# **SMAT 2014 CONGRESS PROGRAM**

# Thursday, 23<sup>rd</sup> October, 2014

### Eminescu Hall 16<sup>30</sup> - 17<sup>30</sup>

#### Chairmen: RADENKOVIĆ Goran CRACIUNOIU Nicolae

- AEM31 CRITERIA FOR ASSESSING THE ENERGY EFFICIENCY OF MOTOR VEHICLES
  Constantin-Corneliu MÎNZATU, George ENE, Marian-Eduard RĂDULESCU, Irinel DINU, Marius SIMIONESCU, Ramona-Monica STOICA
- AEM32 **CONSIDERATIONS RELATING TO ACTIVE SAFETY OF AUTOMOBILES** Constantin-Corneliu MÎNZATU, George ENE, Marian-Eduard RĂDULESCU, Irinel DINU, Marius SIMIONESCU, Ramona-Monica STOICA
- AEM33 THE ANALYSIS OF THE INFLUENCE OF THE CLEARENCE ON THE IMPACT NOISY AT GROOVES ASSEMBLIES -FINITE ELEMENT ACOUSTIC MODEL STRUCTURE Axel MAURER, Mircea BOCIOAGA, Anghel CHIRU
- AEM34 THE ANALYSIS OF THE INFLUENCE OF THE CLEARENCE ON THE IMPACT NOISY AT GROOVES ASSEMBLIES -FINITE ELEMENT ACOUSTIC MODEL RESULTS INTERPRETATION-Axel MAURER, Mircea BOCIOAGA, Anghel CHIRU
- AEM35 FLOW SIMULATION THROUGH AN ELECTROHYDRAULIC SWITCHING VALVE USING FINITE ELEMENT METHOD Dan Mihai DOGARIU, Anghel CHIRU, Cristian Ioan LEAHU, Vlad Ștefan STANCU
- AEM80 **DEVELOPMENT OF A THREE-DIMENSIONAL FINITE ELEMENT KNEE PROSTHESES MODEL** Daniela TARNITA, Dan CALAFETEANU, Marius CATANA, Ionut GEONEA, Dan TARNITA

### **Eminescu Hall** 17<sup>30</sup> - 18<sup>15</sup>

#### Chairmen: RAKOSI Edward TARNIȚĂ Daniela

- AEM36 USING CORRELATION ANALYSIS TO MODELING VEHICLE DYNAMICS Constantin-Ovidiu ILIE, Marin MARINESCU
- AEM37 **AUGMENTED REALITY APPLICATION IN ENGINEERING** Petar PEJIĆ, Taško RIZOV, Sonja KRASIĆ, Bojana STAJIĆ
- AEM40 **GEAR MATERIAL SELECTION USING WASPAS METHOD** Dušan PETKOVIĆ, Miloš MADIĆ, Goran RADENKOVIĆ
- AEM41 APPLICATION OF THE COPRAS METHOD FOR MATERIAL HANDLING EQUIPMENT SELECTION Miloš MADIĆ, Dušan PETKOVIĆ, Vojislav TOMIĆ

### **18<sup>30</sup> - 19<sup>30</sup>**

#### Chairmen: OPREAN Mircea IVAN Florian

- AEM42 **RECONSTRUCTION OF AN UNUSUAL ROAD TRAFFIC ACCIDENT USING TWO DIFFERENT VERSIONS OF A SIMULATION PROGRAM** Attila Iuliu GÖNCZI, Adrian CIPLEU, Liviu MIHON
- AEM43 APPLICATION OF HOMOTOPY ANALYSIS METHOD FOR SOLVING EQUATION OF VEHICLE'S MOVE IN THE LINEAR CASE Bogdan N. NICOLESCU, Tiberiu MACARIE, Tudor C. PETRESCU
- AEM44 WITH REGARD TO THE STABILITY OF THE CARS GOING ALONG STRAIGHT LINES AND IN TURN Tiberiu MACARIE, Amalia DASCĂL, Helene SUSTER BĂDĂRĂU
- AEM45 EFFECTS OF ALCOHOL ADDITION INTO DIESEL-BIODIESEL BLENDS FOR CI ENGINES BY COMPUTER SIMULATIONS Bogdan OvidiuVARGA, Calin ICLODEAN
- AEM49 **EXPERIMENTAL RESEARCHES REGARDING THE CORRELATION BETWEEN THE OPTIMAL DISTRIBUTION PHASES, THE POLLUTING EMISSIONS AND THE FUEL CONSUMPTION** Daniel LIȚĂ, Florian IVAN

 AEM67 MODAL-DYNAMIC ANALYSIS OF THE STEERING MECHANISM ON A VEHICLE
Nicolae DUMITRU, Gabriel MARINESCU, Adrian ROŞCA, Oana OŢĂT

