

### **EPE 2008 Conference Schedule**

## Friday 3

### **Plenary Session**

Friday, October 3,  $10^{30}$ - $12^{00}$ , "Gh.Asachi" Aula, Building A

PATIENT-INTERACTIVE ROBOTS FOR REHABILITATION	R. RIENER	ETH Zurich and University Hospital Balgrist, Zurich	Switzerland
CHARGE EFFECT ON THE ELECTROCHEMICAL IMPEDANCE OF Poly (2,2 -diakyl-3,4-propylenedioxythiophene) COATED CARBON FIBRE ELECTRODE	A.SEZAI SARAC and R. CIOBANU	Technical University Of Istambul	Turkey
MODELING OF DYNAMICS AND VIRTUAL REALITY SIMULATION FOR A SMALL ROBOTIC AIRSHIP	M. GERKE, I. MASÁR and M. HUBA	University Of Hagen	Germany

### **Oral Sessions**

### Automation

Part I

Friday, October 3, 15<sup>00</sup>-16<sup>30</sup>, E2, Building E Chairmen: Mikuas Huba, Lucian Mastacan

37	AUTOMATION OF THE TRANSPORT AND DOSAGE SYSTEM FOR THE LADLE- FURNACE INSTALLATION	S.DEACONU, G.N.POPA, I.POPA, S.C. POP and CORINA M. DINIŞ	0	"Politehnica" University of Timişoara	ROMANIA	2
42	AUTOMATION AND SUPERVISION FOR ORIENTATION OF THE AUTONOMOUS PHOTOVOLTAIC PANELS	L. ALBOTEANU, A. NOVAC Gh. MANOLEA and FL. RAVIGAN	0	University Of Craiova	ROMANIA	2
62	ABOUT THE QUINTIC DUFFING OSCILLATOR	MIHAELA CLEJU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	2

63	JUMP RESONANCE IN THE QUINTIC DUFFING OSCILLATOR	MIHAELA CLEJU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	2
64	RESEARCHES ON PETRI NETS FOR FLEXIBLE ROBOTIZED STRUCTURES MODELING	M.A. DRIGHICIU, ANCA PETRIŞOR and M.C. POPESCU	0	University Of Craiova	ROMANIA	2
82	NEW PROTOTYPE ARCHITECTURE FOR VISION AUTOMATED INSPECTION	A. SAMOILĂ and O. COSTEA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	2

#### Part II Friday, October 3, 16<sup>45</sup>-16<sup>30</sup>, E2, Building E Chairmen: Victoria Boghanastiuk, Mircea Drighiciu

95	AUTONOMOUS ROBOT FOR RECYCLABLE WASTE COLLECTION	RALUCA OROZ, B. LIACU, AI. IORDAN and R. VARBANESCU	0	"Politehnica" University of Bucharest	ROMANIA	2
135	TEMPERATURE FUZZY CONTROL USING VIRTUAL INSTRUMENTATION	L. MASTACAN, I. OLAH and C.C. DOSOFTEI	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	2
139	CONSTRAINED POLE ASSIGNMENT CONTROL FOR NONLINEAR PLANT	F. JELENČIAK, M. HUBA, I. MASÁR and M. GERKE	0	STU Bratislava/Fernuniversitāt In Hagen	SLOVAKIA GERMANY	2
167	NEW METHODS TO IMPROVE FUZZY LOGIC CONTROLLERS PERFORMANCE	L. MASTACAN	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	2
199	CONTRIBUTIONS OF CONTROLLERS TUNING IN THE MULTIPLE-LOOP FEEDBACK CONTROL SYSTEM TO THE OBJECTS' MODELS WITH INERTIA OF THIRD ORDER AND NON MINIMAL PHASE	B. IZVOREANU and IRINA COJUHARI	0	Technical University of Moldova, Chişinău	MOLDOVA	2
200	A STATE -SPACE MODEL OF URBAN TRANSPORTATION DISCRETE EVENT DYNAMIC SISTEMS AND IT'S APPLICATION TO ROUTING OPTIMIZATION	VICTORIA BOGHANASTJUK, N. KOBILEATZKY	0	Technical University of Moldova, Chişinău	MOLDOVA	2

### Automotive equipment and electrical traction

Friday, October 3, 15<sup>00</sup>-16<sup>30</sup>, E3, Building E Chaimen: Gheorghe Livint, Ilie Nucă, Sergiu Ivanov

51	PERFORMANCES ANALYSIS OF THE ENERGY SOURCES ON THE HYBRID ELECTRIC VEHICLES	GH. LIVINŢ and G. CHIRIAC	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	3

