



PAEP`20

CONFERENCE PROGRAM

IEEE 25th

International Conference on PROBLEMS OF AUTOMATED ELECTRIC DRIVE Theory and practice

Kremenchuk Mykhailo Ostrohradskyi
National University, Ukraine,
September 21-25, 2020

SCHEDULE OF CONFERENCE

Date	Duration		Event	Meeting ID
September 22 Tuesday	11:00- 13:00	PLENARY SESSION	Greeting to the conference participants Prof. Mykhaylo Zagirnyak Kremenchuk Mykhailo Ostrohradskyi National University. Ukraine	Zoom ID 76868535469 Password 1kHXmm
			Opening Remarks Prof. Vladimir Klepikov National Technical University "Kharkiv Polytechnic Institute". Ukraine	
			Greeting to the conference participants Ievgen Pichkalov Vice Chair / Chair Elect of IEEE Ukraine Section	
			Keynote Speech I Prof. Andrzej Krawczyk University of Economy and Innovations. Poland	
			Keynote Speech II Prof. Vladimir Klepikov National Technical University "Kharkiv Polytechnic Institute". Ukraine	
			Keynote Speech III Prof. Oleh Sinchuk Kryvyi Rih National University. Ukraine	
September 22 Tuesday	13:00- 15:00	ORAL SESSION	Section 2: "Energy efficient of electromechanical systems and converters of electric energy"	Zoom ID 76868535469 Password 1kHXmm
	15:30- 17:30		Section 3: "Control and diagnostics of electromechanical and conversion systems"	
September 22 Tuesday	13:00- 15:00	ORAL SESSION	Section 1, 4: "The theory of automated electric drive", "Simulation in electrical engineering"	Zoom ID 76505091245 Password Yx5Rst
	15:30- 17:30		Section 5: "Electrical Engineering Education and Education Technologies"	

SCHEDULE OF CONFERENCE

Date	Duration		Event	Meeting ID
September 23 Wednesday	10:00-13:00	POSTER SESSION	Section 2: "Energy efficient of electromechanical systems and converters of electric energy"	Zoom ID 76868535469
	14:00-17:00		Section 2: "Energy efficient of electromechanical systems and converters of electric energy"	Password 1kHXmm
September 23 Wednesday	10:00-14:00	POSTER SESSION	Section 6: "Modern systems of industrial electric drive and its components"	Zoom ID 76505091245 Password Yx5Rst
September 23 Wednesday	10:00-13:00	POSTER SESSION	Section 5: "Electrical Engineering Education and Education Technologies"	Zoom ID 73762847586 Password dL1KtS
	14:00-17:00		Section 5: "Electrical Engineering Education and Education Technologies"	73762847586 Password dL1KtS
September 24 Thursday	10:00-13:00	POSTER SESSION	Section 1, 3: "The theory of automated electric drive", "Control and diagnostics of electromechanical and conversion systems"	Zoom ID 76868535469 Password 1kHXmm
			Section 4: "Simulation in electrical engineering"	Zoom ID 76505091245 Password Yx5Rst
			Section 7: "Industrial application & Industry 4.0"	Zoom ID 73762847586 Password dL1KtS
	15:00-15:30	CLOSING CEREMONY	Prof. Oleksii Chorny. Kremenchuk Mykhailo Ostrohradskyi National University. Ukraine	Zoom ID 76868535469 Password 1kHXmm
September 25 Friday	10:00-12:00	CLOSING CEREMONY	PANEL DISCUSSION. SUMMING UP THE CONFERENCE	Zoom ID 76868535469 Password 1kHXmm

21.09.2020

TEST CONNECTION

[Zoom ID 768 6853 5469](https://zoom.us/j/76868535469)

Time: 9:00 - 13:00

ZOOM User Guideline

Download the ZOOM: <https://zoom.us/download>

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The most important function is Share Screen,
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22.09.2020

PLENARY SESSION

[Zoom ID 768 6853 5469](#)