#### Romanescu Hall 16<sup>30</sup>-18<sup>15</sup>

#### Chairmen: CHIRU Anghel BUTSCH Michael

- APP28 **PRESENTATION OF A WHEEL LOADER WITH AN ELECTRIC DRIVEN PUMP AND WITH ELECTRIC WHEEL DRIVES** Michael BUTSCH, Uwe KOSIEDOWSKI, Peter KUCHAR, Manfred MACK, Dimitri ZIMANTOVSKI
- APP29 A MATHEMATICAL MODEL TO SIMULATE THE PHENOMENA OCCURRING IN THE HYDRAULIC CIRCUIT OF A SINGLE REGIME OPERATING THERMAL-HYDRAULIC GENERATOR Tudor MITRAN, Nicolae CHIOREANU, Horia BELES, Alexandru RUS,

Nicolae POLOJINTEF-CORBU

- APP30 **MEASUREMENT EQUIPMENT FOR EXPERIMENTAL BENCH, ELECTRICALLY OPERATED BRAKE SYSTEM USED IN VEHICLES** Daniel BALTAGIU, Radu GAIGINSCHI, Radu DROSESCU
- APP31 ONE WAY TO ACHIEVE THE PROCESS OF THE SUPERCHARGING AT THE INTERNAL COMBUSTION ENGINES, RESEARCHED EXPERIMENTAL ON THE TEST BENCH

Cristian-Ioan LEAHU, Anghel CHIRU, Dan Mihai DOGARIU

- APP32 **RESEARCH ON IDENTIFYING THE PERFORMANCES OF THE SUPERCHARGING AGGREGATES** Cristian-Ioan LEAHU, Anghel CHIRU, Dan Mihai DOGARIU
- APP33 NUMERICAL INVESTIGATION OF HYBRID ELECTRIC VEHICLE'S PERFORMANCE Bogdan Ovidiu VARGA, Calin ICLODEAN
- APP34 INJECTION TIMING STRATEGY FOR EXHAUST HEAT RECOVERY OPTIMIZATION ON A TURBOCHARGED DIESEL ENGINE Plamen PUNOV, Christelle PERILHON, Stéphanie LACOUR, Pierre PODEVIN, Georges DESCOMBES, Teodossi EVTIMOV
- APP42 **THE CALCULATION OF THE INJECTION PROCESS FOR AN SI ENGINE WITH ELECTROMAGNETIC INJECTORS** Vasile BLAGA, Tudor MITRAN, George DRAGOMIR, Nicolae CHIOREANU
- RVE93HEAT DISSIPATION PROCESSES IN DIRECT INJECTION DIESEL ENGINES AIRVladimir Gheorghe MĂRDĂRESCU, Nicolae ISPAS, Mircea NĂSTASOIU

#### **Romanescu Hall** 18<sup>30</sup> - 19<sup>30</sup>

#### Chairmen: **PANĂ Constantin EVTIMOV Teodosie**

\* The acknowledgment of this paper refers only at project Grant number PO 9003/1138/ 31.03.2014 SMIS code 50139

APP43 VARIABLE VALVE EVENT AND LIFT - NISSAN SOLUTION FOR HIGH-PERFORMANCE ENGINE

Gabriela Monica PANĂ

- APP48 THE DYNAMIC STUDY FOR THE HELICOIDAL SPRING OF THE MACPHERSON AUTOMOTIVE SUSPENSION
  Mihaela-Liana BOGDAN, Ionut GEONEA, Loreta SIMNICEANU, Victor OTAT, Dragos Laurentiu POPA
- APP50 **DESIGN OF A TRANSMISSION FOR WHEELCHAIRS INTENDED TO HUMANS WITH LOCOMOTOR DISABILITIES \*** Ionut Daniel GEONEA, Alina ROMANESCU, Laurențiu RACILĂ, Ilie DUMITRU
- APP51 **RUNNING SPEEDS DETERMINATION FOR TRACTOR U 650 EQUIPPED WITH ADDITIONAL TRANSMISSION** Gheorghe POPA, Augustin CONSTANTINESCU, Stefanita CIUNEL
- APP53 **BIODIESEL: DETERMINATION OF THE PHYSICO CHEMICAL PROPERTIES WITH IMPACT ON THE DIESEL COLD STARTING** Rodica NICULESCU, Adrian CLENCI, Gabriel Alexandru ŞERBAN, Victor SIMAN IORGA
- RVE92 CHARGING MIXTURES OF DIESEL FUEL AND ALCOHOL FOR DIRECT INJECTION DIESEL ENGINES AIR COOLED Sanda GEAMBAŞU, Vladimir MĂRDĂRESCU
- APP58 **DESIGN OF A WHEELCHAIR INTENDED TO HUMANS WITH** LOCOMOTORS DISABILITIES Ionuț Daniel GEONEA, Alina ROMANESCU, Laurențiu RACILĂ, Ilie DUMITRU

### **Iorga Hall** 16<sup>30</sup> - 18<sup>15</sup>

#### Chairmen: NEGRUS Eugen CLENCI Adrian

\* The acknowledgment of this paper refers only at project Grant number PO 9003/1138/ 31.03.2014 SMIS code 50139