79	MODDELING AND SIMULATION OF A VERSION OF FUZZY CONTROL FOR PERMANENT MAGNET SYNCHRONOUS MACHINE	S. MUŞUROI, M. SVOBODA, V. OLĂRESCU, C. ŞORÂNDARU	0	"Politehnica" University of Timişoara	ROMANIA	3
80	SIMULATION OF PMSM FOR FAULT TOLERANT DRIVES	S. IVANOV	0	University Of Craiova	ROMANIA	3
83	MODELING AND SIMULATION OF A VERSION OF NEURONAL CONTROL OF THE PERMANENT MAGNET SYNCHRONOUS MACHINE	M. SVOBODA, C. ŞORÂNDARU, V. OLĂRESCU and S. MUŞUROI	0	"Politehnica" University of Timişoara	ROMANIA	3
84	MONOPHASIC RECTIFIER WITH LINIAR DEPENDENCE BETWEEN THE RECTIFIED VOLTAGE AND COMMAND VOLTAGE	S. MUŞUROI, V. OLĂRESCU, C. ŞORÂNDARU and M. SVOBODA	0	"Politehnica" University of Timişoara	ROMANIA	3
97	UNBALANCES COMPENSATION FOR A THREE-PHASE AUTONOMOUS INDUCTION GENERATOR	C. P. ION, C. MARINESCU and L. CLOTEA	0	Transilvania University Of Braşov	ROMANIA	3
98	AN OPTIMAL SOLUTION FOR THE POWER MANAGEMENT OF A HYBRID POWER SYSTEM WITH RENEWABLE ENERGY SOURCES	I. ŞERBAN and C. MARINESCU	0	Transilvania University Of Braşov	ROMANIA	3
136	PROBLEMS REGARDING THE ENERGY CONSUMPTION FOR THE ELECTRIC TRAINS	G. CHIRIAC and D. LUCACHE	0	"Gh. Asachi" Technical University, lasi	ROMANIA	3
184	SWITCHING LOSSES AND PROTECTION OF THE TROLLEYBUS DC TRACTION SDMC-103 ELECTRONIC EQUIPMENT	I. NUCĂ, I. RÂMBU and V. MIHALACHE	0	Technical University of Moldova, Chişinău	MOLDOVA	3
204	GH. LIVINT, V. HORGA and M. RATOI	CONTROL SYSTEM FOR A HYBRID ELECTRIC VEHICLE IMPLEMENTED WITH CANOPEN PROTOCOL – PART I	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	3
205	GH. LIVINT, V. HORGA, M. RATOI, M. ALBU, M. PETRESCU and G. CHIRIAC	DISTRIBUTED CONTROL SYSTEM FOR A HYBRID ELECTRIC VEHICLE IMPLEMENTED WITH CANOPEN PROTOCOL- PART II	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	3
206	M. PETRESCU, GH. LIVINT, D. LUCACHE and G. CHIRIAC	CAN CONTROL SYSTEM FOR AN ELECTRIC VEHICLE	0	"Gh. Asachi" Technical University, lasi	ROMANIA	3

### Electrical energy transport and distribution

Part I Friday, October 3, 15<sup>00</sup>-16<sup>30</sup>, EN, Building EN Chairmen: Gheorghe Cârțină, Gheorghe Vuc

3	ENERGY LOSSES CALCULUS OF THE LOW VOLTAGE NETWORK USING TYPE LOAD CURVES	GH. HAZI, A. HAZI and VASILE PETCU	0	University of Bacău	ROMANIA	6
17	MEASUREMENT METHODS OF THE MAIN MONITORED PARAMETERS OF THE LARGE POWER TRANSFORMER UNITS	TRAIAN CHIULAN and BRÂNDUŞA PENTELIMON	0	SC ICEMENERG SA	ROMANIA	6
43	MODERN POWER SYSTEM ANALYSIS USING STOCHAS TIC POWER FLOW	ŞT. KILYENI, C. BĂRBULESCU and GH. VUC	0	"Politehnica" University of Timişoara	ROMANIA	6
74	THE CALCULATION OF SHORT CIRCUIT CURRENTS AND MATLAB/SIMULINK SIMULATION FOR AN INDUSTRIAL CONSUMER	M. HORGOS, L. PETREAN, L. NEAMT and O. CHIVER	0	North University of Baia Mare	ROMANIA	6
75	ANALYSIS AND MONITORING A CONNECTION TO THE ELECTRICAL NETWORK FOR A INDUSTRIAL CONSUMER	Z. ERDEI, M. HORGOŞ and L. PETREAN	0	North University of Baia Mare	ROMANIA	6

#### Part II Friday, October 3, 16<sup>45</sup>-18<sup>30</sup>, EN, Building EN Chairmen: Marcel Istrate, Maricel Adam

76	MATLAB/SIMULINK SIMULATION OF SOME SHORT CIRCUITS FROM THE ELECTRIC SUPPLYING SCHEME OF A CONSUMER	M. HORGOS, L. PETREAN, L. NEAMT and O. CHIVER	0	North University of Baia Mare	ROMANIA	6
166	VOLTAGE STABILITY INVESTIGATION OF DISTRBUTION NETWORK CONNECTED WIND POWER GENERATION	TRINH TRONG CHUONG	0	Hanoi University Of Industry, Hanoi	VIETNAM	6
170	ON SOME MEASUREMENTS OF ENERGY QUALITY IN THE NATIONAL ELECTRICAL POWER GRID – PART I	FR. SZOMBATFALVI – TÖRÖK, EMIL SIMION, A. CECLAN, D. D. MICU and L. CZUMBIL	0	Technical University Of Cluj- Napoca	ROMANIA	6

178	ENERGY QUALITY EVALUATION IN THE NATIONAL ELECTRICAL POWER GRID – PART II	FR. SZOMBATFALVI – TÖRÖK, EMIL SIMION, A. CECLAN, D. D. MICU, DENISA ŞTEŢ and L. CZUMBIL	0	Technical University Of Cluj- Napoca	ROMANIA	6
185	AN IMPROVED METHOD FOR POWER LOSSES DETERMINATION IN RURAL DISTRIBUTION NETWORKS	GH. GRIGORAS, GH. CARTINA and V. ALEXANDRESCU	0	"Gh. Asachi" Technical University, lasi	ROMANIA	6
186	POSSIBILITIES FOR ENERGY SAVING IN ELECTRIC DISTRIBUTION NETWORKS	GH. GRIGORAS, GH. CARTINA and E.C. BOBRIC	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	6

## **Electrical energy utilizations**

Friday, October 3, 15<sup>00</sup>-16<sup>30</sup>, E4, Building E Chairmen: Maria Brojboiu, Dorin Lucache

