

**18-th INTERNATIONAL CONFERENCE
ON ELECTRICAL MACHINES,
DRIVES AND POWER SYSTEMS**



ELMA 2023

PROGRAM

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

18-th INTERNATIONAL CONFERENCE ON ELECTRICAL MACHINES, DRIVES AND POWER SYSTEMS

ELMA 2023

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

**Organized by:
Union of Electronics, Electrical Engineering and Telecommunications (CEEC)**



Bulgarian Section

With the support of:

Technical University of Varna

Technical University of Sofia

Technical University of Gabrovo

University of Rousse "Angel Kanchev"

Federation of Scientific and Technical Unions

PROGRAM

CONFERENCE VENUE

18-th International Conference on Electrical Machines, Drives and Power Systems
ELMA 2023 will be held in Varna, in Varna Municipality and "Aqua Azur" Hotel

Conference site: <https://elma.tu-varna.bg>

e-mail: elma@tu-varna.bg

TIME TABLE

Day	Time	
Thursday, 29 June	9:30	Registration - Varna Municipality
	10:00	Opening Ceremony (Plenary Hall) - Varna Municipality
	12:00	Lunch – Restaurant “Halbata” Varna
	14:00-17:00	Events related to the 60th anniversary of the Faculty of Electrical Engineering of the Technical University – Varna

Day	Time	"Aqua Azur" Hotel
Friday, 30 June	9:00	Registration – Registration desk (Reception level of the hotel)
	9:00-10:30	Virtual & Oral session 1 – Hall 1 Oral session 2 – Hall 2
	10:30-11:00	Coffee break (Lobby bar at the reception level of the hotel)
	10:30-12:30	Poster session 1 (Conference block of the hotel)
	11:00-12:30	Oral session 3 – Hall 1 Oral session 4 – Hall 2
	12:30-13:30	Lunch (Restaurant of the hotel)
	13:30-14:30	Oral session 5 – Hall 1 Oral session 6 – Hall 2
	13:30-15:30	Poster session 2 (Conference block of the hotel)
	15:30-16:00	Coffee break (Lobby bar at the reception level of the hotel)
	16:00-18:00	Poster session 3 (Conference block of the hotel)
	19:00	Dinner (Restaurant of the hotel)

Day	Time	"Aqua Azur" Hotel
Saturday, 1 July	10:00	Closing Ceremony – Hall 1

PROGRAM
18-th INTERNATIONAL CONFERENCE ON
ELECTRICAL MACHINES, DRIVES
AND POWER SYSTEMS

Thursday, June 29

09:30
Registration
Municipality
Varna

OPENING CEREMONY

Municipality Varna
10:00

LUNCH

Thursday, 29 June
Restaurant “Halbata”
Varna 12:00

EVENTS RELATED TO THE 60TH ANNIVERSARY OF THE FACULTY OF
ELECTRICAL ENGINEERING OF THE TECHNICAL UNIVERSITY – VARNA

Thursday, 29 June
Technical University - Varna
14:00 – 17:00

VIRTUAL & ORAL SESSION 1

Friday, 30 June

09:00 Hall 1

Chairman: Dimo Stoilov

Virtual

09:00-09:15 BACKSTEPPING CONTROL OF A PHASE SHIFTED FULL BRIDGE DC/DC CONVERTER FOR EV FAST CHARGERS

Achraf Saadaoui, Mohammed Ouassaid and Mohamed Maaroufi

09:15-09:30 EDUCATIONAL POWER LOGGER FOR ELECTRICAL MACHINES LABORATORY EXPERIMENTS

Kerem Kontas, Diëgo Zuidervliet and Peter van Duijsen

09:30-09:45 STUDY ON FACTORS INFLUENCING THE PUBLIC SENTIMENT ON NUCLEAR ENERGY INVESTMENT IN EU MEMBER STATES

Dafina Nikolova and Dimo Stoilov

09:45-10:00 THE DEVELOPMENT OF AN UNIVERSAL SIX LEG INVERTER FOR ELECTRICAL DRIVES LABORATORY EXPERIMENTS

Axel Drop, Diëgo Zuidervliet and Peter van Duijsen

10:00-10:15 EXTERNAL ROTOR BLDC MOTOR DESIGN FOR A LIGHT ELECTRIC VEHICLE: 24 SLOT/22 POLE COMBINATION

Mucahit Soyaslan

Oral

10:15-10:30 HYBRID ENERGY STORAGE SYSTEM TO INCREASE ENERGY EFFICIENCY DURING REGENERATIVE BRAKING OF URBAN ELECTRICAL TRANSPORT