- MTSRT34 **DATA RECORDING SOLUTIONS FOR VEHICLE TESTING** Dinu COVACIU, Dragoş-Sorin DIMA, Ion PREDA, Anghel CHIRU
- MTSRT35 A SIMULATION OF AN INTELLIGENT VEHICLE DEFENSE FROM NETWORK ATTACKS Ron DAVIDESCU, Eugen NEGRUS
- MTSRT37 IT DISASTER RECOVERY FOR THE ITS SYSTEM Ron DAVIDESCU, Eugen NEGRUS
- MTSRT39 STUDY ON THE POSSIBILITY TO ESTIMATE THE VEHICLE SIDE SLIP USING TWO INDEPENDENT GPS RECEIVERS Dinu COVACIU, Ion PREDA, Dragoş-Sorin DIMA, Anghel CHIRU
- MTSRT40 DETERMINATION OF FUEL CONSUMPTION OF A SUV WITH 1400 CCM PETROL ENGINE Liviu GEORGESCU, George DRAGOMIR
- MTSRT41 EVALUATION OF THE PARAMETERS THAT INFLUENCING THE VEHICLES EQUILIBRIUM STATE OF CORNERING DISPLACEMENT Nicolae CORDOȘ, Bálint ZSOLDICS, Adrian TODORUȚ, István BARABÁS, Monica BĂLCĂU
- MTSRT46 **ROAD SAFETY, EVOLUTION AND PERSPECTIVES** Lidia GAIGINSCHI, Radu GAIGINSCHI, Iulian AGAPE, Mihai PINTILEI
- MTSRT47 CONSIDERATIONS TO IMPROVE ROAD TRAFFIC MANAGEMENT IN ROMANIA Todiriță-Ionuț DUMBRAVĂ, Adrian SACHELARIE, Radu GAIGINSCHI
- MTSRT48 STUDIES REGARDING SEMAPHORING EFFECTIVENESS IN OVERSATURATED INTERSECTIONS \* Theodor OPRICA, Dumitru ILIE, Matei VÎNĂTORU

#### **Iorga Hall** 18<sup>30</sup> - 19<sup>30</sup>

#### Chairmen: KUNCEV Lilo RUS Alexandru

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- MTSRT50 MATHEMATICAL MODEL OF A DUMMY NECK-HEAD SYSTEM INCLUDED IN A FRONTAL IMPACT TESTING DEVICE Stefanita CIUNEL, Nicolae DUMITRU, Dragos-Laurentiu POPA, Gheorghe POPA-MITROI, Walter THIERHEIMER
- MTSRT51 VALIDATION OF SIMULATION AND OPTIMIZATION RECONSTRUCTION IN PC CRASH WITH VIDEO RECORDED SAMPLE Dragoş-Sorin DIMA, Dinu COVACIU, Anghel CHIRU
- MTSRT52 APPLICATION OF THE MULTICRITERIA DECISION-MAKING METHODOLOGY FOR ROUTE SELECTION OF A ROAD TRAIN Svetla STOILOVA, Lilo KUNCHEV
- MTSRT53 **REDUCING VEHICLES' WAITING TIME AT AN URBAN INTERSECTION** Oana OȚĂT, Ilie DUMITRU, Victor OȚĂT
- MTSRT54 **DETERMINING THE PROJECTION THROW DISTANCE OF A PEDESTRIAN UPON THE COLLISION WITH A VEHICLE** Oana OȚĂT, Victor OȚĂT
- MTSRT55 ANALYSIS AND DYNAMIC HUMAN CRANIO-CERVICAL COMPLEX MOVEMENTS Stefanita CIUNEL, Nicolae DUMITRU, Bebe TICA, Dragos-Laurentiu POPA, Gherghe POPA MITROI, Mihai-Aureliu LUNGU

MTSRT56 ASPECTS OF FUNCTIONAL OPTIMIZATION AND PERFORMANCE EVALUATION USING AN EXPERIMENTAL PROGRAMMABLE ENGINE CONTROL UNIT \* Ilie DUMITRU, Laurențiu RACILĂ, Lucian MATEI ,Theodor OPRICA, Virgil VĂLEANU

