

2023 18th Conference on Electrical Machines, Drives and Power Systems (ELMA 2023)

**Varna, Bulgaria
29 June - 1 July 2023**



**IEEE Catalog Number: CFP23L07-POD
ISBN: 979-8-3503-1128-0**

**Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP23L07-POD
ISBN (Print-On-Demand):	979-8-3503-1128-0
ISBN (Online):	979-8-3503-1127-3

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

1.	HYBRID ENERGY STORAGE SYSTEM TO INCREASE ENERGY EFFICIENCY DURING REGENERATIVE BRAKING OF URBAN ELECTRICAL TRANSPORT <i>Valentin Totev, Hristo Vasilev, Vultchan Gueorgiev and Ivan Angelov</i>	1
2.	BIDIRECTIONAL FLYING INDUCTOR CONVERTER BASED ON KARSCHNY TOPOLOGY <i>Yovko Rakanov and Andrey Mirev</i>	5
3.	FEASIBILITY STUDY OF A HYBRID EXCITED CLAW-POLE ALTERNATOR <i>Ivan Bachev, Vladimir Lazarov, Ludmil Stoyanov and Zahari Zarkov</i>	9
4.	APPLICATION OF PID ALGORITHMS TO CONTROL ROBOTIC PLATFORM USING SIMULINK <i>Martin Dejanov</i>	13
5.	MODELLING OF A DC GENERATOR IN MATLAB ENVIRONMENT DURING ONLINE LEARNING <i>Vyara Ruseva, Anka Krasteva and Konstantin Koev</i>	17
6.	IMPACT OF DECARBONISATION IN THE ENERGY SECTOR ON LOW-VOLTAGE DISTRIBUTION NETWORKS <i>Ivan Tonev and Nikolay Nikolaev</i>	21
7.	BACKSTEPPING CONTROL OF A PHASE SHIFTED FULL BRIDGE DC/DC CONVERTER FOR EV FAST CHARGERS <i>Achraf Saadaoui, Mohammed Ouassaid and Mohamed Maaroufi</i>	27
8.	OPERATIONAL TORQUE CHARACTERISTICS OF INNOVATIVE COAXIAL MAGNETIC GEAR'S CONSTRUCTIONS <i>Miglenna Todorova and Iliana Marinova</i>	33
9.	INVERTER MODEL OPTIMIZATION IN SIMULINK SOFTWARE ENVIRONMENT <i>Mladen Proykov, Neli Simeonova and Vasil Ivanov</i>	39
10.	CLASSIFICATION OF FACTORS AFFECTING EMPLOYEE SATISFACTION IN MODERN BUSINESS ORGANIZATIONS <i>Boris Gramchev, Svetlana Lesidrenska and Svetlana Dimitrakieva</i>	43
11.	IMPLEMENTATION OF PLC-BASED COOLING SYSTEM CONTROL OF AN INDUSTRIAL HALL WHERE A LARGE AMOUNT OF HEAT IS EMITTED <i>Bohos Aprahamian and Veselin Vasilev</i>	46
12.	DESIGN FOR SUSTAINABLE BEHAVIOR: A FOCUS ON SUSTAINABLE ENERGY <i>Ivaylo Tsanov</i>	49
13.	ANALYTICAL AND SIMULATION STUDY OF THE POWER LOSSES OF A SWITCHED RELUCTANCE MOTOR <i>Dimitar Yankov, Tsvetana Grigorova and Ivan Maradzhiev</i>	53
14.	STUDY OF CONVERTERS FOR ENERGY STORAGE SYSTEMS IN PARALLEL OPERATION OF MODULES OR ELEMENTS <i>Dimitar Arnaudov, Teodora Todorova and Vladimir Dimitrov</i>	57
15.	IDENTIFYING DIFFERENCES BETWEEN POWER SYSTEM OF CONVENTIONAL AND AUTONOMOUS SHIP WITH RESPECT TO THEIR SAFETY ASSESSMENT <i>Ivana Jovanović, Maja Perčić and Nikola Vladimir</i>	61
16.	CALCULATION OF TEMPERATURE DISTRIBUTION AT CABLE JOINTS USING HYBRID BOUNDARY ELEMENTS METHOD <i>Dusan Jevtic, Nebojsa Raicevic, Ana Vuckovic, Mirjana Peric and Slavoljub Aleksic</i>	66
17.	DESIGN OF AN ELECTRONIC SYSTEM FOR REGENERATION OF POTENTIAL-INDUCED DEGRADATION (PID) IN PV INSTALLATIONS <i>Atanas Kabakchiev, Boris Evstatiev and Dimitar Trifonov</i>	70

