

CONTENT

PLENARY SESSION

OXYGEN TRANSFER REACTIONS DURING SINTERING OF FERROUS POWDER COMPACTS Herbert DANNINGER, Raquel DE ORO CALDERON, Christian GIERL-MAYER	1
NEW STEEL COMBINATIONS PRODUCED BY THE DAMASCUS TECHNIQUE Susanne STROBL, Roland HAUBNER, Wolfgang SCHEIBLECHNER	3
QUALITATIVE SIMULATION OF CRANIUM DYNAMIC LOADING Sorin Mihai CROITORU	5
ASPECTS REGARDING THE COLLECTION AND REMOVAL OF RAINFALL WATER ON LANDFILL FINAL COVER Gheorghe VOICU, Mirela DINCĂ, Paula TUDOR, George IPATE	7
NEW APPROACHES IN TIME PERIOD ESTIMATION FOR THE SHIPS MAINTENANCE WORKS CARRIED OUT IN THE SHIPREPAIRS SHIPYARDS Emil MANEA	9

PART 1.

ADVANCED MATERIALS AND PROCESSING TECHNOLOGIES

MORPHOLOGICAL AND THERMOPHYSICAL BEHAVIOUR OF HYDROXYAPATITE AND TITANIUM POWDERS MIXTURE DURING THE MECHANICAL ALLOYING PROCESSING Ionela Gabriela BUCȘE, Nicoleta CIOATERA, Elena-Adriana VOINEA, Petre ROTARU, Gabriela SIMA, Oana GINGU	11
OBTAINING OF BIOPOLYMER FROM ONION (ALLIUM CEPA L.) USED AS A BINDER IN METAL INJECTION MOLDING PROCESS (MIM) Mihaela-Gabriela DUMITRU, Cristina TEISANU, Oana GINGU	13
CUTTING WITH WATERJET OF METALLIC STRATIFIED MATERIALS Traian FLESER, Branco PETROVICI	15
MORPHOLOGICAL AND FUNCTIONAL CHARACTERIZATION OF THE AI-BASED FOAMS PROCESSED BY POWDER METALLURGY-SPACE HOLDER TECHNIQUE Oana GINGU, Ionela Gabriela BUCȘE, Gabriela SIMA, Cristina TEISANU, Stephane FONTAINE, Cornel DRAGUSIN, Nicoleta CIOATERA, Adriana VOINEA	17
ANALYSIS OF METALLIC MATERIALS USING OPTICAL COHERENCE TOMOGRAPHY Gheorghe HUȚIU, Virgil-Florin DUMA, Dorin DEMIAN, Adrian BRADU, Adrian Gh. PODOLEANU	19
EFFECTS OF THE WEAR PROCESS ON THE IN-VITRO BIOCOMPATIBILITY OF SOME NANOSTRUCTURED HYDROXYAPATITE-BASED COMPOSITES Johny NEAMTU, Oana GINGU, Danut COJOCARU, Olimpia GHERMEC, Gabriela SIMA, Ionela Gabriela BUCȘE, Cristina TEISANU, Nicoleta CIOATERA, Elena-Adriana VOINEA	21