### **Green Hall** 16<sup>30</sup> - 18<sup>15</sup>

#### Chairmen: FONTAINE Stephane BOLCU Dumitru

- MT15 THE AUTOMOTIVE MARKET, A MAJOR COMPETITOR FOR METAL INJECTION MOULDING COMPONENTS – AN OVERVIEW Cristina TEISANU, Oana GINGU
- MT16 INNOVATIVE STAMPING TECHNOLOGIES AND THEIR APPLICATION IN THE AUTOMOTIVE INDUSTRY, UNDER THE CONSIDERATION OF GLOBAL REQUIREMENTS AND AVAILABILITY OF LOCAL RESOURCES Axel MAURER, Mircea BOCIOAGA, Anghel CHIRU
- MT17 INFLUENCE FACTORS ON THE PROPERTIES OF STEEL, CORRELATED TO INNOVATIVE STAMPING TECHNOLOGIES AND THEIR APPLICATION IN THE AUTOMOTIVE INDUSTRY Axel MAURER, Mircea BOCIOAGA, Anghel CHIRU
- MT19 SPACE-WINDING- PROCESS FOR PRODUCTIONOF COMPLEX GEOMETRYPARTS MADE OF COMPOSITESMATERIAL BASED ON CARBON FIBERAND TESTING Lucian RAD, Anghel CHIRU
- RVE78 **PREDICTION OF DISSIPATIVE PROPERTIES OF FLAX FIBERS REINFORCED LAMINATES BY VIBRATION ANALYSIS** M. BELAÏD, A. EL HAFIDI, P.B. GNING, S. FONTAINE, B. PIEZEL
- MT22 ANALYTICAL MODEL FOR STRENGTH CALCULUS OF SHAFTS MANUFACTURED BY TURNING
  Cătălin ROȘU, Cosmin Mihai MIRIȚOIU, Dan ILINCIOIU, Daniela Florentina TĂRÂŢĂ, Marius ZAMFIRACHE
- MT23 **EXPERIMENTAL SETUP USED TO DETERMINE THE STRESSES FROM** LATHE CUTTERS Cătălin ROȘU, Cosmin Mihai MIRIȚOIU, Dan ILINCIOIU, Gheorghe VĂDUVOIU, Alexandru STANIMIR
- MT24 **CURRENT STATE OF RESEARCH ON BIO-SOURCE COMPOSITE** A.I. HĂLOIU, Stefan TABACU

#### Green Hall 18<sup>30</sup>-19<sup>30</sup>

Chairmen: STANIMIR Alexandru TICĂ Bebe

- MT30 **RESEARCH ABOUT THE QUALITY OF BULK TITANIUM MATERIALS OBTAINED BY POWDER METALLURGY TECHNOLOGY FROM TITANIUM HYDRIDE POWDER** Cristina Ileana PASCU, Oana GINGU, Nicoleta LUPU, Ioan VIDA-SIMITI, Gabriel BENGA
- MT31 EXPERIMENTAL DETERMINATION ON BEHAVIOR OF COMPOSITE LAMINATED BODY ELEMENTS AT TEMPERATURE VARIATIONS Gabriela Monica PANĂ, Mario TROTEA
- MT32 HOW THE TECHNOLOGY FOR THE MANUFACTURE OF THE POLYESTER GLASS FIBER COMPOSITE MATERIAL INFLUENCES THE MECHANICAL PROPERTIES Gabriela Monica PANĂ, Mario TROTEA
- MT35 **RESEARCHES ON OBTAINING SOME BIMETAL PIECES BY MP, ALUMINUM-STEEL, REINFORCED WITH STEEL YARNS** Anca DIDU, Marin DIDU
- MT36 ESTABLISH DEPENDENCY RELATIONS BETWEEN CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES OF ALUMINUM ALLOY6082 ALSI<sub>1</sub>MGMN Laura GRIGORIE, Alina ROMANESCU, Daniela VINTILA
- MT37 THE STAMPING BY EXTRUSIONOF PARTS WITH COMPLEX SHAPES FOR AUTOINDUSTRY Constantin DUMITRU

#### **Red Hall** 16<sup>30</sup> - 18<sup>15</sup>

- **SACHELARIE Adrian** Chairmen: **NEAGOE Dumitru**
- RVE41 EXPERIMENTAL RESEARCH ON THE HYBRIDIZATION OF A ROAD VEHICLE Dan Mihai DOGARIU, Anghel CHIRU, Cristian Ioan LEAHU
- **RESEARCH AIMING SIMULTANEOUSLY RECYCLING OF WASTE** RVE46 POLYOLEFINS BY PYROLISIS, IN ORDER TO OBTAIN SOME FUELS FOR **COMPRESSION IGNITION ENGINES** George Liviu POPESCU, Nicolae FILIP, Violeta POPESCU
- TESTER FOR STUDY THE INFLUENCE OF VERTICAL LOAD AND TIRE RVE47 **INTERNAL PRESSURE ON TIRE CORNERING STIFFNESS** Hristina GEORGIEVA, N. PAVLOV, Lilo KUNCHEV
- RVE52 THE INFLUENCE OF THE COLD ENGINE'S OPERATING REGIME ON THE EXHAUST EMISSIONS Stelian TÂRULESCU, Corneliu COFARU
- RVE53 STUDY UPON THE VEHICLE ORIENTATION ON THE TRAJECTORY TO TRANSIENT MOVEMENTS Dumitru BOLCU, Marius Marinel STĂNESCU, Cosmin Mihai MIRIŢOIU
- RVE54 PERFORMANCE OF INDUCTIVE SENSORS FOR AUTOMOTIVE APPLICATIONS Dragos TUTUNEA, George GHERGHINA, Adrian Constantin CERNĂIANU
- RVE55 **EXPERIMENTAL RESEARCHES ON BIODIESEL PROPERTIES** Dragos TUTUNEA, Marin BICĂ, Ilie DUMITRU, Alexandru DIMA
- RVE56 AUTOMOTIVE WING WITH ACTIVE CONTROL OF FLOW Angel HUMINIC, Gabriela HUMINIC
- TEHNICAL IMPROVEMENTS ON THE GEAR SHIFTER USED FOR MANUAL RVE57 AND AUTOMATIC GEARBOXES Dan-Lucian CÂMPAN, Gheorghe FRĂTILĂ