Valentin Totev, Hristo Vasilev, Vultchan Gueorgiev and Ivan Angelov

10:30-11:00 COFFEE BREAK

ORAL SESSION 3

Friday, 30 June

11:00 Hall 1

Chairman: Ludmil Stoyanov

11:00-11:15 DIGITALIZATION OF ADMINISTRATIVE PROCESSES IN A HOSPITAL THROUGH AN ERP SYSTEM

Kiril Anguelov and Gabriela Georgieva

11:15-11:30 DESIGN FOR SUSTAINABLE BEHAVIOR: A FOCUS ON SUSTAINABLE ENERGY

Ivaylo Tsanov

11:30-11:45 IDENTIFYING DIFFERENCES BETWEEN POWER SYSTEM OF CONVENTIONAL AND AUTONOMOUS SHIP WITH RESPECT TO THEIR SAFETY ASSESSMENT

Ivana Jovanović, Maja Perčić and Nikola Vladimir

11:45-12:00 APPLICATION OF A METHODOLOGY FOR THE DESIGN AND CONSTRUCTION OF POWER CHOKES FOR LOW VOLTAGE FLTER-COMPENSATING SYSTEMS

Valentin Gyurov and Milen Duganov

12:00-12:15 ENERGY RESOURCES AS A FACTOR FOR STABILITY IN EUROPE IN THE 20TH

CENTURY
Mariya Zheleva

12:15-12:30 DETERMINATION OF THE LEVEL OF VIBROACTIVITY OF THE TRACTION MOTOR-GEAR UNITS
Genadijs Kobenkins, Marks Marinbahs, Anatolijs Bizans, Nikita Rilevs and Olegs Sliskis

12:30-13:30 LUNCH

ORAL SESSION 5

**Friday, 30 June
13:30 Hall 1**

Chairman: Svetlana Tzvetkova

13:30-13:45 SOCIAL WELLBEING AND ENERGY POVERTY
Krasimira Georgieva

13:45-14:00 BRAKING MODES ENERGY UTILIZATION IN DC PUBLIC TRANSPORTATION
Vultchan Gueorgiev

14:00-14:15 STUDY ON POWER CONSUMPTION MODES AND POWER QUALITY ACCORDING TO IEEE 1459 STANDARD IN THE ELECTRIC POWER SUPPLY SYSTEMS OF PUBLIC BUILDINGS
Valentin Gyurov and Milen Duganov

ORAL SESSION 2

**Friday, 30 June
09:00 Hall 2**

Chairman: Vultchan Gueorgiev

09:00-09:15 APPLYING A RECURRENT NEURAL NETWORK TO THE BEHAVIOUR OF AN AUTONOMOUS AGENT
Vanya Markova and Ventseslav Shopov

09:15-09:30 COMPARATIVE EVALUATION OF COMMUNICATION PROTOCOLS IN THE AUTOMOTIVE INDUSTRY
Marieta Yordanova and Aydan Haka

09:30-09:45 MULTI-CRITERIA ANALYSIS APPROACHES FOR ENERGY SYSTEM DEVELOPMENT SCENARIOS
Kristina Hadzhiyska and Dimo Stoilov

09:45-10:00 A MODEL BASED COMPARISON ON THE EFFICIENCY OF ELECTRIC VEHICLES TO CONVENTIONAL VEHICLES
Valentin Totev

10:00-10:15 ANALYSIS OF STUDENTS SATISFACTION WITH DISTANCE LEARNING THE ADVANTAGES AND DISADVANTAGES OF LABORATORY WORKS WITH COMPUTER SIMULATION OF ELECTRONIC ANALOG CIRCUITS
Kuralay Nurgaliyeva, Kamila Mirkhamitova, Asylgul Gabdullina and Assel Igenbayeva