36	ANALYSIS OF SOME SOLUTIONS FOR DIMINISHING THE HARMONICS AND IMPROVING THE POWER FACTOR IN AN ELECTRIC STEEL SHOP	G.N. POPA, S.I. DEACONU, A.I. TOMA, I. POPA and CORINA M. DINIŞ	0	"Politehnica" University of Timişoara	ROMANIA	7
65	EQUIPMENT FOR CATHODIC PROTECTION SUPPLIED BY RENEWABLE SOURCES OF ENERGY CONTROLLED AT DISTANCE	LUIZA POPA, MIHAELA MATEI, CLAUDIA POPESCU and M. O. POPESCU	0	"Politehnica" University of Bucharest	ROMANIA	7
71	NUMERICAL AND GRAPHICAL STATISTICAL PROCESSING OF THE LOAD CURVE	MARIA BROJBOIU , VIRGINIA IVANOV and I. TOMESCU	0	University Of Craiova	ROMANIA	7
77	ENERGETIC MANAGEMENT OF INTELLIGENT BUILDING	EUGENIE POSDARASCU	0	Hyperion University Of Bucharest	ROMANIA	7
78	SPACE THERMIC MAPS INTO INTELLIGENT BUILDINGS	EUGENIE POSDARASCU	0	Hyperion University Of Bucharest	ROMANIA	7
155	A COMPARATIVE STUDY BETWEEN ON-GRID AND OFF- GRID EQUIPMENTS. CASE STUDY: CALCULATIONS FOR THE INVESTMENT NEEDED FOR SUCH EQUIPMENTS	MIHAELA MATEI, LUIZA POPA, CLAUDIA POPESCU and M.POPESCU	0	"Politehnica" University of Bucharest	ROMANIA	7
183	MODERN SYSTEMS FOR INDUSTRIAL OZONE PRODUCTION	I. COLT, F. IONESCU and G. MELTZER	0	Sc ICPE SAERP SA Bucuresti	ROMANIA	7
207	IMPROVING THE CELLULOSIC SLUDGE DEWATERING BY ELECTRO-OSMOSIS	D. LUCACHE, D. IOACHIM, A. BULGARU and G. CHIRIAC,	0	"Gh. Asachi" Technical University, lasi	ROMANIA	7

### Electrical machines and drives

Part I Friday, October 3, 15<sup>00</sup>-16<sup>30</sup>, E1, Building E Workshop on Electrical Machines Equatios Chair: Aurel Câmpeanu, Alecsandru Simion, Leonard Livadaru

55	RELEVANT DESIGN ISSUSES OF ROTARY MICROMOTORS AND THEIR APPLICATION TO ROBOTIC MICROSYSTEMS - REVIEW	A. CAMPEANU, M.A. NICOLAESCU	0	University Of Craiova	ROMANIA	8
56	GENERAL STUDY OF RELUCTANCE MOTORS FOR DRIVING LIGHT ELECTRIC VEHICLES	V. TRIFA and C. MARGINEAN	0	Technical University Of Cluj- Napoca	ROMANIA	8
127	CONTRIBUTION CONCERNING THE CODE EQUATIONS USED TO IDENTIFY THE CLOCK HOUR FIGURE OF THE VECTOR GROUP AT THREE-PHASES TRANSFORMER	CRISTINA PRODAN, NICULINA POIENAR and D. CERNOMAZU	0	"Stefan Cel Mare" University of Suceava	ROMANIA	8
141	ON THE TRANSIENT ELECTROMAGNETIC TORQUE COMPONENTS OF THE INDUCTION MACHINE WHEN SUPPLYING WITH ROTOR IN MOTION	V. R. COCIU and LIVIA COCIU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	8
182	FEM ANALYSIS UPON THE INFLUENCE OF THE ROTOR BAR FAULTS ON THE INDUCTION MACHINE CHARACTERISTICS	L. LIVADARU, AL. SIMION and S. MIHAI	0	"Gh. Asachi" Technical University	ROMANIA	8
190	REPRESENTATIVE PHASE VECTORS CORRESPONDING TO THE MATHEMATICAL MODEL IN TOTAL FLUXES OF THE TWO PHASE INDUCTION MACHINE	Al. SIMION	0	Universitatea Tehnica Gh.Asachi lasi	ROMANIA	8
191	MECHANICAL CHARACTERISTIC OF THE TWO-PHASE INDUCTION MACHINE EXPRESSED BY MEANS OF THE MATHEMATICAL MODEL IN TOTAL FLUXES	AI. SIMION and L. LIVADARU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	8
201	LA SOLUTION DU SYSTEME DES ÉQUATIONS DU CHAMP MAGNETIQUE GAAP	T. AMBROS	0	Technical University of Moldova, Chişinău	MOLDOVA	8

201	LE SPECTRE DES HARMONIQEUS DU CHAMP MAGNETIQUE DU GENERATEUR ASYNCHRONE PREMAGNETISE	T. AMBROS	0	Technical University of Moldova, Chişinău	MOLDOVA	8	

### Part II Friday, October 3, 16<sup>45</sup>-18<sup>30</sup>, E1, Building E Chairmen: Viorel Trifa, Dorel Cernomazu, Sergiu Ivanov

47	OPTIMIZATION OF AN INDUCTION MOTOR FED BY A CURRENT INVERTER	ANA BOBĂIANU	0		ROMANIA	8
61	ABOUT THE MODEL PREDICTIVE CONTROL FOR PERMANENT MAGNET SYNCHRONOUS MACHINES	ELEONORA DARIE	0	Technical University Of Civil Engineering, Bucharest	ROMANIA	8
87	CONSIDERATIONS ABOUT STATOR WINDING LEAKAGE INDUCTANCES DETERMINATION BY FEA	O. CHIVER, M. HORGOS, C. BARZ and E. POP	0	North University Of Baia Mare	ROMANIA	8
117	PWM ROTOR-FED INDUCTION GENERATOR BASED WIND TURBINE	M. GOGU, E.C. TEODORU and IRINA ATUDOREI	0	"Gh. Asachi" Technical University, lasi	ROMANIA	8
120	MATHEMATICAL MODEL ABOUT THE TRAVELING WAVE ULTRASONIC PIEZOELECTRIC MOTOR	I. PRISACARIU	0	"Stefan Cel Mare" University of Suceava	ROMANIA	8
126	CONSIDERATIONS UPON THE CONNECTIONS ESTABLISHED BETWEEN THE DEPENDENT VARIABLES ASSOCIATED TO THE CLOCK HOUR FIGURES THAT ARE POSSIBLE AT THE THREE-PHASES TRANSFORMER	NICULINA POIENAR, CRISTINA PRODAN, N. C. CREŢU, ELENA OLARIU and D. CERNOMAZU	0	"Stefan Cel Mare" University of Suceava	ROMANIA	8
131	CONSIDERATIONS AND CONTRIBUTIONS CONCERNING THE REALISATION OF THE SOLAR ENGINES BASED ON HELIO-THERMO-MECHANICAL CONVERSION	N. SOREA, MIHAELA JEDER and D. CERNOMAZU	0	"Stefan Cel Mare" University of Suceava	ROMANIA	8
11	DIRECT CURRENT MOTOR WITH ELECTRONIC DRIVE OF STATOR PHASES	DUMITRU DRAGAN	0	Military Technical Academy	ROMANIA	8
165	INFLUENCE OF THE VARIABLE AIR-GAP UPON THE ELECTROMAGNETIC TORQUE DEVELOPED BY THE D.C. MOTOR	R. HANGANU, AI. SIMION, L. LIVADARU and A. MUNTEANU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	8