18.	ENERGY RESOURCES AS A FACTOR FOR STABILITY IN EUROPE IN THE 20TH CENTURY <i>Mariya Zheleva</i>	75
19.	A MTTFD ESTIMATION APPROACH FOR ELECTRONIC MODULES PART OF SAFETY-RELATED CONTROL SYSTEMS <i>Toncho Papanchev, Svetlozar Zahariev and Angel Marinov</i>	79
20.	COMPUTER-BASED METHODS FOR STUDENT TRAINING IN THE FIELD OF ELECTRICITY SUPPLY <i>Vyara Ruseva, Anka Krasteva and Konstantin Koev</i>	83
21.	STRUCTURES AND TOPOLOGIES FOR REALIZATION OF CHARGING STATION FOR EVS <i>Andrei Borisov, Gergana Vacheva and Nikolay Hinov</i>	87
22.	DETERMINATION OF THE LEVEL OF VIBROACTIVITY OF THE TRACTION MOTOR-GEAR UNITS <i>Genadijs Kobenkins, Marks Marinbahs, Anatolijs Bizans, Nikita Rilevs and Olegs Sliskis</i>	91
23.	COMPARATIVE ANALYSIS OF OZONE GENERATING DEVICES <i>Tatyana Dimova, Bohos Aprahamian and Mariya Marinova</i>	95
24.	ATTENTION DETECTION IN VIRTUAL EDUCATIONAL LABORATORY <i>Evgeniy Mendeleev, Daria Burtseva, Roman Petrov, Olga Alekseyeva, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov</i>	99
25.	SIMULATION MODEL FOR EVALUATION OF POWER QUALITY INDICATORS IN INDUSTRIAL POWER SUPPLY SYSTEMS WITH GRID-TIED PV SYSTEM <i>Yavor Lozanov, Svetlana Tzvetkova and Angel Petleshkov</i>	102
26.	SOCIAL WELLBEING AND ENERGY POVERTY <i>Krasimira Georgieva</i>	106
27.	RESEARCH OF ASYMMETRIC MAGNETOELECTRIC STRUCTURES ON SUBSTRATES <i>Evgeniy Kuzmin, Roman Petrov, Viktor Kiselev, Vasily Misilin, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov</i>	110
28.	DESIGN OF DIGITAL PHASE FILTERS USING MATLAB <i>Adriana Borodzhieva and Snezhinka Zaharieva</i>	113
29.	ALGORITHM FOR GENERATING HUMAN EYE IRIS TEXTURE CODE <i>Gergana Spasova</i>	117
30.	MAIN CHARACTERISTICS IN MEASURING TEAM COMMUNICATION AS A MEANS OF IMPROVING TEAM PERFORMANCE <i>Boris Gramchev, Svetlana Dimitrakieva and Svetlana Lesidrenska</i>	121
31.	THEORETICAL MODEL FOR EVALUATION OF THE ENERGY EFFICIENCY OF A HOME BREAD MAKER <i>Yanita Slavova and Mariya Marinova</i>	124
32.	LOW-COST REMOTE LAB ON RENEWABLE ENERGY SOURCES WITH A FOCUS ON STEM EDUCATION <i>Todor Yordanov, Nicolay Mihailov and Katerina Gabrovksa-Evstatieva</i>	128
33.	PROBLEMS WITH MEASUREMENT AT THE BORDERS BETWEEN ELECTRICITY TRANSMISSION AND DISTRIBUTION NETWORKS IN BULGARIA <i>Velichko Atanasov and Dimo Stoilov</i>	133
34.	FAULTS ANALYSIS OF THE ELECTRICAL EQUIPMENT IN A COMPANY FROM THE MINING INDUSTRY <i>Svetlana Tzvetkova, Yavor Lozanov and Angel Petleshkov</i>	137
35.	BRAKING MODES ENERGY UTILIZATION IN DC PUBLIC TRANSPORTATION <i>Vultchan Gueorgiev</i>	141
36.	ROLE OF THE LEADER IN THE ANTI-CRISIS MANAGEMENT OF ENERGY SECTOR INDUSTRY <i>Marina Marinova-Stoyanova</i>	145