Password: 1kHXmm

Time: 11:00 - 13:00

CHAIRMAN: Mykhaylo Zagirnyak

1	Prof. Mykhaylo Zagirnyak Rector of Kremenchuk Mykhailo Ostrohradskyi National University	Greeting to the conference participants
2	Prof. Vladimir Klepikov President UAEE, National Technical University "Kharkiv Polytechnic Institute". Ukraine	From the history of conferences "Problems of electric drive. Theory and practice"
3	Ievgen Pichkalov Vice Chair/ Chair Elect of IEEE Ukraine Section	Greeting to the conference participants
4	Prof. Andrzej Krawczyk University of Economy and Innovations, Lublin, Ewa Korzeniewska, University of Technology, Lodz, Jacek Stańdo, University of Technology, Lodz, Poland	Electromagnetic field in social perception – myths and conspiracy theories
5	Prof. Vladimir Klepikov President UAEE, National Technical University "Kharkiv Polytechnic Institute". Ukraine, Oleksii V Semikov, National Technical University "Kharkiv Polytechnic Institute". Ukraine	Modeling the dynamic processes of the electric drive of electric vehicle while wheels are slipping
6	Prof. Oleh Sinchuk, Igor Sinchuk, Kryvyi Rih National University, Ukraine	Theoretical foundations of developing the systems controlling power flows distribution among mining enterprises consumers
7	Prof. Oleksii Chorny Chair of the Organizing Committee. Kremenchuk Mykhailo Ostrohradskyi National University. Kremenchuk, Ukraine	Organizational issues of the conference

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ORAL SESSION

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Section2: Energy efficient of electromechanical systems and converters of electric energy

Time: 13:00 - 15:00

CHAIRMAN: Dmytro Mamchur, Rostyslav Yatsiuk

1	Sergei Peresada, Yevhen Nikonenko, Viktor Reshetnyk, Oleh Kiselychnyk	Dynamics of the synchronous motor based traction electromechanical systems with hybrid energy sources
2	Serhiy Buryakovskiy, Artem Maslii, Danylo Pomazan, Andrii Maslii, Oleksii Panchuk, Andriy Rybin	Study of Methods for Charging of Energy Storage Devices of Railway Traction Units
3	Roman Manko, Selma Čorović, Damijan Miljavec	Analysis and Design of Rotary Transformer for Wireless Power Transmission
4	Viktor Petrushin, Vladimir Vodichev, Yuriy Plotkin, Rostislav Yenoktaiev	Design Cyclic Criteria for the Development of Induction Motors for Various Operation Modes
5	Andrii Perekrest, Mykhailo Kushch-Zhyrko, Vita Ogar, Olga Zalunina, Oleksandr Bilyk, Yevheniia Chebotarova	Key performance indicators assessment methodology principles adaptation for heating systems of administrative and residential buildings
6	Dmitriy Kukhareno, Olha Novokhatko, Oksana Maznytska, Sergii Digtar, Oksana Sakun, Evgeniia Chernaiia	The Influence of an Electromagnetic Field on the Additional Increment of Biogas in a Power Plant
7	Oksana Dovgalyuk, Halyna Omelianenko, Roman Bondarenko, Kostiantyn Miroshnyk, Ivan Yakovenko, Sherali Saidov	Research of the Influence of Energy Storage Systems on the Electrical Distribution Networks Operations

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Section 3: Control and diagnostics of electromechanical and conversion systems

Time: 15:30 - 17:30

CHAIRMAN: Andrii Gladyr, Rostyslav Yatsiuk

1	Anton Maksakov, Stefan Palis	Koopman-based Optimal Control of Boost DC-DC Converter
2	Ihor Reva, Olexii Bialobrzheskyi, Andrii Lomonos	Single-phase transformer active and reactive power distribution with the inter-turn fault conditions and the eddy currents increase
3	Oleksii Sheremet, Oleksandr Sadovoi, Kateryna Sheremet, Yuliia Sokhina	Relay Control Systems with Discrete Time Equalizer
4	Victor Busher, Vasily Horoshko, Anatoly Shestaka, Lubov Melnikova	Fractional Integrated Dual Electromagnetic Retarder Controller for Tuning Internal Combustion Engines
5	Oleg Shutenko and Oleksii Kulyk	Comparative Analysis of Defect Type Recognition Using Different Methods of DGA Results Interpretation
6	Oleg Shutenko and Serhii Ponomarenko	Diagnostics of Transformer Oils Using the Multiple Linear Regression Model

