS OF REINFORCEMENT DUE TO AIR POLLUTION CORROSION ON REINFORCED GIRDER BRIDGE**, Assoc. Prof. Dr. Eng. Peter Kotes, Eng. Miroslav Strieska, Dr. Eng. Miroslav Brodnan, University of Zilina - Civil Engineering Faculty - Department of Structures and Bridges, Slovakia515
- 68. MULTI-SOURCE CLOUD PLATFORM FOR ENHANCING THE QUALITY OF LIFE**, Dr. Eng. George Suciu, Adrian Pasat, Carmen Nadrag, Mihaela Balanescu, BEIA Consult International, Romania.....523
- 69. NEURAL NETWORKS AS OPTIMIZATION TOOLS FOR FUEL CONSUMPTION**, Assist. Prof. Costel Humelnicu, Assist. Prof. Valentin Amortila, Prof. Dr. Elena Mereuta, Dunarea de Jos University of Galati, Romania.....531
- 70. OPTIMAL DESIGN OF PRESSURE SWING ADSORPTION UNITS FOR THE SEPARATION OF MULTICOMPONENT GAS MIXTURES**, Assoc. Prof. Evgeny Akulinin, Assoc. Prof. Oleg Golubyatnikov, Assoc. Prof. Sergey Skvortsov, Prof. Dr. Dmitry Dvoretzky, Prof. Dr. Stanislav Dvoretzky, Tambov state technical university-Technological institute, Russia539
- 71. PERSPECTIVE OF DECREASING OF ROAD TRAFFIC POLLUTION IN THE CITIES**, Assoc. Prof. Phd. Andrii Galkin, Full Prof., Dr. Oleksii Lobashov, Ing. PhD. Silvia Capayova, Ing. Dominika Hodakova, Ing. CSc. Tibor Schlosser, Slovak University of Technology Bratislava, Slovakia.....547
- 72. PRACTICAL REALISATION AND FINITE ELEMENT MODELING OF ULTRASONIC FILTERS DESIGN FOR AIR FILTRATION**, Assoc. Prof. Dan Nitoi, Prof. Dr. Gheorghe Amza, Lecturer Dr. Zoia Amza, Lecturer Dr. Constantin Radu, Dr. Marius Teodorescu, University Politehnica of Bucharest, Romania.....555
- 73. RADON CONCENTRATION IN UNIVERSITY POLITEHNICA OF BUCHAREST**, Lecturer. Dr. Eng. Gabriel Lazaro Pavel, University Politehnica of Bucharest, Romania.....563
- 74. RESISTANCE OF CONCRETE SURFACE AGAINST THE ACTION OF CHEMICAL DEICING SUBSTANCES**, Dr. Eng. Miroslav Brodnan, Assoc. Prof. Dr. Eng. Peter Kotes, Eng. Miroslav Strieska, Dr. Eng. Wojciech Kubissa, Dr. Eng. Roman Jaskulski, University of Zilina - Civil Engineering Faculty - Department of Structures and Bridges, Slovakia.....571

- 75. SATELLITE MONITORING OF THE DROUGHT CONSEQUENCES VIA MEDIUM AND HIGH RESOLUTION MULTISPECTRAL IMAGES**, Assoc. Prof. Dmitriy K. Mozgovoy, Assoc. Prof. Roman Yu. Tsarev, Assoc. Prof. Olga A. Almabekova, Assoc. Prof. Alexander N. Pupkov, Siberian Federal University, Russia579
- 76. SNOW BLIZZARDS AND SNOW DRIFTS IN NORTEAST BULGARIA - ASSESSMENT AND RECENT TENDENCIES**, Assist. Prof. Dr. Dimitar Nikolov, Assist. Prof. Dr. Cvetan Dimitrov, Assist. Prof. Dr. Lilia Bocheva, National Institute of Meteorology and Hydrology- Bulgarian Academy of Sciences, Bulgaria.....591
- 77. SOFTWARE AND HARDWARE APPLIANCE FOR RESEARCH, MODELLING AND OPTIMISATION OF CYCLIC PROCESSES OF GAS MIXTURE SEPARATION**, Assoc. Prof. E. I. Akulinin, Assoc. Prof. O. O. Golubyatnikov, Prof. Dr. S. I. Dvoretzky, Prof. Dr. D. S. Dvoretzky, Tambov state technical university-Technological institute, Russia599
- 78. SOIL MOISTURE IMPACT ON AMMONIA SOIL FLUXES WITH INPUT OF MINERAL NITROGEN**, Bc. sc. ing. Olga Frolova, Mg. env. Inga Grinfelde, Dr. sc. ing. Laima Berzina, Mg. sc. ing. Kristine Valujeva, Bc. sc. ing. Jovita Pilecka, Latvia University of Life Sciences and Technologies, Latvia607