10:15-10:30 DESIGN OF MULTIPLE-OUTPUT FLYBACK CONVERTER WITH INDEPENDENTLY CONTROLLED OUTPUTS FOR TV POWER SUPPLY
Ramazan DÜzgÜN, Mehmet Parlak and İsmail Yilmazlar

10:30-11:00 COFFEE BREAK

ORAL SESSION 4

Friday, 30 June

11:00 Hall 2

Chairman: Dimitar Arnaudov

11:00-11:15 THE PSYCHOLOGY OF SUSTAINABLE ENERGY

Ivaylo Tsanov

11:15-11:30 ANALYSIS OF THE PHOTOBIOLOGICAL IMPACT OF LED LIGHT SOURCES IN THE CONTEXT OF STANDARDIZATION REQUIREMENTS FOR REDUCTION OF BLUE LIGHT EMISSION

Valentin Gyurov and Tsvetomir Dimitrov

11:30-11:45 ALGORITHM FOR ESTIMATION OF THE ECONOMIC EFFICIENCY OF HOUSEHOLD PHOTOVOLTAIC INSTALLATIONS WITH POWER UP TO 10KW

Angel Marinov, Svilen Simeonov and Svetlozar Zahariev

11:45-12:00 ASSESSMENT OF OPERATIONAL RESERVE REQUIREMENT RESULTING FROM WIND POWER USE IN THE ELECTRIC POWER SYSTEM OF KOSOVO

Shyqeri Morina and Dimo Stoilov

12:00-12:15 LOW-COST TESTER FOR START-UP AND HOLD-UP VERIFICATION OF ELECTRONIC CONVERTERS

Angel Marinov, Svetlozar Zahariev and Toncho Papanchev

12:15-12:30 POWER ELECTRONIC TOPOLOGY FOR LOW POWER SYSTEM FOR ELECTROEXTRACTION

Angel Marinov, Svetlozar Zahariev and Toncho Papanchev

12:30-13:30 LUNCH

ORAL SESSION 6

Friday, 30 June

13:30 Hall 2

Chairman: Maik Streblau

13:30-13:45 CONCEPT FOR IMPROVING THE LIGHTING ENVIRONMENT AND REDUCING UGR WITH DIMMABLE LED'S SYSTEM IN SPORTS HALL IN LIGHTING CLASS III