22.09.2020

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[Zoom ID 765 0509 1245](#)

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**Section 1, 4: The theory of automated electric drive,
Simulation in electrical engineering**

Time: 13:00 - 15:00

CHAIRMAN: Viacheslav Prus, Nikita Rudenko

1	Sergei Peresada, Dmytro Rodkin, Viktor Reshetnyk	Theoretical And Experimental Comparison of The Standard And Feedback Linearizing Speed Controllers For Synchronous Motors
2	Andriy Lozynskyy, Orest Lozynskyy, Yaroslav Marushchak, Lidiya Kasha	Synthesis of Combine Feedback Control of Electromechanical System by Feedback Linerization Method
3	Rostyslav Yatsiuk, Serhii Husach	Research on Neural Network Vector Control System for Induction Motor
4	Badur Tchunashvili, Mamuka Kobalia, Alexander Petrosyan, Teimuraz Gamrekelashvili, Dimitri Kharebava	Improvement of the Physical Model of Power Supply Systems Dynamic Loads
5	Igor Petukhov, Konstantin Akinin, Anton Filominko	Influence of the magnetic field of the overhang parts of the micromotor winding on the rotor position sensor
6	Ihor Shchur, Yurii Biletskyi	Energetic Microscopic Representation (EMR) and Passivity-Based Control of Multi-Input Systems with Non-Linear Coupled Dynamics (PMSM control example)
7	Ihor Orlovskiy, Maciej Fajfer	The nonlinear choke parameter identification based on the modified artificial neural network

22.09.2020

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**Section 5: Electrical Engineering Education and
Education Technologies**

Time: 15:00 - 17:30

CHAIRMAN: Vicktor Busher, Nikita Rudenko

1	Larysa Butko, Volodymyr Maslak, Daria Vasylenko, Svitlana Fedorenko, Olga Litvinova	Facilitation Techniques for the Preparation of the Future Specialists in The Field of the Electrical Engineering
2	Viktoriia Shabunina, Oksana Tur, Viktor Sarancha	Foreign Language Communicative Competence as a Factor of Improving the Quality of Electrical Engineering Students Professional Training
3	Viktoriia Shabunina, Oksana Tur, Evgeniia Chernaiia, Anastasiia Tur	The IEEE Style: Peculiarities of the Format and Application Prospects
4	Volodymyr Osadchyy, Olena Nazarova	Laboratory Stand for Investigation of Liquid Level Microprocessor Control Systems
5	Agnieszka Drzymala, Ewa Korzeniewska	Economic and technical aspects of a hybrid single-family house heating based on photovoltaic and heat pump installation

23.09.2020

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Section 2: Energy efficient of electromechanical systems and converters of electric energy