37.	STUDY ON POWER CONSUMPTION MODES AND POWER QUALITY ACCORDING TO IEEE 1459 STANDARD IN THE ELECTRIC POWER SUPPLY SYSTEMS OF PUBLIC BUILDINGS <i>Valentin Gyurov and Milen Duganov</i>	149
38.	APPLICATION OF CONVOLUTIONAL NEURAL NETWORKS AND SIGNAL PROCESSING TECHNIQUES TO IDENTIFY AND FILTER NOISE FROM ECG SIGNALS <i>Veselin Atanasov</i>	154
39.	COMPARISON OF HYBRID MODELS FOR PV POWER OUTPUT FORECASTING – APPLICATION TO ORYAHOVO, BULGARIA <i>Ludmil Stoyanov and Iva Draganovska</i>	159
40.	EDUCATIONAL POWER LOGGER FOR ELECTRICAL MACHINES LABORATORY EXPERIMENTS <i>Kerem Kontas, Diëgo Zuidervliet and Peter van Duijsen</i>	163
41.	EXPERIMENTAL STUDY OF THE TEMPERATURE FIELD OF AN ELECTRONIC MODULE <i>Boris Evstatiev and Nadezhda Evstatieva</i>	167
42.	POWER-TO-HEAT IN DISTRICT HEATING SYSTEMS – A CASE STUDY FOR SOFIA'S DHC <i>Viktor Garbev</i>	171
43.	APPLYING A RECURRENT NEURAL NETWORK TO THE BEHAVIOUR OF AN AUTONOMOUS AGENT <i>Vanya Markova and Ventseslav Shopov</i>	175
44.	ALGORITHM FOR IRIS SEGMENTATION IN HUMAN EYE <i>Gergana Spasova</i>	179
45.	COMPARATIVE EVALUATION OF COMMUNICATION PROTOCOLS IN THE AUTOMOTIVE INDUSTRY <i>Marieta Yordanova and Aydan Haka</i>	183
46.	CONTROL ALGORITHM DEVELOPMENT OF ELECTRICAL DRIVES BY USING FINITE ELEMENT MODEL IN CONNECTED MATLAB/SIMULINK AND JMAG FRAMEWORK <i>György Istenes and Krisztián Horváth</i>	187
47.	WEB-BASED INFORMATION PORTAL FOR BUSINESS PARTNERS - BASIS FOR PROFESSIONAL GUIDANCE FOR GRADUATES <i>Ivan Evstatiev and Georgi Georgiev</i>	191
48.	CHARGING STATION INFRASTRUCTURE AND STANDARDS FOR ELECTRIC VEHICLES - STATE, PROBLEMS AND FUTURE TRENDS <i>Andrei Borisov, Gergana Vacheva and Nikolay Hinov</i>	195
49.	STUDY OF THE LONGITUDINAL DYNAMIC PARAMETERS OF TWO-WHEELED ELECTRIC VEHICLES <i>Daniel Lyubenov, Georgi Kadikyanov, Seher Kadirova and Zhivko Kolev</i>	199
50.	EXPERIMENTAL STUDY OF INSULATION COMPOSITE MATERIALS ELECTRICAL PROPERTIES IN LIQUID NITROGEN <i>Georgi Ivanov, Valentin Mateev and Iliana Marinova</i>	203
51.	SYSTEM FOR STRING MONITORING IN SMALL EXPERIMENTAL PV PLANTS <i>Nikolay Valov, Boris Evstatiev, Tsvetelina Mladenova, Vladislav Hinkov and Nicolay Mihailov</i>	207
52.	SIMULATION ENVIRONMENT FOR EXAMINING THE PAIRING METHODS IN BLE TECHNOLOGY <i>Aydan Haka, Yordan Yordanov, Diyan Dinev, Veneta Aleksieva and Hristo Valchanov</i>	212
53.	A MODEL BASED COMPARISON ON THE EFFICIENCY OF ELECTRIC VEHICLES TO CONVENTIONAL VEHICLES <i>Valentin Totev</i>	216
54.	APPLYING A PROBLEM-BASED LEARNING IN THE TOPIC OF MODELLING OF THE POWER AND IMPROVEMENT THE VOLTAGE STABILITY OF WIND TURBINES <i>Ivaylo Stoyanov, Vasil Ivanov and Selahattin Kosunalp</i>	221