168	RING WINDINGS USED IN LINEAR INDUCTION ENGINES	A.P. ALEXANDRESCU and L. CANTEMIR	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	8
193	FEM-BASED ANALYSIS CONCERNING SOME SOLUTIONS ON THE RESTRICTION OF THE SPACE HIGH ORDER HARMONICS OF THE TWO-PHASE INDUCTION MACHINE	S. MIHAI, AI. SIMION and L. LIVADARU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	8

### Electromagnetic field, linear and nonlinear circuits

#### Part I Friday, October 3, 15<sup>00</sup>-16<sup>30</sup>, BE, Building E Chairmen: Camelia Petrescu, Călin Munteanu

67	SOME NEW RECIPROCITY RELATIONS IN ELECTROMAGNETIC FIELD, IN PERIODICAL, NON-HARMONIC STEADY-STATE	H. ROSMAN	0	"Gh. Asachi" Technical University, lasi	ROMANIA	9
121	ON A MONTE CARLO ORIGINAL APPROACH OF INTERFERENCE PROBLEMS	ANDREI CECLAN, DAN DORU MICU, LEVENTE CZUMBIL, DAN O. MICU and EMIL SIMION	0	Technical University Of Cluj- Napoca	ROMANIA	9
39	THE STUDY OF INDUCTIVE HEATING UTILIZATION THE JOING OF "FRETAJ"	CLAUDIA OLIMPIA STAŞAC, D. A. HOBLE	0	University Of Oradea	ROMANIA	9
41	INDUCTION HEATING PROCESS ANALYSIS USING INDUCTORS WITH MAGNETIC FLUX CONCENTRATORS	MIHAELA NOVAC, T. LEUCA and O. NOVAC	0	University Of Oradea	ROMANIA	9
103	INVESTIGATION OF ELECTROMAGNETIC APPLICATIONS OF CHIRAL STRUCTURES	R. DAMIAN, R. CIOBANU and CRISTINA SCHREINER	0	"Gh. Asachi" Technical University, lasi	ROMANIA	9

#### Part II Friday, October 3, 16<sup>45</sup>-18<sup>30</sup>, BE, Building E Chairmen: Vasile Țopa, Viorel Varvara

20	THE STUDY OF THE TRANSITORY REGIME WHEN AN ELECTRIC RESISTIVE ELEMENT BECOMES HOT	MITICĂ IUSTINIAN NEACĂ, ANDREEA MARIA NEACĂ	0	University Of Craiova	ROMANIA	13
44	MODELING AND TIME-DOMAIN SIMULATION OF WIRED FERROMAGNETIC CORES FOR DISTORTED REGIMES	L. MANDACHE, and D. TOPAN	0	University Of Craiova	ROMANIA	13

112	NUMERICAL SIMULATION WITH A VIEW TO ANALYSE THE BIOLOGICAL EFFECTS OF ELECTROMAGNETIC FIELDS	V. DAVID, I. NICA	0	"Gh. Asachi" Technical University, lasi	ROMANIA	9
53	THE ACTIVE POWERS FLOW IN NETWORKS RUNNING IN DISTORTING AND NONSYMMETRICAL STATES	V. VARVARA and GH. GEORGESCU	0	"Gh. Asachi" Technical University	ROMANIA	13

### Metrology and measurement systems

#### Part I Friday, October 3, 15<sup>00</sup>-16<sup>30</sup>, S14, Building E Chairmen: Brânduşa Pantelimon, Mihai Crețu

18	ADVANCED WAVEFORM SEQUENCING AND TRIGGERING ON ARBITRARY WAVEFORM GENERATORS	C. DOSOFTEI, M. CRETU and L .TOMA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
19	ADVANCED SIGNAL GENERATOR ARHITECTURE: ANALOG OUTPUT TO ADVENCED FEATURES	C. DOSOFTEI, M. CRETU, L.TOMA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
73	GRÜTZMACHER IMPEDANCE METER	PLOPA OLGA, C. FOŞALĂU and M. CREŢU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
81	AUTOMATED VIDEO SYSTEM INSTRUMENTS TEST AND CALIBRATION	OANA COSTEA, C. DONCIU and ALINA SAMOILA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
88	IMPROVING THE SELECTIVITY OF ELECTROCHEMICAL SENSORS BY COMPENSATING INTERFERENCE ERRORS	CĂTĂLINA SELIMAN, D.COSTINEANU, CRISTINA BRĂTESCU and RAMONA BURLACU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
111	THE SURVEY OF ELECTROMAGNETIC ENVIRONMENT DUE TO COMUNICATION SYSTEMS	V. DAVID and I. NICA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
	InterNET, PRESENT AND PERSPECTIVES	InterNET	0	InternNET	ROMANIA	14

#### Part II Friday, October 3, 16<sup>45</sup>-18<sup>30</sup>, S14, Building E Chairmen: Alexandru Sălceanu, Valeriu David