Time: 10:00 - 13:00

CHAIRMAN: Sergiy Buryan, Mykhailo Kushch-Zhyrko

1	Serhii Bondarenko, Oleksii Bialobrzheskyi, Oleh Todorov	Power theories application rationality in series filter-compensating device control system
2	Olha Zinchenko, Olesya Finagina, Olena Prygodiuk	Introduction of the newest technologies at Ukrainian thermal power plants in the conditions market crisis
3	Olexander Shavolkin, Iryna Shvedchykova	Improvement of the three-phase multifunctional converter of the photoelectric system with a storage battery for a local object with connection to a grid
4	Vitaliy Kuznetsov, Mykola Babyak, Mykola Tryputen, Viktor Artemchuk, Yevheniia Kuznetsova, Maksim Kovzel	Ways to Improve Power Quality under the Conditions of Industrial Enterprises
5	Elena Avdieieva, Rostislav Stavinskiy, Oleksiy Sadovoy, Vyacheslav Shebanin, Larisa Vakhonina, Andrii Rudenko	Technological Parameters of the Magnetic Circuit of the Compact Transformer For Aggregate Electric Drive
6	Oleksiy Sadovoy, Elena Avdieieva, Rostislav Stavinskiy, Dmutro Babenko, Valerii Havrysh, Vitalii Mardziavko	Comparative Analysis of Options Indicators of Submersible Electromechanical System's Three-Phase Group Transformer
7	Viktoriya Kovalchuk, Tetyana Korenkova, Atef Saleh Almashakbeh	The Assessment of the Electrohydraulic Complex Power Controllability in the Event of an Emergency Shutdown of the Power Supply
8	Tetyana Korenkova, Viktoriya Kovalchuk, Mohamed Zaidan Qawaqzeh	The Assessment of the Electrohydraulic Complex Power Controllability in the Event of an Emergency Shutdown of the Power Supply
9	Matej Bereš, Andrii Kalinov	The Control Strategy for Railway Power Conditioner in the Reference Frame of Two-Wattmeter Method

23.09.2020

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Section 2: Energy efficient of electromechanical systems and converters of electric energy

Time: 10:00 - 13:00

CHAIRMAN: Sergiy Buryan, Mykhailo Kushch-Zhyrko

10	Mykhailo Artemenko, Yuri Kutafin, Valerii Mykhalskyi, Vasyl Chopyk, Ivan Shapoval, Serhii Polishchuk	The Control Strategy for Railway Power Conditioner in the Reference Frame of Two-Wattmeter Method
11	Leonid Mazurenko, Anatolii Kotsiuruba, Oleksandr Dzhura, Maksym Shykhnenko	A Wind-Hydro Power System Using a Back-To-Back PWM Converter and Parallel Operated Induction Generators
12	Dmitriy Alekseevskiy, Andriy Pozhuyev, Olena Mikhailutsa, Olga Pankova	Determination of the optimal parameters of the electromechanical system of a wind power plant with aerodynamic multiplication

23.09.2020

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Section 2: Energy efficient of electromechanical systems and converters of electric energy

Time: 14:00 - 17:00

CHAIRMAN: Svetlana Podnebennaya, Mykhailo Kushch-Zhyrko

1	Olexiy Iegorov, Olga Iegorova, Mykolay Kundenko, Andriy Milenin	Single-phase induction motors winding parameters optimization with maximum efficiency
2	Olexiy Iegorov, Olga Iegorova, Mykolay Kundenko, Natalia Potryvaieva	Ripple torque synchronous reluctance motor with different rotor designs
3	Iurii Zachepa, Oleksii Chorny, Andrii Perekrst, Nataliia Zachepa, Oksana Zbyrannyk, Ganna Mykhalchenko	Technical and Economic Assessment of Use Local Autonomous Sources of Energy Supply
4	Andrii Kutsyk, Mykola Semeniuk, Mykhailo Khai	An Experimental Study of a Voltage Control Quality of a Diesel-Engine Synchronous Generator with a Phase-Compounding Excitation System
5	Borys Kuznetsov, Ihor Bovdui, Tatyana Nikitina, Valerij Kolomiets, Borys Kobilyanskiy	Modeling and Active Shielding of Magnetic Field with Circular Space-Time Characteristic and with Different Shielding Coils Spatial Positions
6	Oleg Naboka	Modernization of the Control System of the Traction Converter Diesel Train DEL-02
7	Oleksandr Kovalov, Ihor Nazarenko, Serhii Kvitka, Yulia Postol, Olga Koval, Sergej Kurashkin	Electric Drive of Small-Sized Soil-Cultivating Motoblock
8	Volodymyr Chenchevoi, Iurii Zachepa, Olga Chencheva, Rostyslav Yatsiuk	Parameters of Guaranteed Self-Excitation of an Induction Generator for Autonomous Electric Power Sources
9	Mykola Ostroverkhov, Yevhen Monakhov, Vadim Chumack	Study of Robust Speed Control of Hybrid Excited Synchronous Machine with Field Weakening
10	Olga Zalunina, Alla Kasych, Vita Ogar, Andrii Perekrst, Serhii Serhiienko, Mykhailo Kushch-Zhyrko	Energy System Control Optimization Criterion Development
11	Viacheslav Prus, Oleksandr Dehtiarenko	Methods of Compensating for Changes of the Properties of Synchronous Motors in the Result of Aging by Frequency Controlled Electric Drive