55.	ANALYSIS OF LORA RSSI DATA USING SIMULATIONS AND REAL DEVICES <i>Diyana Dineva, Aydin Haka, Veneta Aleksieva and Hristo Valchanov</i>	225
56.	A REMOTE LAB FOR EXPERIMENTAL STUDY OF DC MOTORS <i>Teodor Nenov, Boris Evstatiev and Seher Kadirova</i>	229
57.	COMPARATIVE ANALYSIS OF THE CHANGE OF TOUCH AND STEP VOLTAGES AT THE FLOW OF LIGHTNING CURRENTS IN EARTHING GRIDS WITH DIFFERENT MESH SIZES <i>Rositsa Dimitrova and Milena Ivanova</i>	233
58.	ANALYSIS OF STUDENTS SATISFACTION WITH DISTANCE LEARNING AND THE ADVANTAGES AND DISADVANTAGES OF LABORATORY WORKS WITH COMPUTER SIMULATION OF ELECTRONIC ANALOG CIRCUITS <i>Kuralay Nurgaliyeva, Kamila Mirkhamitova, Asylgul Gabdullina and Assel Igenbayeva</i>	237
59.	BIBLIOMETRIC ANALYSIS OF TECHNOLOGICAL AND EFFICIENCY DEVELOPMENT IN PHOTOVOLTAIC SYSTEMS <i>Svilen Simeonov, Angel Marinov and Svetlozar Zahariev</i>	241
60.	OXYHYDROGEN – AN OVERVIEW OF THE TECHNOLOGY, APPLICATION AND PRODUCTION FACTORS <i>Kalin Nikolov</i>	244
61.	FACTORS INFLUENCING THE PUBLIC SENTIMENT ON NUCLEAR ENERGY INVESTMENT IN EUROPEAN UNION MEMBER STATES <i>Dafina Nikolova and Dimo Stoilov</i>	250
62.	CONSIDERATIONS ON ELECTROMAGNETIC DISTURBANCES APPEARING IN ELECTRICAL ENERGY SMART METERING SYSTEMS <i>Silvia-Maria Diga, Nicolae Diga, Paul-Mihai Mircea, Ion Patru, Marian-Ştefan Nicolae and Ion Mircea</i>	259
63.	ENERGY-EFFICIENT DC MOTOR SPEED CONTROL USING THE GENETIC ALGORITHM <i>Donka Ivanova and Nikolay Valov</i>	263
64.	MODELING THE ENERGY STORAGE SYSTEM FOR DIFFERENT FORMS OF DISCHARGE CURRENT <i>Hristiyan Kanchev, Krasimir Kishkin and Dimitar Arnaudov</i>	269
65.	DESIGN OF MULTIPLE-OUTPUT FLYBACK CONVERTER WITH INDEPENDENTLY CONTROLLED OUTPUTS FOR TV POWER SUPPLY <i>Ramazan Düzgün, Mehmet Parlak and İsmail Yılmazlar</i>	273
66.	COMPARISON OF EXTENDED AND UNSCENTED KALMAN FILTERS WITH AND WITHOUT USING MECHANICAL MODEL FOR SPEED SENSORLESS CONTROL OF INDUCTION MACHINES <i>Krisztián Horváth</i>	277
67.	DIFFERENCE BETWEEN MEASURED AND REAL VALUE IN ILLUMINANCE ESTIMATION <i>Iva Petrinska and Dilyan Ivanov</i>	281
68.	PARAMETRIC 3D FEM ANALYSIS OF AN IRON-CORED COIL THERMAL PROPERTIES <i>Ilona Iatcheva and Denitsa Darzhanova</i>	285
69.	DESIGN OF AN ELECTRONIC SYSTEM FOR CONTROL OF PV-POWERED IRRIGATION PROCESSES <i>Reni Kabakchieva, Boris Evstatiev and Katerina Gabrovska-Evstatieva</i>	289
70.	ESTIMATION OF GEOMAGNETICALLY INDUCED CURRENTS AFFECT ON POWER GRID BASED ON MEASUREMENTS OF MID-LATITUDE GEOMAGNETIC OBSERVATORIES <i>Kuralay Nurgaliyeva, Saule Mukasheva, Alexey Andreyev, Olga Sokolova, Nazugum Ussenova and Doszhan Zhunisbekov</i>	294
71.	APPLICATION OF HYBRID INVERTERS IN PHOTOVOLTAIC SYSTEMS <i>Valentin Milenov and Zahari Zarkov</i>	298