113	SOME MEASUREMENTS	R. DRAGOMIR,	0	National Institute for	ROMANIA	14
	ANOMALIES WITH OPTICAL	DORINA		Sudies and Research in		
	TIME DOMAIN	DRAGOMIR, S.		Communication, Bucharest		
	REFLECTOMETER	PUSCOCI and				
		BRANDUSA				
		PANTELIMON				

132	VIRTUAL FILTERS FOR MULTIRATE SIGNAL PROCESSING IN INSTRUMENTATION	L. TOMA, M.V. PĂULEȚ and OANA NEACŞU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
156	BROADBAND MAGNETIC FIELD METER	E. LUNCĂ, V. DAVID, A. SĂLCEANU and OANA NEACŞU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
160	RENDERING THE MEASUREMENTS OF THE NEAR FIELDS ASSOCIATED WITH ESD EXPERIMENTS	OANA NEACŞU, L. TOMA and S.İ. URSACHE	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14
162	TELECOMMUNICATION OPTICAL CABLE FOR OIL PIPELINE APPLICATION	DORINA DRAGOMIR, R. DRAGOMIR, S. PUSCOCI AND BRANDUSA PANTELIMON	0	Traian Vuia, High School, Bucuresti	ROMANIA	14
172	ON THE EMF EXPOSURE DUE TO VIDEO DISPLAY UNITS	E. LUNCĂ, V. DAVID, S.I. URSACHE and M. CREŢU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	14

## Saturday 4

# Artificial inteligence, expert systems and industrial **information technology** Saturday, October 4, 10<sup>00</sup>-11<sup>30</sup>, E4, Building E

Chairmen: Mihaela Albu, Virginia Ivanov

70	THE RELIABILITY ANALYSIS OF ELECTRICAL GRIDS USING EXPERT SYSTEM	VIRGINIA IVANOV, MARIA BROJBOIU and S. IVANOV	0	University Of Craiova	ROMANIA	1
122	INTELLIGENT SYSTEM FOR ROAD TRAFFIC MANAGEMENT BASED ON WEATHER ANALYSIS	D. POPESCU, NIRVANA POPESCU and ANA-MARIA BEJAN	0	Politehnica University Of Bucharest	ROMANIA	1
194	FAULT DIAGNOSIS DETECTION USING A NEURO- FUZZY SYSTEM	M. PISLARU, A. TRANDABAT, I. NICA and S. URSACHE	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	1
118	VEHICLE MONITORING SYSTEM USING A GPRS TRACKER DEVICE AND GOOGLE MAPS	D. GAFITESCU and CLAUDIA BOTEZ	0	"Gh. Asachi" Technical University, lasi	ROMANIA	12
151	DYNAMIC MONITORING SYSTEM OF HEART RATE VARIABILITY PARAMETERS	M. STANCIU, A. BOEV, Mihaela ALBU, Brânduşa PANTELIMON	0	Politehnica University Of Bucharest	ROMANIA	12

159	SYSTEMS FOR INDUSTRIAL PROCESSES QUALITY IMPROVEMENT	R. RUSEI, M. PISLARU, R. CIOBANU and D. CIUREA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	12	
197	INTERNET BASED DISTRIBUTED METHODS IN SUPPORT OF REMOTE AND COLLABORATIVE DESIGN	M. PISLARU, A. TRANDABAT, R. BURLACU, C. BRATESCU S, S. ARADOAIE and M. BRANZILA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	12	

### **Electrical apparatus**

Saturday, October 4,  $10^{00}$ - $11^{30}$ , EN, Building EN Chairmen: Adrian Baraboi, Eugen Hnatiuc

150	WIRELESS SOLUTION FOR MONITORING, DIAGNOSTIC AND CONTROL OF CIRCUIT BREAKERS	C. PANCU, A. BARABOI, M. ADAM and A.T. PLEŞCA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	5
171	ASPECTS REGARDING OF THYRISTORS CONTROLLED SERIES COMPENSATOR	M. ADAM, A. BARABOI and C. PANCU	0	"Gh. Asachi" Technical University, lasi	ROMANIA	5
195	THE RETURN TRANSIENT REGIME AT SINGLE PHASE ELECTROMAGNETS OPERATING TYPE E - I	E. HNATIUC and A. PLEŞCA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	5
196	THE RETURN TRANSIENT REGIME AT SINGLE PHASE ELECTROMAGNETS OPERATING TYPE U - I	E. HNATIUC and A. PLEŞCA	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	5

### Quality, reliability and maintenance

Saturday, October 4, 11<sup>45</sup>-13<sup>30</sup>, E4, Building E Chairmen: Florin Munteanu, Romeo Ciobanu

34	MODELING AND EVALUATION OF POWER DISTRIBUTION SYSTEM RELIABILITY INCLUDING RECLOSERS	D.C. SECUI	0	University Of Oradea	ROMANIA	15
35	PROBABILISTIC CHARACTERIZATION OF THE OPERATIONAL BEHAVIOR FOR THE 110kV/MV POWER TRANSFORMERS	D.C. SECUI and I. FELEA	0	University Of Oradea	ROMANIA	15
40	IMPLEMENTING HAMMING CODES TO THE CACHE LEVEL OF A MEMORY HIERARCHY	O. NOVAC, MIHAELA NOVAC AND GIANINA GABOR	0	University Of Oradea	ROMANIA	15
143	ASPECTS CONCERNING THE IMPORTANCE TO KNOW THE PARTIAL DISCHARGES LEVEL IN DECISIONAL ACT	M.E. ARDELEANU	0	University of Craiova	ROMANIA	15

149	HUMAN RELIABILITY INFLUENCE ON SYSTEMS MAINTENANCE	F. MUNTEANU, C. NEMES	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	15
169	EQUIPMENT RELIABILITY ANALISYS USING THE PROBABILISTIC DESIGN METHODOLOGY	C. NEMEŞ and FI. MUNTEANU	0	"Gh. Asachi" Technical University, Iasi	ROMANIA	15