23.09.2020

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Section 6: Modern systems of industrial electric drive and its components

Time: 10:00 - 14:30

CHAIRMAN: Mykola Anishchenko, Viktoriya Kovalchuk

1	Ihor Shchur, Valentyn Turkovskiy	Multilevel DC Link Inverter Fed BLDC Motor Drive with Modular Battery/Supercapacitor HESS for Electric Vehicle
2	Ján Molnár, Šimon Gans, Olena Slavko	Design and implementation self-balancing robot
3	Oleksandr Kurpe, Volodymyr Kukhar, Ruslan Puzyr, Vadym Burko, Elena Balalayeva, Eduard Klimov	Electric Motors Power Modes at Synchronization of Roughing Rolling Stands of Hot Strip Mill
4	Valerii Tytiuk, Oleksii Chorny, Berdai Abdelmajid, Zhanna Rozhnenko, Mila Baranovska, Viktoriya Saravas	Soft Starters of Powerful Electric Motors and Economic Aspects of their Application
5	Nikolay Buryk, Nikolay Ostroverkhov	Control System with Field Weakening of Synchronous Motor Drive
6	Mykola Pechenik, Serhii Burian, Hanna Zemlianukhina, Heorhii Voyat	Analysis of the Given Law Accuracy of a Mine Skip Lifting Unit Movement Using a Vector-Controlled Electric Drive System
7	Peter Hrabovský, Ján Molnár, Michal Voloch, Oleksii Kravets	Design and realization of a device for the production of plastic filament for 3D FDM printer
8	Branislav Fecko, Tibor Vince, Konstyantyn Pushkar, Mariia Maliakova	Design and Realization of General Purpose Movement Actuator
9	Dmitro Shareyko	Adaptive Control In Complete Electric Drives
10	Yaroslav Paranchuk, Oleksiy Kuznyetsov	Synthesis of the Intelligent Position Controller of an Electromechanical System
11	Oksana Khrebtova, Iurii Zachepa, Nataliia Zachepa, Ganna Mykhalchenko	Formation of Formation of Starting Torque of Double-Fed Induction Motor
12	Yuriy Shurub, Alla Dudnyk, Viktor Vasilenkov, Dmytro Lavinskiy	Application of a Kalman filter in scalar form for discrete control of electromechanical systems
13	Volodymyr Kolosyuk, Serhii Sukach, Dmytro Rieznik, Andriy Kolosyuk	Conditions for Increasing User's Active Power in Intermittent Duty Cycle Operation
14	Petro Andrienko, Mykhailo Kotsur, Danil Andrienko, Andrey Andrienko, Olga Nemykina, Olexander Blyzniakov	Synchronizing Properties of Impulse-Current Controlled Electric Drive of Coordinated Rotation in the Circuit of Electrically Coupled Rectifiers of the Rotor

23.09.2020

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Section 5: Electrical Engineering Education and Education Technologies