Valentin Gyurov and Jylieta Vasileva

13:45-14:00 SOCIAL INEQUILITY AND SUSTAINABLE DEVELOPMENT

Toshko Petrov

14:00-14:15 BIDIRECTIONAL FLYING INDUCTOR CONVERTER BASED ON KARSCHNY TOPOLOGY

Yovko Rakanov

14:15-14:30 APPLICATION OF PID ALGORITHMS TO CONTROL ROBOTIC PLATFORM USING SIMULINK

Martin Dejanov

POSTER SESSION 1

Friday, 30 June

Conference block of the hotel

10:30-12:30

Chairman: Marin Marinov

- 1) FEASIBILITY STUDY OF A HYBRID EXCITED CLAW-POLE ALTERNATOR
Ivan Bachev, Vladimir Lazarov, Ludmil Stoyanov and Zahari Zarkov
- 2) MODELLING OF A DC GENERATOR IN MATLAB ENVIRONMENT DURING ONLINE LEARNING
Vyara Ruseva, Anka Krasteva and Konstantin Koev
- 3) IMPACT OF DECARBONISATION IN THE ENERGY SECTOR ON LOW-VOLTAGE DISTRIBUTION NETWORKS
Ivan Tonev and Nikolay Nikolaev
- 4) OPERATIONAL TORQUE CHARACTERISTICS OF INNOVATIVE COAXIAL MAGNETIC GEAR'S CONSTRUCTIONS
Miglenna Todorova and Iliana Marinova
- 5) CLASSIFICATION OF FACTORS AFFECTING EMPLOYEE SATISFACTION IN MODERN BUSINESS ORGANIZATIONS
Boris Gramchev, Svetlana Lesidrenska and Svetlana Dimitrakieva
- 6) IMPLEMENTATION OF PLC-BASED COOLING SYSTEM CONTROL OF AN INDUSTRIAL HALL WHERE A LARGE AMOUNT OF HEAT IS EMITTED
Bohos Aprahamian
- 7) ANALYTICAL AND SIMULATION STUDY OF THE POWER LOSSES OF A SWITCHED RELUCTANCE MOTOR
Dimitar Yankov, Tsvetana Grigorova and Ivan Maradzhiev
- 8) STUDY OF CONVERTERS FOR ENERGY STORAGE SYSTEMS IN PARALLEL OPERATION OF MODULES OR ELEMENTS
Dimitar Arnaudov, Teodora Todorova and Vladimir Dimitrov
- 9) CALCULATION OF TEMPERATURE DISTRIBUTION AT CABLE JOINTS USING HYBRID BOUNDARY ELEMENTS METHOD
Nebojsa Raicevic, Dusan Jevtic, Ana Vuckovic, Mirjana Peric and Slavoljub Aleksic
- 10) DESIGN OF AN ELECTRONIC SYSTEM FOR REGENERATION OF POTENTIAL-INDUCED DEGRADATION (PID) IN PV INSTALLATIONS
Atanas Kabakchiev, Boris Evstatiev and Dimitar Trifonov
- 11) A MTTFD ESTIMATION APPROACH FOR ELECTRONIC MODULES PART OF SAFETY-RELATED CONTROL SYSTEMS
Toncho Papanchev, Svetlozar Zahariev and Angel Marinov
- 12) COMPUTER-BASED METHODS FOR STUDENT TRAINING IN THE FIELD OF ELECTRICITY SUPPLY
Vyara Ruseva, Anka Krasteva and Konstantin Koev
- 13) STRUCTURES AND TOPOLOGIES FOR REALIZATION OF CHARGING STATION FOR EVS
Andrei Borisov, Gergana Vacheva and Nikolay Hinov

- 14) COMPARATIVE ANALYSIS OF OZONE GENERATING DEVICES
Tatyana Dimova, Bohos Aprahamian and Mariya Marinova
- 15) ATTENTION DETECTION IN VIRTUAL EDUCATIONAL LABORATORY
Evgeniy Mendeleev, Daria Burtseva, Roman Petrov, Olga Alekseyeva, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov
- 16) SIMULATION MODEL FOR EVALUATION OF POWER QUALITY INDICATORS IN INDUSTRIAL POWER SUPPLY SYSTEMS WITH GRID-TIED PV SYSTEM
Yavor Lozanov, Svetlana Tzvetkova and Angel Petleshkov
- 17) RESEARCH OF ASYMMETRIC MAGNETOELECTRIC STRUCTURES ON SUBSTRATES
Evgeniy Kuzmin, Roman Petrov, Viktor Kiselev, Vasily Misilin, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov
- 18) DESIGN OF DIGITAL PHASE FILTERS USING MATLAB
Adriana Borodzhieva and Snezhinka Zaharieva
- 19) ALGORITHM FOR GENERATING HUMAN EYE IRIS TEXTURE CODE
Gergana Spasova
- 20) MAIN CHARACTERISTICS IN MEASURING TEAM COMMUNICATION AS A MEANS OF IMPROVING TEAM PERFORMANCE
Boris Gramchev, Svetlana Dimitrakieva and Svetlana Lesidrenska
- 21) THEORETICAL MODEL FOR EVALUATION OF THE ENERGY EFFICIENCY OF A HOME BREAD MAKER
Yanita Slavova and Mariya Marinova
- 22) LOW-COST REMOTE LAB ON RENEWABLE ENERGY SOURCES WITH A FOCUS ON STEM EDUCATION
Todor Yordanov, Nicolay Mihailov and Katerina Gabrovksa-Evstatieva
- 23) PROBLEMS WITH MEASUREMENT AT THE BORDERS BETWEEN ELECTRICITY TRANSMISSION AND DISTRIBUTION NETWORKS IN BULGARIA
Velichko Atanasov and Dimo Stoilov
- 24) FAULTS ANALYSIS OF THE ELECTRICAL EQUIPMENT IN A COMPANY FROM THE MINING INDUSTRY
Svetlana Tzvetkova, Yavor Lozanov and Angel Petleshkov
- 25) OXYHYDROGEN – AN OVERVIEW OF THE TECHNOLOGY, APPLICATION AND PRODUCTION FACTORS
Kalin Nikolov