SOLID AND LIQUID-BASED PHENOMENA DURING THE MICROWAVE SINTERING OF THE HAP/TI BIOCOMPOSITE NANOPOWDERS	23
Victor NICOARĂ, Ionela Gabriela BUCȘE, Cristina TEIȘANU, Adriana VOINEA, Mihail MANGRA, Pisc MARIAN	
RESISTANCE SPOT WELDING OF SOME SINTERED STEELS	25
Claudiu NICOLICESCU, Victor NICOARĂ, Mădălina Olga GUGILĂ	
STUDY ABOUT THE EFFECT OF Cr ALLOYING ELEMENT ON THE FINAL PROPERTIES OF WCu SYSTEM	27
Cristina Ileana PASCU, Stefan GHEORGHE, Claudiu NICOLICESCU	
FRACTURE MECHANISM IN HYDROXYAPATITE-BASED BIOCOMPOSITES PROCESSED BY POWDER METALLURGY TECHNOLOGY	29
Gabriela SIMA, Ion CINCA, Cristina TEISANU, Petre ROTARU, Oana GINGU	
INVESTIGATION OF THE PORE MORPHOLOGY OF THE HYDROXYAPATITE-BASED BIOCOMPOSITES PROCESSED BY TWO STEP SINTERING	31
Cristina TEISANU, Ionela BUCSE, Gabriela SIMA, Oana GINGU	
ADVANTAGES AND DISADVANTAGES OF CHEMICAL ELEMENTS CONTAIN ON THE PROPERTIES OF TITANIUM ALLOYS	33
Marius VASILESCU, Mircea DOBRESCU	
ASSESSMENT ON DOPING POSSIBILITIES IN TITANATE PYROCHLORES	35
Elena-Adriana VOINEA, Nicoleta CIOATERA, Cezar-Ionut SPINU, Alexandru POPESCU	
COMPARATIVE RAMAN SPECTROSCOPY ANALYSIS FOR BIOCOMPOSITE POWDERS-BASED FEEDSTOCKS FOR SUBSEQUENT MEDIUM PRESSURE INJECTION PROCESSING	37
Elena-Adriana VOINEA, Anca DIDU, Mihai STOICESCU, Oana GINGU	
PART 2.	
MODELING AND SIMULATION	
GEOMETRIC DYNAMICS USED IN THE STUDY OF MECHANICAL METHODS	39
Dumitru BĂLĂ	
PROCESSING TECHNOLOGIES APPLIED FOR REALIZING MEDICAL MICRO-DEVICES COMPONENTS	41
Aurel Valentin BÎRDEANU, Mihaela BÎRDEANU, Gabriel GRUIONU, Lucian-Gheorghe GRUIONU	
STUDIES USED IN CRASHWORTHINESS WITH VIRTUAL MORPHOLOGY AND THE MAIN MOVEMENTS OF HUMAN CRANIO – CERVICAL COMPLEX SIMULATIONS	43
Stefanita CIUNEL, Bebe TICA	
FINITE ELEMENT ANALYSIS OF THE HYBRID RADIOFREQUENCY/MAGNETIC NANOPARTICLES ABLATION	45
Daniela COMAN, Adrian SAFTOIU, Lucian GRUIONU	
MECHANICAL BEHAVIOR OF A LUMBAR VERTEBRA RECONSTRUCTED BY BIOCOMPOSITE ALLOPLASTIC GRAFTS USING FINITE ELEMENT METHOD	47
Daniela COMAN, Mircea Radu GORGAN, Felix Mircea BREHAR, Oana GINGU, Lucian GRUIONU	



PALPATION SIMULATION OF A LIVER WITH TUMOR USING FINITE ELEMENT METHOD Daniela COMAN, Adrian SAFTOIU, Lucian GRUIONU	49
ARTIFICIAL LUNG PHANTOM FOR TRAINING AND TESTING IN BRONCHOSCOPY Catalin CONSTANTINESCU, Irina CONSTANTINESCU, Lucian GRUIONU	51
MECHATRONIC SYSTEM FOR LOCOMOTION REHABILITATION Nicolae DUMITRU, Anca DIDU Cristian COPILUSI	53
ON THE CONTROL OF A CLASS OF CONTINUUM ROBOTS Mihaela FLORESCU	55
COMPARATIVE STUDY ON TREATMENT BIOSOURING OPTIMIZATION WITH AND WITHOUT ULTRASOUND FOR 50 % OF COTTON + 50 % OF FLAX MATERIALS Monica PUSTIANU, Mihaela DOCHIA, Simona GAVRILAȘ, Daniel TOMESCU	57
REVERSE ENGINEERING TECHNIQUE APPLIED TO A HUMAN SKULL: KNOWING WHEN TO COMPROMISE Ioana Alexandra RAD, Mircea Cristian DUDESCU	59
CAD 3D MODELS: THE LINK BETWEEN MEDICINE AND ENGINEERING Ioana Alexandra RAD, Mircea Cristian DUDESCU	61
MATHEMATICAL MODELING OF THE EVOLUTION OF HUMAN CAPITAL AT MICRO AND MACROECONOMIC Dalia SIMION, Dorel BERCEANU	63
CORRELATION AND STATISTICAL ANALYSIS OF VAPOR-LIQUID EQUILIBRIUM DATA FOR THE SYSTEM TOLUENE - BENZENE USING GOTHARD MODEL Luminița SIMOIU, Ștefan RADU, Camelia SIMOIU	65
A CONTROL ALGORITHM FOR AUTONOMOUS ELECTRIC VEHICLES BY FUZZY LOGIC Viorel STOIAN, Nicolae DUMITRU, Sorin Dumitru	67
REGARDING THE ANALYSIS OF TENSION AND DEFORMATION STATES IN CASE OF HIGH SPEED CUTTING TURNING Mihai ȚĂLU, Daniel POPESCU, Roxana Cristina POPESCU	69
FEM MODELING OF STRESS DISTRIBUTION AND DISPLACEMENT IN CLAYEY SOILS DURING ARTIFICIAL COMPACTION Nicoleta UNGUREANU, Valentin VLĂDUȚ, Sorin-Ștefan BIRIȘ, Gheorghe VOICU, Gigel PARASCHIV	71
BUSINESS MARKETING, SALES AND PROMOTION - FIELD RECEPTIVE TO EXPERT SYSTEMS TECHNOLOGY Tomița Constantin VASILE, Luminița POPESCU, Cora Ionela DĂNIASĂ, Anica IANCU, Virgil Daniel POPESCU	73