72.	APPLICATION OF IOT IN UPGRADING AUTOMATIC CONTROL OF ROPE-POLY-STRAP LIFTING SYSTEMS FOR CRANES AND ROTARY EXCAVATORS <i>Stanislav Georgiev, Petko Nedyalkov and Teodora Hristova</i>	303
73.	THE PSYCHOLOGY OF SUSTAINABLE ENERGY <i>Ivaylo Tsanov</i>	307
74.	APPLICATION OF VIBRODIAGNOSTICS FOR DIAGNOSIS AND ANALYSIS OF DEFECTS CAUSED BY THE FLOW OF BEARING CURRENTS IN ELECTRICAL DRIVES <i>Dragomir Dragnev and Bohos Aprahamian</i>	311
75.	3D PRINTED DESIGNS FOR PERMANENT MAGNETS FIXATION ON HIGH SPEED ROTORS <i>Martin Ralchev, Valentin Mateev and Iliana Marinova</i>	315
76.	THE DEVELOPMENT OF AN UNIVERSAL SIX LEG INVERTER FOR ELECTRICAL DRIVES LABORATORY EXPERIMENTS <i>Axel Drop, Diëgo Zuidervliet and Peter van Duijsen</i>	319
77.	ANALYSIS OF THE PHOTOBIOLOGICAL IMPACT OF LED LIGHT SOURCES IN THE CONTEXT OF STANDARDIZATION REQUIREMENTS FOR REDUCTION OF BLUE LIGHT EMISSION <i>Valentin Gyurov and Tsvetomir Dimitrov</i>	323
78.	PELTIER MODULE-BASED THERMOREGULATOR FOR LIQUID BIDIRECTIONAL TEMPERATURE CONTROL <i>Kaloyan Ivanov, Ivaylo Belovski and Anatoliy Aleksandrov</i>	327
79.	APPLICATION OF SWOT ANALYSIS FOR THE SELECTION OF A HYBRID SYSTEM FOR HEATING AND PRODUCTION OF ENERGY AND HOT WATER FOR THE CONDITIONS OF BULGARIA <i>Mario Karadjov and Teodora Hristova</i>	331
80.	APPLICATION OF A METHODOLOGY FOR THE DESIGN AND CONSTRUCTION OF POWER CHOKES FOR LOW VOLTAGE FILTER-COMPENSATING SYSTEMS <i>Valentin Gyurov and Milen Duganov</i>	335
81.	INTEGRATING NARX NEURAL NETWORK WITH K-S TEST FOR ACCURATE PARTIAL DISCHARGE DETECTION IN TRANSFORMERS <i>Abdulla Alabbasi, Mohamed Khalil and Tony McGrai</i>	339
82.	MULTI-CRITERIA ANALYSIS APPROACHES FOR ENERGY SYSTEM DEVELOPMENT SCENARIOS – REVIEW <i>Kristina Hadzhiyska and Dimo Stoilov</i>	346
83.	ASSESSMENT OF OPERATIONAL RESERVE REQUIREMENT RESULTING FROM WIND POWER USE IN THE ELECTRIC POWER SYSTEM OF KOSOVO <i>Shyqeri Morina and Dimo Stoilov</i>	355
84.	APPROACHES FOR EFFICIENCY IMPROVEMENT OF THE CHARGING PROCESS IN AN AUTONOMOUS PHOTOVOLTAIC SYSTEM <i>Svetlozar Zahariev, Toncho Papanchev and Angel Marinov</i>	359
85.	APPLICATION OF PROJECT-BASED LEARNING IN THE DIGITAL ELECTRONICS COURSE FOR IMPLEMENTING BOOLEAN FUNCTIONS OF THREE ARGUMENTS WITH MULTIPLEXERS <i>Adriana Borodzhieva and Snezhinka Zaharieva</i>	363
86.	APPLICATION OF THE VIRTUAL LABORATORY FOR SCHOOLCHILDREN’S FUNCTIONAL LITERACY DEVELOPMENT <i>Olga Alekseyeva, Natalia Alexandrova, Tatyana Chugunova, Daria Burtseva, Roman Petrov, Tatyana Skvortsova, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov</i>	367
87.	EXTERNAL ROTOR BLDC MOTOR DESIGN FOR A LIGHT ELECTRIC VEHICLE: 24 SLOT/22 POLE COMBINATION <i>Mucahit Soyaslan</i>	371