12:30-13:30 LUNCH

**Friday, 30 June
Restaurant of the hotel**

POSTER SESSION 2

**Friday, 30 June
Conference block of the hotel
13:30-15:30**

Chairman: Yanita Slavova

- 1) APPLICATION OF CONVOLUTIONAL NEURAL NETWORKS AND SIGNAL PROCESSING TECHNIQUES TO IDENTIFY AND FILTER NOISE FROM ECG SIGNALS
Veselin Atanasov
- 2) COMPARISON OF HYBRID MODELS FOR PV POWER OUTPUT FORECASTING – APPLICATION TO ORYAHOVO, BULGARIA
Ludmil Stoyanov and Iva Draganovska
- 3) EXPERIMENTAL STUDY OF THE TEMPERATURE FIELD OF AN ELECTRONIC MODULE
Boris Evstatiev and Nadezhda Evstatieva
- 4) ALGORITHM FOR IRIS SEGMENTATION IN HUMAN EYE
Gergana Spasova
- 5) CONTROL ALGORITHM DEVELOPMENT OF ELECTRICAL DRIVES BY USING FINITE ELEMENT MODEL IN CONNECTED MATLAB/SIMULINK AND JMAG FRAMEWORK
György Istenes and Krisztián Horváth
- 6) WEB-BASED INFORMATION PORTAL FOR BUSINESS PARTNERS - BASIS FOR PROFESSIONAL GUIDANCE FOR GRADUATES
Ivan Evstatiev and Georgi Georgiev
- 7) DIGITALIZATION OF MARKETING PROCESSES IN A BANK THROUGH A CRM SYSTEM
Kiril Anguelov and Stanislav Bontchev
- 8) CHARGING STATION INFRASTRUCTURE AND STANDARDS FOR EVS-STATE, PROBLEMS AND FUTURE TRENDS
Andrei Borisov, Gergana Vacheva and Nikolay Hinov
- 9) STUDY OF THE LONGITUDINAL DYNAMIC PARAMETERS OF TWO-WHEELED ELECTRIC VEHICLES
Daniel Lyubenov, Georgi Kadikyanov, Seher Kadirova and Zhivko Kolev
- 10) EXPERIMENTAL STUDY OF INSULATION MATERIALS ELECTRICAL PROPERTIES IN LIQUID NITROGEN
Georgi Ivanov, Valentin Mateev and Iliana Marinova
- 11) STRING MONITORING SYSTEM IN A SMALL EXPERIMENTAL PHOTOVOLTAIC INSTALLATION
Nikolay Valov, Boris Evstatiev, Tsvetelina Mladenova, Vladislav Hinkov and Nicolay Mihailov
- 12) SIMULATION ENVIRONMENT FOR EXAMINING THE PAIRING METHODS IN BLE TECHNOLOGY
Aydan Haka, Yordan Yordanov, Diyan Dinev, Veneta Aleksieva and Hristo Valchanov