PART 3.
ENVIRONMENTAL ENGINEERING

CONSIDERATIONS REGARDING ENVIRONMENTAL ASPECTS OF RISK MANAGEMENT IN THE OIL AND GAS INDUSTRY	75
Mădălina ALBU	
ACTIVE HOUSE - A BUILDING THAT OFFERS MORE THAN CONSUMES	77
Madalina CALBUREANU, Raluca MALCIU, Diana CALBUREANU	
STUDIES ON INTEGRATED WASTE MANAGEMENT IN MEHEDINTI COUNTY	79
Mariana CIOBANU, Olimpia GHERMEC, Ionela BUCSE	
CALCIUM-DOPED Y-114 LAYERED COBALT PEROVSKITE, A PROMISING ANODIC MATERIAL FOR DIRECT METHANOL FUEL CELL	81
Victor-Daniel CRAIA-JOLDES, Mircea Laurentiu DAN, Delia-Andrada DUCA, Nicolae VASZILCSIN	
CONSERVING BIOMASS IN GEOPARK PLATEAU MEHEDINTI	83
Stefan DASCĂLU, Olimpia GHERMEC, Marian DRAGOI	
MULTI-CRITERIA DECISION-MAKING TOOLS FOR SELECTION PHOTOVOLTAIC MODULES	85
Gabriela DEMIAN, Mihai DEMIAN, Stefan RADU, Sandu DUBOVAN	
CEFTRIAZONE AS CORROSION INHIBITOR FOR NICKEL IN ACID SOLUTIONS	87
Delia-Andrada DUCA, Mircea Laurentiu DAN, Nicolae VASZILCSIN	
SULPHITE ELECTROOXIDATION IN ALKALINE MEDIA ON SKELETAL NICKEL BASED 6 LAYERS PLATINUM NANOPARTICLES ELECTRODE	89
Andreea-Floriana ENACHE, Mircea Laurentiu DAN, Nicolae VASZILCSIN	
VISIBLE LIGHT PHOTOACTIVATED HETEROSTRUCTURES FOR PHOTOCATALYTIC WASTEWATER TREATMENT	91
Alexandru ENESCA, Cristina BOGATU, Luminita ISAC, Dana PERNIU, Anca DUTA	
RESEARCH ON TERRESTRIAL SEQUESTRATION OF CARBON DIOXIDE POTENTIAL FROM ANTHROPOGENIC SOURCES IN MEHEDINTI COUNTY	93
Cristian GHERMEC, Olimpia GHERMEC, Elena GAVRILESCU	
TRANSDISCIPLINARITY-A NEW VISION IN FORMING SPECIALISTS IN THE FIELD OF ENVIRONMENTAL ENGINEERING. CASE STUDY.	95
Olimpia GHERMEC, Elena GAVRILESCU, Cristian GHERMEC	
AIR QUALITY ASSESSEMENT THROUGH A MULTI CRITERIA DECISION METHOD	97
Luminița GRECU	
THE IMPLICATION OF THE ENVIRONMENTAL AUTHORITIES FROM MEHEDINTI COUNTY IN RESOLVING COMPLAINTS FROM CITIZENS REGARDINIG SOURCES OF NOISE	99
Viorica IACOB	