#### **Red Hall** $18^{30} - 19^{30}$

- Chairmen: **BURNETE Nicolae COFARU** Corneliu
- **RVE60** AN APPROACH REGARDING WINDSHIELD WIPER MECHANISM DESIGN Cristian COPILUȘI, Viorica VELIȘCU
- RVE61 **RESEARCHING THE INFLUENCE OF THE TECHNICAL CONDITION OF** THE SENSORS EMBEDDED ON THE INTERNAL COMBUSTION ENGINES (ICE) UPON THE POLLUTANTS IN THE EXHAUST EMISSIONS Dănut GROSU, Marin MARINESCU, Octavian ALEXA
- RVE63 MEASURING THE ELECTROMAGNETIC POLLUTION CAUSED BY ELECTRICAL VEHICLE Ion GOȘEA, Cristian PĂTRAȘCU, Liviu RUIENEANU
- RVE64 ALGORITHM AND METHOD FOR THE FUNCTIONAL PARAMETERS **DETERMINATION OF VEHICLES ENGINES MUFFLERS** Edward RAKOSI, Carmen Ema PANAITE, Carmen BUJOREANU, Sorinel-Gicu TALIF
- RVE65 **EXPERIMENTAL INVESTIGATION ON FUNCTIONAL PARAMETERS OF** THE ENGINES EXHAUST MUFFLERS Carmen BUJOREANU, Eugen GOLGOŢIU, Sorinel TALIF, Gheorghe MANOLACHE
- SOLUTION FOR IMPROVEMENT THE THERMAL COMFORT INSIDE THE RVE66 AUTOMOBILE PASSENGER COMPARTMENT Sorinel-Gicu TALIF, Edward RAKOSI, Bogdan CONDURACHE, Cosmin TEODORESCU

#### **Eminescu Hall** 9<sup>00</sup> - 10<sup>45</sup>

- Chairmen: BOROIU Alexandru NEAGU Elena
- AEM51 ABOUT MECHATRONICS IN THE ENGINEERING EDUCATION AT THE FACULTY OF MECHANICS CRAIOVA George GHERGHINA, Dragos TUTUNEA, Nicholas LAMBRACHE, Dragos POPA
- AEM52 VIRTUAL METHODS USED FOR THE HUMAN BONES AND JOINTS RE-CONSTRUCTION. VIRTUAL INNOVATIVE TIBIA NAILS Dragos-Laurentiu POPA, Alina DUTA, Dragos TUTUNEA, George GHERGHINA, Gabriel BUCIU
- RVE90 STUDIES ON THE BEHAVIOR OF THE TOWBARS IN STATIC APPLICATIONS - Part. 1 – theoretical studies Andrei Victor PETRICI, Gheorghe N. RADU
- RVE91 STUDIES ON THE BEHAVIOR OF THE TOWBARS IN STATIC APPLICATIONS - Part. 2 – finite element method and experimental determinations

Andrei Victor PETRICI, Gheorghe N. RADU

AEM54 STUDY ABOUT IMPROVING THE QUALITY PROCESS PERFORMANCE FOR A STEEL STRUCTURES COMPONENTS ASSEMBLY USING FMEA METHOD

Cristina Ileana PASCU, Daniel PARASCHIV

- AEM56 IMPLEMENTING NEW IT SECURITY SOLUTIONS IN AUTOMOTIVE IMMOBILIZER SYSTEMS Marian MIRCEA, Valerian CROITORESCU, Mircea OPREAN
- AEM58 **THE INFLUENCE OF WIND SPEED AND DIRECTION OVER THE ULTRASONIC DETECTION** Stelian ȚÂRULESCU, Radu ȚÂRULESCU
- AEM59 COMPARISONS BETWEEN DIFFERENT MODELS FOR THE CRACKING RATE Vîlcu ROŞCA, Cosmin Mihai MIRIŢOIU, Mircea RĂDULESCU
- AEM60 IMPLEMENTATION OF NRSC TEST AND ECE 324 POWER CYCLE IN PUMA AUTOMATION SYSTEM Dan MOLDOVANU, Levente Botond KOCSIS

# **Romanescu Hall** 9<sup>00</sup> - 10<sup>00</sup>

#### **MANEA** Laurentiu Chairmen:

**IVANESCU** Mariana

\* The acknowledgment of this paper refers only at project Grant number PO 9003/1138/ 31.03.2014 SMIS code 50139