- 13) APPLYING A PROBLEM-BASED LEARNING IN THE TOPIC OF MODELLING OF THE POWER AND IMPROVEMENT THE VOLTAGE STABILITY OF WIND TURBINES
Vasil Ivanov, Ivaylo Stoyanov and Selahattin Kosunalp
- 14) ANALYSIS OF LORA RSSI DATA USING SIMULATIONS AND REAL DEVICES
Diyen Dinev, Aydin Haka, Veneta Aleksieva and Hristo Valchanov
- 15) A REMOTE LAB FOR EXPERIMENTAL STUDY OF DC MOTORS
Teodor Nenov, Boris Evstatiev and Seher Kadirova
- 16) COMPARATIVE ANALYSIS OF THE CHANGE OF TOUCH AND STEP VOLTAGES AT THE FLOW OF LIGHTNING CURRENTS IN EARTHING GRIDS WITH DIFFERENT MESH SIZES
Rositsa Dimitrova and Milena Ivanova
- 17) BIBLIOMETRIC ANALYSIS OF TECHNOLOGICAL AND EFFICIENCY DEVELOPMENT IN PHOTOVOLTAIC SYSTEMS
Svilen Simeonov, Angel Marinov and Svetlozar Zahariev
- 18) POWER-TO-HEAT IN DISTRICT HEATING SYSTEMS – A CASE STUDY FOR SOFIA'S DHC
Viktor Garbev
- 19) CONSIDERATIONS ON ELECTROMAGNETIC DISTURBANCES APPEARING IN ELECTRICAL ENERGY SMART METERING SYSTEMS
Silvia-Maria Diga, Nicolae Diga, Paul-Mihai Mircea, Ion Patru, Marian-Ştefan Nicolae and Ion Mircea
- 20) ENERGY-EFFICIENT DC MOTOR SPEED CONTROL USING THE GENETIC ALGORITHM
Nikolay Valov and Donka Ivanova
- 21) MODELING THE ENERGY STORAGE SYSTEM FOR DIFFERENT FORMS OF DISCHARGE CURRENT
Hristiyan Kanchev, Krasimir Kishkin and Dimitar Arnaudov
- 22) COMPARISON OF EXTENDED AND UNSCENTED KALMAN FILTERS WITH AND WITHOUT USING MECHANICAL MODEL FOR SPEED SENSORLESS CONTROL OF INDUCTION MACHINES
Krisztián Horváth
- 23) DIFFERENCE BETWEEN MEASURED AND REAL VALUE IN ILLUMINANCE ESTIMATION
Iva Petrinska and Dilyan Ivanov
- 24) PARAMETRIC 3D FEM ANALYSIS OF AN IRON-CORED COIL THERMAL PROPERTIES
Iлона Iatcheva and Denitsa Darzhanova
- 25) ROLE OF THE LEADER IN THE ANTI-CRISIS MANAGEMENT OF ENERGY SECTOR INDUSTRY
Marina Marinova-Stoyanova

15:30-16:00 COFFEE BREAK

Friday, 30 June

POSTER SESSION 3

Friday, 30 June
Conference block of the hotel
16:00-18:00

Chairman: Georgi Zhelev

- 1) DESIGN OF AN ELECTRONIC SYSTEM FOR CONTROL OF PV-POWERED IRRIGATION PROCESSES
Reni Kabakchieva, Boris Evstatiev and Katerina Gabrovska-Evstatieva
- 2) ESTIMATION OF GEOMAGNETICALLY INDUCED CURRENTS AFFECT ON POWER GRID BASED ON MEASUREMENTS OF MID-LATITUDE GEOMAGNETIC OBSERVATORIES
Kuralay Nurgaliyeva, Saule Mukasheva, Alexey Andreyev, Olga Sokolova, Nazugum Ussenova and Doszhan Zhunisbekov
- 3) APPLICATION OF HYBRID INVERTERS IN PHOTOVOLTAIC SYSTEMS
Valentin Milenov and Zahari Zarkov
- 4) APPLICATION OF IOT IN UPGRADING AUTOMATIC CONTROL OF ROPE-POLY-STRAP LIFTING SYSTEMS FOR CRANES AND ROTARY EXCAVATORS
Stanislav Georgiev, Petko Nedyalkov and Teodora Hristova
- 5) APPLICATION OF VIBRODIAGNOSTICS FOR DIAGNOSIS AND ANALYSIS OF DEFECTS CAUSED BY THE FLOW OF BEARING CURRENTS IN ELECTRICAL DRIVES
Dragomir Dragnev and Bohos Aprahamian
- 6) 3D PRINTED DESIGNS FOR PERMANENT MAGNETS FIXATION ON HIGH SPEED ROTORS
Martin Ralchev, Iliana Marinova and Valentin Mateev
- 7) PELTIER MODULE-BASED THERMOREGULATOR FOR LIQUID BIDIRECTIONAL TEMPERATURE CONTROL
Kaloyan Ivanov, Ivaylo Belovski and Anatoliy Aleksandrov
- 8) 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
Mario Karadjov and Teodora Hristova
- 9) APPROACHES FOR EFFICIENCY IMPROVEMENT OF THE CHARGING PROCESS IN AN AUTONOMOUS PHOTOVOLTAIC SYSTEM
Svetlozar Zahariev, Toncho Papanchev and Angel Marinov
- 10) APPLICATION OF PROJECT-BASED LEARNING IN THE DIGITAL ELECTRONICS COURSE FOR IMPLEMENTING BOOLEAN FUNCTIONS OF THREE ARGUMENTS WITH MULTIPLEXERS
Adriana Borodzhieva and Snezhinka Zaharieva
- 11) APPLICATION OF THE VIRTUAL LABORATORY FOR SCHOOLCHILDREN'S FUNCTIONAL LITERACY DEVELOPMENT
Olga Alekseyeva, Natalia Alexandrova, Tatyana Chugunova, Daria Burtseva, Roman Petrov, Tatyana Skvortsova, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov
- 12) IMPLEMENTATION OF A COMPLEX PLC-BASED CONTROL OF THE TECHNOLOGICAL SYSTEMS OF A SPORTS CENTER WITH A SWIMMING POOL
Bohos Aprahamian