- ECOLOGICAL REHABILITATION OF COAL ASH DUMP, ESSENTIAL OBJECTIVE IN ORDER TO PROTECT THE ENVIRONMENT** 101
Dumitru ȚUGUI, Claudiu DOBRE, Constantin COTIGA

**PART 4.
NAVIGATION AND MARITIME AND INLAND TRANSPORT SYSTEMS**

- IDENTIFICATION OF GAPS IN LNG EDUCATION AND TRAINING** 103
Gabriel BENGA, Ion CIUPITU, Sorin SAVU, Adrian OLEI
- COMPUTATIONAL METHODS IN THE STUDY OF SHIP MOTIONS ON THE REAL SEA CONDITIONS** 105
Mihaela-Greti CHITU
- EDUCATION AND TRAINING FOCUSING ON LNG IN LOGISTICS COURSES** 107
Ion CIUPITU, Gabriel BENGA, Sorin SAVU, Adrian OLEI
- STRUCTURAL AND CONSTRUCTIVE ANALYSIS OF THE GRAB WITH TWO CUPS USED IN THE PORT AND MARINE AREA** 109
Mirela COTRUMBĂ, Alexandru PINTILIE
- PERFORMANCED BUOYS FOR SIGNALING RIVER NAVIGATION** 111
Sandu DUBOVAN, Mihai GHIBA, Lidia DUBOVAN
- TECHNIQUE OF USING THE "VOYAGE PLANNING" CONCEPT FOR THE LOGISTIC INTEGRATION OF INLAND WATERWAY TRANSPORT** 113
Mihai GHIBA, Sandu DUBOVAN, Lidia DUBOVAN
- THE RIS KEY TECHNOLOGIES AVAILABLE FOR THE MAIN EUROPEAN INLAND NAVIGATION CORRIDORS** 115
Adrian OLEI, Mihai GHIBA
- TRANSPORTATION ON THE LOWER DANUBE – CURRENT ISSUES** 117
Ionel Dănuț SAVU, Ion CIUPITU
- COMPETENCIES FOR INLAND NAVIGATION CREW OF LNG-FUELED SHIPS** 119
Sorin SAVU, Gabriel BENGA, Ion CIUPITU, Adrian OLEI
- REALITIES IN MARITIME DOMAIN REGARDING CYBER SECURITY CONCEPT** 121
Remus ZAGAN, Gabriel RAICU

**PART 5.
MANAGEMENT AND INDUSTRIAL ENGINEERING**

- ASSESSMENT FRAMEWORK FOR ORGANIZATION'S INFORMATION SECURITY** 123
Dragoș-Ionuț ANGHELUȚĂ, Luminița-Mihaela LUPU, Ionuț-Viorel HERGHILIGIU
- STRUCTURAL OF COMPLEX MECHANISM OF SIX-SPEED AUTOMATIC TRANSMISSION** 125
Daniela ANTONESCU, Constantin BREZEANU, Paun ANTONESCU



ORGANIZATION AND COORDINATION OF ACCOUNTING PROFESSION IN ROMANIA Marioara AVRAM, Greti Daniela AVRAM	127
OPTIMIZATION FOR MATERIALS SELECTION AND ITS IMPORTANCE IN AN PERFORMANCE MANAGEMENT Mihai DEMIAN, Luminita GRECU, Gabriela DEMIAN	129
ROMANIAN E-COMMERCE TRENDS Silviu-Valentin MIROSLAV, Mirona Ana-Maria POPESCU	131
ASPECTS ABOUT THE QUALITY CONTROL AT FIRST ARTICLE INSPECTION (FAI) FOR PARTS OBTAINED BY MATERIALS COMPOSITES USED IN THE RAILWAY SECTOR Cristina Ileana PASCU , Stefan GHEORGHE, Dragos POPA , Ovidiu POPA	133
IMPLEMENTING AN ONLINE MARKETING STRATEGY FOR AN IT COMPANY Mirona Ana-Maria POPESCU, Silviu-Valentin MIROSLAV	135
CONCURRENTIAL ROTATION MOVEMENTS COMPOUNDING Mariana TROFINESCU, Gabriela FIROUZI, Păun ANTONESCU	137