- 79. SPATIAL DISTRIBUTION OF PRECIPITATIONS ASSOCIATED TO CUT-OFF LOWS IN ROMANIA IN 2014**, Lecturer Dr. Traian Tudose, Assoc. Prof. Dr. Florin Moldovan, Babes-Bolyai University, Romania.....615
- 80. THE CHAMBER CONFIGURATION IMPACT ON SOIL FLUX PRECISION USING CAVITY RING-DOWN SPECTROSCOPY**, Bc. sc. ing. Olga Frolova, Mg. env. Inga Grinfelde, Ruta Kalnina, Dr. sc. ing. Laima Berzina, Mg. sc. ing. Kristine Valujeva, Latvia University of Life Sciences and Technologies, Latvia623
- 81. THE EMISSIVITY AND ENERGY INTENSITY IN EU COUNTRIES – CONSEQUENCES FOR THE POLISH ECONOMY**, Ph.D., M. Sc. Eng. A. Bluszcz, Silesian University of Technology, Poland631
- 82. THE IMPACT OF CLIMATE ON WOOL PRODUCTIVITY FORMATION IN ASKANIAN FINE FLEECE SHEEP OF THE TAVRIAN TYPE**, Prof. Tetiana NEZHUKCHENKO, PhD. Natalia NEZHUKCHENKO, Post-graduate student Sadiar MAMEDOV, Kherson State Agricultural University, Ukraine639
- 83. THE IMPACT OF WATER INJECTION WITHIN A GAS TURBINE'S INTAKE, AT ITS STARTING ON THE TEST BENCH**, Dr. Ene Barbu, Dr. Radu Mirea, Dr. Mihaiella Cretu, Eng. Marius Deaconu, Dr. Valeriu Vilag, Romanian Research and Development Institute for Gas Turbines COMOTI, Romania.....647

- 84. THE SHALLOW DEPTH INFLUENCED BY THE REGIONAL RISE IN TEMPERATURE CAUSING MORE EARTHQUAKES IN ALASKA**, Adven Masih, Ural Federal University, Russia655
- 85. THE SPATIAL ANALYSIS OF AIR POLLUTION WITH TRACE ELEMENTS USING SNOW SAMPLING**, Bc. sc. ing. Jovita Pilecka, Mg. env. Inga Grinfelde, Mg.sc. ing. Kristine Valujeva, Bc. sc. ing. Olga Frolova, Dr. geogr. Oskars Purmalis, Latvia University of Agriculture, Latvia663
- 86. THE TEMPORAL AND SPATIAL ANALYSIS OF TRANSPORT IMPACT ON TRACE ELEMENTS IN SNOW SAMPLES**, Mg. sc. ing. Jovita Pilecka, Mg. env. Inga Grinfelde, Mg.sc.ing. Kristine Valujeva, Prof. Dr. silv. Inga Straupe, Dr. Geogr. Oskars Purmalis, Latvia University of Agriculture, Latvia.....671
- 87. THERMAL ANOMALIES IN NORTH-WESTERN POLAND**, Dr. Malgorzata Kirschenstein, Dr. Małgorzata Owczarek, Air Force Academy Poland, Poland.....679
- 88. THERMAL REGIME AT THE BASE OF THE LATE PLEISTOCENE ICE SHEETS AS INFERRED FROM BOREHOLE TEMPERATURE DATA**, Dr. Dmitry Demezhko, Dr. Anastasia Gornostaeva, Dr. Alexander Antipin, Institute of Geophysics UB RAS, Russia687
- 89. THREE-DIMENSIONAL DIFFUSION MODEL FOR COMPUTING THE CONCENTRATION OF PM10 ORIGINATED FROM AN ASH DUMP AFFECTING A ROMANIAN URBAN AREA**, Univ. Lect. Dr. Clementina Moldovan, Assoc. Prof. Dr. Liana-Simona Sbirna, B. Eng. Sebastian Sbirna, University of Petrosani, Romania695
- 90. TOOL OF CONSISTENT REPORTING OF GHG AND AIR POLLUTANT EMISSIONS: CASE STUDY OF LATVIA’S AGRICULTURAL SECTOR**, Dr.sc.ing. Laima Berzina, Mg.sc.env. Inga Grinfelde, Mg.sc.ing. Olga Frolova, Zaharane Karina, Mg.sc.ing. Jovita Pilecka, Latvia University of Agriculture, Latvia703
- 91. VARIABILITY OF BIOMETEOROLOGICAL CONDITIONS IN THE NORTH-WESTERN PART OF POLAND**, Dr. Malgorzata Owczarek, Dr. Malgorzata Kirschenstein, University of Gdansk, Poland711
- 92. VARIATION IN THE FREQUENCY OF STORM PHENOMENA IN NORTH-WESTERN POLAND**, Dr. Małgorzata Kirschenstein, Dr. Izabella Chlost, Air Force Academy Poland, Poland719