- 13) EFFECT OF THE COLOR OF THE ROOM SURFACES IN A MACHINE HALL ON THE ENERGY EFFICIENCY OF THE LIGHTING INSTALLATION
Iva Petrinska
- 14) MAGNONIC COMMUTATOR ON MAGNETOELECTRIC GRADIENT STRUCTURE FOR ARTIFICIAL NEURAL NETWORKS
Aleksandr Nikitin, Roman Petrov, Viktor Kiselev, Vasily Misilin, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov
- 15) ON MAGNETIC INDUCTIONS IN A THREE-PHASE SPLIT-PHASE INDUCTION DEVICE
Marin Marinov, Georgi Zhelev and Maria Marinova
- 16) ELECTRIC OSMOSIS IN HEAT PIPES
Yuri Kiliba, Roman Petrov, Ksenia Petrova, Marina Khavanova, Slavcho Bozhkov, Ivan Milenov and Penko Bozhkov
- 17) BUSINESS PROCESS REENGINEERING MODEL FOR A WIND PARK
Svilen Simeonov and Vesela Dicheva
- 18) INVESTIGATION OF THE MAGNITUDE OF THE ELECTROMAGNETIC FIELDS IN SPECIFIC WORKING AREAS OF THE ELECTRICAL PERSONNEL ON VESSELS WITH ELECTRIC PROPULSION
Emil Barudov, Milena Ivanova, Vyara Vasileva and Miroslava Doneva
- 19) MODEL FOR REENGINEERING OF ENTREPRENEURIAL PROCESS IN ELECTRICAL ENGINEERING
Svilen Simeonov and Vesela Dicheva
- 20) TECHNICAL ECONOMIC ANALYSIS OF UTILIZATION OF TRANSFORMERS ALONG A LONG LOW VOLTAGE OVERHEAD POWER LINE.
Velichko Atanasov and Dimo Stoilov
- 21) SIMULATION AND EXPERIMENTAL STUDY OF STATIC TORQUE CHARACTERISTICS OF A 12/8 THREE-PHASE SRM
Dimitar Yankov, Tsvetana Grigorova and Ivan Maradzhiev
- 22) INVERTER MODEL OPTIMIZATION IN SIMULINK SOFTWARE ENVIRONMENT
Mladen Proykov and Neli Simeonova
- 23) INTEGRATING NARX NEURAL NETWORK WITH K-S TEST FOR ACCURATE PARTIAL DISCHARGE DETECTION IN TRANSFORMERS
Abdulla Alabbasi, Mohamed Khalil and Tony McGrai

19:00 DINNER

Friday, 30 June
Restaurant of the hotel

CLOSING CEREMONY

Saturday, 1 July
Hall 1
10:00