APP38 THE INFLUENCE OF BUTANOL USE ON THE DIESEL ENGINE'S PERFORMANCE

> Alexandru DOBRE, Constantin PANĂ, Nikolaos Cristian NUŢU, Niculae NEGURESCU, Alexandru CERNAT

- APP39 THEORETICAL AND EXPERIMENTAL STUDY OF THE FUELLING A TRUCK DIESEL ENGINE WITH LIQUEFIED PETROLEUM GAS Nikolaos Cristian NUTU, Constantin PANA, Alexandru DOBRE, Niculae NEGURESCU, Alexandru CERNAT
- APP52 CONSIDERATIONS REGARDING VALIDATION THROUGH SIMULATION **OF SOME BOARD SYSTEM INFORMATION'S FOR POWERTRAIN PERFORMANCE OPTIMIZATION \*** Ilie DUMITRU, Matei VINATORU, Dragos TUTUNEA, Alexandru DIMA
- APP54 AN EXPERIMENTAL INVESTIGATION **OF ENGINE COOLANT HIGH TEMPERATURE INFLUENCE ON THE ENGINE EXHAUST GASES** Mihai Alin GÎRBACI, Adrian SACHELARIE, Iulian AGAPE, Lidia GAIGINSCHI
- APP55 MODELING AND DIAGNOSIS OF A POWERTRAIN THROUGH SPECIFIC PARAMETERS Liviu MIHON, Arina NEGOITESCU, Adriana TOKAR, Daniel OSTOIA
- APP56 DIFFERENT APPROACHES FOR DETERMINATION OF INTERNAL **COMBUSTION ENGINES PERFORMANCES**

Alexandru DIMA, Dragos TUTUNEA, Marin BICĂ

APP57 USING OF CELLULOSE TRINITRAT IN CHANGING OCTANE **RATINGS OF A UNLEADED GASOLINE FUEL FOR SPARK IGNITED** ENGINES

Traian DORDEA, Gheorghe BOBESCU, Laurentiu-Claudiu MANEA

#### **Romanescu Hall** 10<sup>00</sup> - 10<sup>45</sup>

Chairmen: MĂRDĂRESCU Vladimir ILIE Sorin \* The acknowledgment of this paper refers only at project Grant number PO 9003/1138/ 31.03.2014 SMIS code 50139

- RVE97 STUDIES REGARDING OCCUPANT KINEMATICS IN THE VEHICLE AT THE FRONTAL AND REAR IMPACT Virgil POPA, Horia BELES, Bogdan TOLEA, George DRAGOMIR, Viorel ILIE
- MTSRT56 OPTIMAL ANALYSIS OF A ROUTE OF THE PUBLIC SYSTEM TRANSPORTATION OF PERSONS FROM TARGU JIU CITY Augustin CONSTANTINESCU, Gheorghe POPA MITROI, Mario TROTEA
- MTSRT57 ADAPTIVE TRAFFIC SIGNAL CONTROL ON A NATIONAL ROAD INTERSECTION \* Lucian MATEI, Dumitru ILIE, Matei VÎNATORU, Laurențiu RACILĂ
- MTSRT58 USE OF THE FUNDAMENTAL DIAGRAM OF TRAFFIC FLOW FOR THE ORGANISATION OF ROAD TRAFFIC DURING THE INFRASTRUCTURE REHABILITATION WORKS

Andrei-Alexandru BOROIU, Elena NEAGU, Alexandru BOROIU, Ionel VIERU

#### **Green Hall** 9<sup>00</sup> - 10<sup>00</sup>

#### Chairmen: **TABACU Ion MIHON Liviu**

RVE70 ANALYTICAL STUDY OF COMBUSTION GASES OF INTERNAL COMBUSTION ENGINES OPERATION

Marius Daniel MUSCALAGIU, Marin BICĂ, Cosmin Gabriel MUSCALAGIU

RVE71 THERMAL BALANCE MODEL OF A VEHICLE'S PASSENGER COMPARTAMENT

Cristina Andreea ENE, Mariana IVĂNESCU, Cătălin Adrian NEACȘU, Ion TABACU, Mihai STĂNCILĂ

- RVE72 STUDY OF AIR CONDITIONING SYSTEMS FOR CARS THAT USE DIFFERENT REFRIGERANTS Mihai STANCILA, Cristina-Andreea ENE, Mariana IVANESCU, Ion TABACU, Catalin-Adrian NEACSU
- RVE73 STUDY ON HYBRID ELECTRIC VEHICLES Adrian IORGA
- RVE74 OPPORTUNITIES, CHALLENGES AND FUTURE PROSPECTS OF PRODUCTION AND USAGE OF JATROPHA BIODIESEL AS ROAD TRANSPORT FUEL IN ROMANIA Fazal UM MIN ALLAH
- RVE77 THE THEORY OF SONICS AND ITS APPLICATIONS IN THE AUTOMOTIVE ENGINEERING Mircea RADULESCU