### Robotics in industry and medicine

Saturday, October 4, 11<sup>45</sup>-13<sup>30</sup>, PIEI Lab, Building EN

Workshop: New Developments within the FES-Based Rehabilitation

Chairmen: Robert Riener, Marian Poboroniuc

13	VIRTUAL MIRROR AUGMENTED BY SOUND AND SENSORY ELECTRICAL STIMULATION	T. KORITNIK, T. BAJD and M. MUNIH	0	University Of Ljubljana	SLOVENIA	16
49	METHOD AND MECHATRONIC DEVICE TO TEST A SITTING- DOWN FES-BASED CONTROL STRATEGY IN PARAPLEGIA	M. POBORONIUC and C. M. ŞTEFAN	0	Technical University Of lasi	ROMANIA	16
93	FIVE AXES ARTICULATED MECHANISM FOR HUMAN FOOT EMULATION (ROBOTIC FOOT)	P. CRACIUNESCU and C. BAICU	0	C.I.T. Automatizari SRL	ROMANIA	16
123	ANALYSIS OF THE HUMAN BODY MOTION IMAGES	D. POPESCU, CORINA ILIE and ANDREEA CALOTA	0	Universiy Of Craiova	ROMANIA	16
147	NEW APPROACHES IN HUMAN MOVEMENT ANALYSIS – ENHANCING DATA GENERATION, STANDARDISATION, ACQUISITION AND ANALYSIS SYSTEMS APPLYED IN SPORT	ELENA-TAINA AVRAMESCU, ILONA ILINCA,	0	University Of Craiova	ROMANIA	16
163	SYSTEMS AND METHODS FOR HAND SENSORIMOTOR CAPABILITY AUGMENTATION	J. PERDAN, R. KAMNIK, T. BAJD and M. MUNIH	0	University Of Ljubljana	SLOVENIA	16

## Thermal and electrical power generation

Saturday, October 4,  $10^{00}$ - $11^{30}$ , EN, Building EN Chairmen: Florin Munteanu, Ion Sobor, Ion Mircea

25	TRIGENERATION, AN EFFICIENT SOLUTION FOR THE COMBINED HEAT AND POWER PLANTS OF ROMANIA	P. ATĂNĂSOAE	0	Combined Heat And Power Plant Of Suceava	ROMANIA	17
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68	COMPARATIVELY OPTIMIZING THE FEED WATER PREHEAT AND THE REHEAT PRESSURE FOR CONDENSING STEAM CYCLES	F.N. ALEXE and V.E. CENUŞĂ	0	Politehnica University Of Bucharest	ROMANIA	17
69	CORRELATIVELY OPTIMIZING THE REGENERATIVE FEED WATER PREHEAT AND THE REHEAT PARAMETERS FOR CONDENSING STEAM CYCLES	F.N. ALEXE and V.E. CENUŞĂ	0	Politehnica University Of Bucharest	ROMANIA	17
158	MODEL FOR SIMULATION OF CONVENTIONAL DRYING OF PAPER	A. HAZI and GH. HAZI	0	University Of Bacau	ROMANIA	17
173	MODELISATION MATHEMATIQUE D'ECONOMISEUR DU CHAUDIER AVEC CIRCULATION NATURELLE	A. DUINEA and I. MIRCEA	0	University Of Craiova	ROMANIA	17
188	THE ESTIMATION OF WIND ENERGY POTENTIAL OF REPUBLIC OF MOLDOVA	ION SOBOR, ANDREI CHICIUC	0	Technical University of Moldova	MOLDOVA	17

**Poster presentation**Friday, October 3, 12<sup>15</sup>-13<sup>30</sup>, "Hall of Lost Steps", Building A Chairman: Viorel Varvara

4	GAS – TURBINE COGENERATION SYSTEMS FUNCTIONING ANALYSIS IN UNRATED DUTIES	R.C. DINU, C. BRATU and I. MIRCEA	Р	University Of Craiova	ROMANIA	17
6	MULTIPLE LOOP NONLINEAR CONTROL FOR D.C. SERIES MOTOR	MIHAELA DOINA ZAMFIR	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	2
7	SWITCHED ADAPTIVE CONTROL STRUCTURE FOR ROBUST MOTION CONTROLLER	MIHAELA DOINA ZAMFIR	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	2
10	USE OF PROGRAMMABLE LOGIC CIRCUITS FOR THE CONTROL OF ELECTRICAL MACHINES	C.G. HABA, V.BAHRIN and CARMEN COJOCARU- FILIPIUC	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	8
14	FLUX OBSERVERS APPLIED ON A THREE PHASE INDUCTION MACHINE	GABRIELA CRĂCIUNAȘ	Р	"Lucian Blaga" University of Sibiu, Facultatea De Inginerie	ROMANIA	8
16	THE COUNTER-REVOLVING MAGNETIC INDUCTIONS IN A NEW MODEL OF THE UNSYMMETRICAL TWO-PHASE INDUCTION MACHINES	ADRIANA-ELENA PRISACARU	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	8
22	OPTIMIZED COMPENSATOR' CONFIGURATIONS FOR LOAD CURRENT SYMMETRIZATION	D. RUŞINARU and C. BRATU	Р	University Of Craiova	ROMANIA	6