88.	IMPLEMENTATION OF A COMPLEX PLC-BASED CONTROL OF THE TECHNOLOGICAL SYSTEMS OF A SPORTS CENTER WITH A SWIMMING POOL <i>Bohos Aprahamian and Veselin Vasilev</i>	375
89.	EFFECT OF THE COLOR OF THE ROOM SURFACES IN A MACHINE HALL ON THE ENERGY EFFICIENCY OF THE LIGHTING INSTALLATION <i>Iva Petrinska</i>	378
90.	LOW-COST TESTER FOR START-UP AND HOLD-UP VERIFICATION OF ELECTRONIC CONVERTERS <i>Angel Marinov, Svetlozar Zahariev and Toncho Papanchev</i>	383
91.	MAGNONIC COMMUTATOR ON MAGNETOELECTRIC GRADIENT STRUCTURE FOR ARTIFICIAL NEURAL NETWORKS <i>Aleksandr Nikitin, Roman Petrov, Viktor Kiselev, Vasily Misilin, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov</i>	387
92.	ON MAGNETIC INDUCTIONS IN A THREE-PHASE SPLIT-PHASE INDUCTION DEVICE <i>Marin Marinov, Georgi Zhelev and Maria Marinova</i>	391
93.	ELECTRIC OSMOSIS IN HEAT PIPES <i>Yuri Kiliba, Roman Petrov, Ksenia Petrova, Marina Khavanova, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov</i>	395
94.	CONCEPT FOR IMPROVING THE LIGHTING ENVIRONMENT AND REDUCING UGR WITH DIMMABLE LED'S SYSTEM IN SPORTS HALL IN LIGHTING CLASS III <i>Valentin Gyurov and Zhulieta Vasileva</i>	399
95.	SOCIAL INEQUILITY AND SUSTAINABLE DEVELOPMENT <i>Toshko Petrov</i>	403
96.	BUSINESS PROCESS REENGINEERING MODEL FOR A WIND PARK <i>Svilen Simeonov and Vesela Dicheva</i>	406
97.	INVESTIGATION OF THE MAGNITUDE OF THE ELECTROMAGNETIC FIELDS IN SPECIFIC WORKING AREAS OF THE ELECTRICAL PERSONNEL ON VESSELS WITH ELECTRIC PROPULSION <i>Emil Barudov, Milena Ivanova, Vyara Vasileva and Miroslava Doneva</i>	410
98.	MODEL FOR REENGINEERING OF ENTREPRENEURIAL PROCESS IN ELECTRICAL ENGINEERING <i>Svilen Simeonov and Vesela Dicheva</i>	415
99.	TECHNICAL ECONOMIC ANALYSIS OF UTILIZATION OF TRANSFORMERS ALONG A LONG LOW VOLTAGE OVERHEAD POWER LINE. <i>Velichko Atanasov and Dimo Stoilov</i>	419
100.	SIMULATION AND EXPERIMENTAL STUDY OF STATIC TORQUE CHARACTERISTICS OF A 12/8 THREE-PHASE SRM <i>Dimitar Yankov, Tsvetana Grigorova and Ivan Maradzhiev</i>	423