#### $10^{00} - 10^{45}$

#### Chairmen: **TODORUȚ Adrian COVACIU Dinu**

- RVE94 STUDY ON THE DIFFERENTIAL MATRIX EQUATION OF THE RIGID BODY VIBRATIONS Monica BÂLDEA, Mihaela ISTRATE
- RVE95 **VEHICLE STABILITY CONTROL THE BRAKE ADJUSTMENT** Florin POPESCU, Vasile Valerian COJOCARU
- RVE96DYNAMIC BEHAVIOR OF A VEHICLE WHEN CHANGING LANE<br/>AND IN CIRCULAR MOTION<br/>Vasile Valerian COJOCARU, Florentin POPESCU
- APP36 MATHEMATIC MODEL FOR ANALYSING THE DYNAMIC BEHAVIOR OF A VEHICLE IN THE FIELD OF CHAOTIC MOVEMENT Loreta SIMNICEANU, Dumitru NEAGOE, Mario TROTEA, Mihaela BOGDAN, Augustin CONSTANTINESCU

#### **Red Hall** 9<sup>00</sup> - 10<sup>45</sup>

#### Chairmen: MACARIE Tiberiu MANEA Adriana

- RVE80STUDIES ABOUT REFLECTED TEMPERATURE VARIATION FOR<br/>THE CAR BRAKE DISC<br/>George DRAGOMIR, Rares PANCU, Geza HUSI, Liviu GEORGESCU, Horia BELES
- RVE81 ASPECTS REGARDING THE CONTRIBUTION OF PARTICULATE MATTER EMISSIONS GENERATED BY HEAVY VEHICLE TRAFFIC ON AIR QUALITY Adriana TOKAR, Arina NEGOIȚESCU, Liviu MIHON
- RVE82 ESTIMATED ANALYSIS OF CO EMISSIONS EXHAUSTED BY CARS EQUIPPED WITH EURO 5 SI ENGINES WITH VARIOUS CUBIC CAPACITIES, DEPENDING ON THE RUNNING MODES Arina NEGOIȚESCU, Adriana TOKAR, Liviu MIHON
- RVE83THE STUDY OF THE NEW TYPE OF TRIM CORRECTOR EFFICIENCY,<br/>BASED THE TESTS ON RIGS AND ON VEHICLE<br/>Adrian Ioan NICULESCU, Razvan Cristian BUJOAICA
- RVE88 AUXILIARY AIR CONDITIONING SYSTEM RETROFITTING WITH PARAMETRIZABLE SPECIAL MODULE COMPUTER Vasile CAUNII, Adrian SACHELARIE
- RVE89CONSTANTA "OVIDIUS" UNIVERSITY STUDENT'S NEW PROTOTYPES<br/>OF ECOLOGICAL MULTIPURPOSE AUTOMOTIVE VEHICLES<br/>TALÎP Aihan, BOBESCU Gheorghe, Adriana Teodora MANEA

## Saturday, 25<sup>th</sup> October, 2014

#### **Eminescu Hall** 9<sup>30</sup> - 11<sup>00</sup>

#### Chairmen: NICOLAE Viorel ROSCA Adrian

\* The acknowledgment of these papers refers only at project Grant number PO 9003/1138/ 31.03.2014 SMIS code 50139

- AEM65 **ON JERK AND HIGHER ORDER MECHANICS** Marcela POPESCU, Paul POPESCU
- AEM66 ECONOMICAL MODEL BASED ON GRAPH THEORY FOROPTIMIZATION EXECUTION ORDER OF AUTOMOTIVE PRODUCTS ONTHE MANUFACTURING LINES SERVED BY ROBOTS Violeta Cristina DUMITRU
- AEM69 DYNAMIC SIMULATION OF A MECHANISM FOR HUMAN LEG MOTION REHABILITATION Ionut GEONEA, Alexandru MARGINE, Daniela VINTILĂ, Alina ROMANESCU
- AEM72 **THE COMPARISON BETWEEN BRB DAMPERS AND TAYLOR DAMPERS USED IN DAMPING SYSTEM OF HIGH BUILDINGS** Mihai NEGRU, Adriana IONESCU, Marian ANDRONE
- AEM73 THE SYSTEM FOR DIRECT MEASURING OF CAR'S STEERING ANGLE Helene SUSTER-BADARAU, Ion TABACU, Florin SERBAN, Ionel VIERU
- AEM74 CAR JACK BASED ON 6 ROVER CONSTRAINED MECHANISM \* Laurentiu RACILA, Ilie DUMITRU, Ionut Daniel GEONEA
- AEM75 VIRTUAL MODEL USED FORKINEMATICS STUDYOF CAR'SREAR AXLE Răzvan BUJOAICĂ, Ionel VIERU, Viorel NICOLAE, Dănuț MARINESCU
- AEM76 **MODEL AND SIMULATION FOR THE BEHAVIORAL ASSESSMENT OF A CAR REAR SUSPENSION FITTED ON WITH THE TRIM CORRECTOR** Răzvan BUJOAICĂ, Viorel NICOLAE, Ionel VIERU, Gabriela MITRAN, Sorin ILIE