23	AGENT-BASED SIMULATION FOR MICROGRID OPERATIONS	C. COSTEA	Р	North University Of Baia Mare	ROMANIA	12
24	STUDY ABOUT THE INDUCTIVE METHOD, USED BY SHAPE RECOGNIZING		Р	University Of Oradea	ROMANIA	9
27	MATLAB SIMULATION OF AN AUTO- ADAPTIVE CONTROL SYSTEM OF A SWITCHED RELUCTANCE MOTOR DRIVE	C. ŞORÂNDARU, S. MUŞUROI and M. SVOBODA	Р	"Politehnica" University of Timişoara	ROMANIA	8
31	A NEW EXPRESSION FOR IMAGINARY POWER VARIATIONS OF SMALL SIZE INDUCTION MOTOR DRIVES	N. TOTOR	Р	"Politehnica" University of Timişoara	ROMANIA	8
33	CURRENT AND HEAT FLOW DISTRIBUTION IN THE CUTTING HOLLOW DURING THE PLASMA ARC CUTTING OF METALS	I. KISELIOV, T. STANCIU, V. POGORA and I. PROŢUC	P	Technical University of Moldova, Chişinău	MOLDOVA	7
48	COMPUTER BASED DESIGN ALGORITHM FOR OVERHEAD LINES PROFILING	C. BRATU, D. RUŞINARU and S. DIGĂ	Р	University Of Craiova	ROMANIA	6
50	POSIBILITIES OF SURVEY AND SHAPE THE CONSUMPTION FROM THE ELECTRIC ENERGY DISTRIBUTION SYSTEMS	GH. GEORGESCU, V. VARVARA and B. NEAGU	Р	"Gh. Asachi" Technical University	ROMANIA	6
52	THE IMPACT OF THE ELECTRIC ENERGY TRANSMISSION LINES ON THE TELECOMMUCATION LINES	GH. GEORGESCU, V. VARVARA and B. NEAGU	Р	"Gh. Asachi" Technical University	ROMANIA	6
60	ANALYSIS OF MULTILEVEL DC LINK INVERTER FOR PERMANENT MAGNET MOTORS	ELEONORA DARIE and E. DARIE	Р	Technical University Of Civil Engineering, Bucharest	ROMANIA	8
72	SENSORLESS SWITCHED RELUCTANCE MOTOR DRIVE USING FLUX-LINKAGE ESTIMATION METHOD	TH. KOBLARA	Р	"Politehnica" University of Timişoara	ROMANIA	8
90	NUMERICAL ANALYSIS OF A COUPLED ELECTROMAGNETIC- THERMAL PROBLEM USING COMSOL-MULTIPHYSICS	CAMELIA PETRESCU	Р	"Gh. Asachi" Technical University, lasi	ROMANIA	9
91	COMPARAISON ENTRE METHODES DE COMMANDE D'UN ONDULEUR DE TENSION	L. HAMAD et N. MOUBAYED	Р	Université Libanaise, Beirut	LEBANON	8
96	FAULT LOCATION IN DISTRIBUTION GRIDS IN AN ATP APPROACH	M. ISTRATE	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	6
101	MARKET CLEARING CONSIDERING POWER SYSTEM SECURITY	E. NASR AZADANI, S.H.HOSSEINIAN and J.MOGHANI	Р	Amirkabir University Of Technology	IRAN	6

102	OPTIMAL POWER FLOW CONSIDERING STABILITY MARGIN	E. NASR AZADANI, P. HASANPOR , J.MOGHANI and S.H.HOSSEINIAN	P	Amirkabir University Of Technology	IRAN	7
104	ESTABLISHING THE CONVERTOR LOADING STATUS, OPTIMUM FROM THE POINT OF VIEW OF DURATION OF LIFE	C. POPESCU	Р	University Of C. Brâncuşi, Târgu Jiu	ROMANIA	8
105	EXPERT SYSTEMS FOR QUALITY SERVICE MANAGEMENT AND MAINTAINANCE	D. CIUREA ,R. RUSEI and ANA CRISTINA BRATESCU	Р	SC Relians	ROMANIA	1
106	PROJECT QUALITY MANAGEMENT WITHIN SERVICES	D. CIUREA, R. RUSEI and RAMONA BURLACU	Р	SC Relians	ROMANIA	15
108	COMMAND AND DIAGNOSIS OF AN INDUSTRIAL PRODUCTION LINE FOR FORMATTING AUTO STORAGE BATTERIES	S. FRUMUSELU, R. POPOVICI, M. O. POPESCU and CLAUDIA L. POPESCU	P	Electrotehnica Echipamente Electrice	ROMANIA	2
114	MANIPULATOR FOR FERROMAGNETIC ROLLED STEEL DEPOT	LUCIAN CIOBANU	Р	"Gh. Asachi" Technical University, Iaşi	ROMANIA	16
115	PROPULSION OF THE SHIP WITH PERMANENT MAGNET SYNCHRONOUS MOTOR.	L. CIOBANU	Р	"Gh. Asachi" Technical University, Iaşi	ROMANIA	8
119	STUDY CONCERNING THE INFLUENCE OF MAGNETIC CORE'S CONFIGURATION ON THE ELECTRIC TRANSFORMERS WITH ADJUSTABLE OUTPUT-VOLTAGE	ELENA-DANIELA OLARIU, NICULINA POIENAR MIHAELA JEDER and D. CERNOMAZU	P	"Stefan Cel Mare" University of Suceava	ROMANIA	8
125	VIRTUAL LABORATORY	M. V. PAULET, OANA MARIA NEACSU, L. TOMA and M. CREŢU	Р	"Gh. Asachi" Technical University, lasi	ROMANIA	14
128	A PARTICLE SWARM OPTMIZATION TECHNIQUE (PSO) FOR POWER FILTER DESIGN	ADEL M. SHARAF and ADEL A. A. EL-GAMMAL	Р	University Of Trinidad And Tobago UTT	TRINIDAD AND TOBAGO	15
129	A DISCRETE PARTICLE SWARM OPTIMIZATION TECHNIQUE (DPSO) FOR POWER FILTER DESIGN	ADEL M. SHARAF and ADEL A. A. EL-GAMMAL	Р	University Of Trinidad And Tobago UTT	TRINIDAD AND TOBAGO	15
130	EQUIVALENT CIRCUIT AND FUNCTION CHARACTERISTICS FOR ROTATING ULTRASONIC TRAVELLING WAVE MOTOR	I. PRISACARIU	Р	"Stefan Cel Mare" University of Suceava	ROMANIA	8
133	SIMULATION OF A PHASE LOCKED LOOP USING LABVIEW	L. TOMA, C. DOSOFTEI and M. CREŢU	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	14