RVE76 MODELLING AND CONTROL OF A MOBILE ROBOT, EQUIPPED WITH AN ARM IN CYLINDRICAL COORDINATES WITH UNCOUPLED TENTACULAR TERMINAL \* Viorel STOIAN, Sorin DUMITRU

# Saturday, 25<sup>th</sup> October, 2014

# **Romanescu Hall** 9<sup>30</sup> - 11<sup>00</sup>

Chair	men: PREDA Ion CIOLAN Gheorghe
* The acknowledgment of this paper refers only at project Grant number PO 9003/1138/ 31.03.2014 SMIS code 50139	
AEM86	DESIGN APPROACH FOR THE VEHICLE'S STEERING LINKAGE FITTED ON RIGID AXLE
	Ion PREDA, Dinu COVACIU, Gheorghe CIOLAN
HSV20	VARIATION OF START ACCELERATION FOR WHEELED AND TRACKED AUTONOMOUS MINI-VEHICLES
	Radu ȚÂRULESCU, Ciprian OLTEANU, Sorin ZAMFIRA
HSV21	SENSORIAL SYSTEM OPTIMIZATION FOR ONE AUTONOMOUS MINI- VEHICLE
	Radu ȚÂRULESCU, Sorin ZAMFIRA, Ciprian OLTEANU
RVE84	STUDY ON THE APPLIED TOLERANCES USING COMPUTER AIDED DESIGN *
	Nicolae CRACIUNOIU, Ana BALANOIU
RVE85	ANALYSIS OF THE SINGLE RIGHT FLUTE REAMER USING FEA METHODS Nicolae CRACIUNOIU, Ionut GEONEA
AEM53	THEORETICAL AND EXPERIMENTAL RESEARCHES REGARDING THE INFLUENCE OF THE SUSPENSION CAR STIFFNESS ON THEDYNAMIC BEHAVIOR OF VEHICLES
	Dumitru NEAGOE, Dumitru BOLCU, Loreta SIMNICEANU, Mario TROTEA
RVE86	DESIGN OPTIMIZATION OF A DIAPHRAGM SPRING OF A MECHANICAL CLUTCH FOR MOTOR CARS
	Mario TROTEA, Augustin CONSTANTINESCU, Dumitru NEAGOE, Loreta SIMNICEANU
RVE75	ANSYS SIMULATION AND EXPERIMENTS OF SERB NEW ROMANIAN SEISMIC DAMPERS USED IN BUILDINGS DAMPING SYSTEM
	Adriana IONESCU, Cristian BURADA, Madalina CALBUREANU, Mihai NEGRU

# Saturday, 25<sup>th</sup> October, 2014

# **Red Hall**

**9**<sup>30</sup> - **11**<sup>00</sup>

#### Chairmen: ISPAS Nicolae NASTASOIU Mircea

- MT39 HEATING SYSTEM USING MECHANICAL POWER TRANSMISSION THROUGH FLUIDS Bebe TICA, Stefanita CIUNEL
- MT29 STUDIES CONCERNING THE ROUGHNESS OF THE SURFACES CASE OF ALLOYED STEEL TURNING Marius ZAMFIRACHE, Luminita LAZAR

#### MT28 STUDIES REGARDING THE TURNING MACHINABILITY OF THE TITANIUM ALLOYS Marius ZAMFIRACHE, Alexandru STANIMIR

- RVE79 HEAT PUMPS USED FOR CEREALS DRYING Constantin IANCU, Mircea BADESCU, Alina POPA
- MT20 COMPARISON BETWEEN A COMPOSITE SANDWICH BAR WITH POLYPROPYLENE HONEYCOMB CORE REINFORCED WITH STEEL WIRE MESH AND METALLIC BEAMS WITH VARIOUS TRANSVERSAL SECTIONS

Cosmin Mihai MIRIȚOIU, Cristian Oliviu BURADA, Dumitru BOLCU, Marius Marinel STĂNESCU, Alexandru STANIMIR

- MT21 A COMPARISON BETWEEN SOME COMPOSITE BARS WITH DIFFERENT CORE AND REINFORCEMENTS AND METALLIC BEAMS FROM THE MASS PER UNIT LENGTH POINT OF VIEW Cosmin Mihai MIRIȚOIU, Marius Marinel STĂNESCU, Dumitru BOLCU, Cristian Oliviu BURADA, Vîlcu ROŞCA
- RVE87 STUDIES ON THE SUSTAINABILITY AND DEGRADATION OF MASSIVE MASONRY BUILDINGS Anca-Mihaela MOGOSANU, Madalina CALBUREANU, Alina DUTA, Ludmila SASS, Gelica STANESCU

#### HSV22 FORENSIC INVESTIGATION AND ANALYSIS OF A RAILCAR ENGINE DAMAGES Ispas NICOLAE, Șoica ADRIAN, Mircea NĂSTĂSOIU