134	CONTRIBUTIONS REGARDING THE TRANSIENT STATE' STUDY IN CASE OF ELECTROMECHANICAL ACTUATORS WITH PARAFFIN AND GRAPHITE	MIHAELA JEDER, N. SOREA and ELENA OLARIU	Р	"Stefan Cel Mare" University of Suceava	ROMANIA	8
142	THE INFLUENCE OF THE ROTOR SPEED ON THE TRANSIENT ELECTROMAGNETIC TORQUE COMPONENTS	V. R. COCIU and LIVIA COCIU	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	8
145	CONTRIBUTIONS REGARDING THE REALIZATION AND THE EXPERIMENTATION OF THE SPECIAL SLIDING CONTACTS USED IN CASE OF ELECTRICAL TRANSFORMERS WITH REVOLVING SECONDARY WINDING	ELENA-DANIELA OLARIU, MIHAELA JEDER, NICULINA POIENAR, C. CREŢU, BRÂNDUŞA NEGRU, I. PRISACARIU, N. SOREA, C. UNGUREANU	Р	"Stefan Cel Mare" University of Suceava	ROMANIA	8
146	MAGNETIC NEURAL STIMULATOR – GEOMETRY OPTIMIZATION	C. CURTA, ANCA- IULIA NICU, MIHAELA PLESA, S. CRISAN	Р	Technical University Of Cluj-Napoca	ROMANIA	9
148	OPTIMAL SPEED CONTROL METHODS FOR PERMANENT- MAGNET SYNCHRONOUS MOTOR DRIVES	ROOZBEH MOLAVI and DAVOOD A. KHABURI	Р	Iran University Of Science And Technology(IUST)	IRAN	8
152	ON-CHIP, THREE-DIMENSIONAL INDUCTANCE MODELING AND EXTRACTION	CLAUDIA RĂCĂŞAN, V. ȚOPA, ADINA RĂCĂŞAN and C. MUNTEANU	Р	Technical University Of Cluj-Napoca	ROMANIA	13
153	TEHNIQUES TO REDUCE THE INSERTION LOSSES IN EMI FILTERS WITH MAGNETIC PLANAR TECHNOLOGY	ADINA RĂCĂŞAN, C. MUNTEANU, V. ȚOPA and CLAUDIA RĂCĂŞAN	Р	Technical University Of Cluj-Napoca	ROMANIA	13
154	STUDY UPON THE INFLUENCE OF GUN ORIENTATION AND APPLICATION POINT IN THE IMMUNITY TESTS	A. SĂLCEANU, OANA NEACȘU and E. LUNCĂ	Р	"Gh. Asachi" Technical University, lasi	ROMANIA	9
157	THE DETERMINATION OF THE CHARACTERISTICS AND THE EVALUATION OF THE POWER LOSSES IN THE INDUCTION MACHINES COUPLED WITH CONVERTERS	ANA BOBĂIANU	Р	"Politehnica" University of Timişoara	ROMANIA	8
161	APLICATIONS OF MONOLITHIC BRIDGE DRIVERS	VIOLETA -VALI CIUCUR	Р	Maritime University Of Constanța, Constanța	ROMANIA	8
175	AVAILABILITY EVALUATION OF THE HYDRO GENERATOR GROUPS BY MONTE CARLO SIMULATION	CRISTINA HORA	Р	University Of Oradea	ROMANIA	15

179	FUNDAMENTAL PARAMETERS MATRIX OF THE LINEAR FOUR- TERMINAL WITH REACTION IMPEDANCE ON UPPER SIDE	D. BELAUS	Р	"Gh. Asachi" Technical University, Iasi	ROMANIA	13
181	ON THE EQUIVALENT CIRCUIT DIAGRAMS OF THE TWO-PHASE INDUCTION MOTORS WITH CAPACITOR	ADRIANA PRISACARU	Р	"Gh. Asachi" Technical University	ROMANIA	8
187	TWO-STAGE VOLTAGE TRASFORMER WITH ELECTRONIC COMPENSATION	ADRIAN CREŢU and C.G.HABA	Р	"Gh. Asachi" Technical University	ROMANIA	5
189	ON THE INFLUENCE OF DISTORTION FACTOR IN COMPENSATED CIRCUITS IN NONSINUSOIDAL CONDITIONS	IUSTINA ZAHARIA and CRISTINA TEMNEANU	Р	"Gh. Asachi" Technical University	ROMANIA	13
192	INFLUENCE OF THE COMPOLES UPON THE ELECTROMAGNETIC TORQUE DEVELOPED BY THE D.C. MOTOR	R. HANGANU, AI. SIMION, L. LIVADARU and B. ANGHEL	Р	"Gh. Asachi" Technical University	ROMANIA	8
198	CONSIDERATIONS REGARDING ELECTRICAL SERVOMOTORS	V. BAHRIN and C.G. HABA	Р	"Gh. Asachi" Technical University, lasi	ROMANIA	8

### Workshops

Friday, October 3, 16<sup>00</sup>-17<sup>30</sup> Council Room, Building E Organized in collaboration with Continental Automotive Romania Collaboration between university and industry: opportunities and perspectives

Friday, October 3, 15<sup>00</sup>-18<sup>30</sup> and Saturday, October 4, 11<sup>45</sup>-13<sup>30</sup>, Qualindser Lab, Building E Advanced Materials and Technologies from Bilateral Cooperation to FP7 Partnership

Saturday, October 4, 11<sup>45</sup>-13<sup>30</sup>, PIEI Lab, Building EN New Developments within the FES-Based Rehabilitation

Saturday, October 4, 11<sup>45</sup>-13<sup>30</sup>, Council Room, Building E The Use of Programmable Logic Devices in Control of Electrical Machines

Saturday, October 4,  $10^{00}$ - $11^{30}$ , Qualindser Lab, Building E Remote Instrumentation for New Dedicated Regional Grids