Time: 15:00 - 17:30

CHAIRMAN: Vita Ogar, Olha Herasimenko

1	Olena Sushchenko, Iryna Trunina, Olena Stryzhak, Serhii Sushchenko	Implementing Competency-Based Education for the Engineering Specialties' Students
2	Olena Sushchenko, Olena Akhmedova, Olena Stryzhak	The Use of Interactive Training Technologies in Teaching Academic Disciplines for Students of Electrical Engineering Specialities
3	Olena Kryvylova, Natalya Sosnickaya	Formation of social skills as a step towards competitiveness in the labor market of specialists of energy profile
4	Mykola Lazariev, Anatolii Tarasenko, Hanna Mosiienko, Iryna Soloshych	Development of complex models of elements of the system of professionally-oriented content of electrical engineering training
5	Iryna Shvedchikova, Iryna Soloshych, Natalia Kononets, Maryna Grynova	Creation of electronic educational resources for resource-oriented training of electrical engineering students
6	Tibor Vince, Stanislav Makiš, Matej Bereš, Dmytro Mamchur	PLC Universal Hardware in the Loop System Based on ATmega2560
7	Iryna Trunina, Inna Khovrak, Maryna Bilyk	Academic entrepreneurship in Ukraine: determinants of development and performance indicators
8	Oleksiy Chorny, Larysa Herasymenko, Liudmyla Zelenska	Diagnostic Assessment of The Competency Maturity of Electrical Engineers Through Profession-oriented problems
9	Andrey Pochtovyuk, Kateryna Pryakhina, Maryna Bilyk	Formation of organizational and managerial competence of electrical engineers
10	Mykhaylo Zagirnyak, Volodymyr Luhovyi, Serhii Serhiienko, Vita Ogar, Zhanneta Talanova	The Standardization of the Higher Engineering Education in Ukraine in the Light of American and European Experience
11	Mykhaylo Zagirnyak, Dmytro Mamchur, Andrii Gladyr	Digital Competences Enhancement for Electromechanic Specialists: dComFra Approach

23.09.2020

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Section 5: Electrical Engineering Education and Education Technologies

Time: 14:00 - 17:00

CHAIRMAN: Inna Khovrak, Olha Herasimenko

1	Pavel Lushyn, Yana Sukhenko, Oksana Davydova	Particularities of students' educational trajectories and "projectories": a psychosemantic dimension
2	Mykola Anishchenko, Valentyn Zaleskyi	Pocket Labs development using NI myDAQ data acquisition device
3	Mykhaylo Zagirnyak, Andrii Gladyr , Viktoriia Nozhenko	Results and Problems of International Academic Exchanges
4	Andrii Pochtovyuk, Ievgen Buriak, Mariia Buriak, OksanaZakharova	High Engineering Education as a Component of the System of Human Capital Development
5	Ksenia Sizova, Svitlana Soshenko, Ruslana Bilous, Anfisa Shmeleva, Serhii Serhiienko, Mykola Nesen	Mobile Technologies in the Electrical Engineers Training
6	Lesia Sakun, Svitlana Pochtovyuk, Larysa Shevchuk, Oleksandr Bilyk	Introduction of Innovative Educational Methods in the organization of the Education process of Electrical Engineers
7	Olha Chencheva, Volodymyr Chenchevoi, Tamara Poyasok, Olena Bespartochna	Application of the Augmented Reality Technology to Training Future Electrical Engineers
8	Olga Litvinova, Svitlana Fedorenko, Larysa Butko, Mykola Nesen	Empirical Study of Soft Skills Development In Higher Education Graduates Qualification Electrician
9	Olena Titova, Natalya Sosnickaya	The Engineer's Creative Potential Scales
10	Alla Kasych, Valentyna Glukhova, Olga Zalunina	Directions and Conditions of Improving Educational Programs in Electrical Engineering
11	Oleh Todorov, Olexii Bialobrzheskyi, Serhii Bondarenko	Virtual complex prototype for metering a three-phase network electric power quantity and quality
12	Nataliia Shalimova, Denys Zagirniak	The Education Impact on "Expectations Gap" in Auditing and Other Assurance in Specific Industries
13	Mykola Mukha, Alla Drankova	Laboratory complex for the shipboard variable frequency drives researches

24.09.2020

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**Section 1, 3: The theory of automated electric drive,
and diagnostics of electromechanical and conversion systems**

Time: 10:00 - 13:00

CHAIRMAN: Valerii Tytiuk, Oleksandr Somka

1	Yaroslav Kyrylenko, Yuriy Kutovoj, Ihor Obruch, Tatiana Kunchenko	Neural network control of a frequency-regulated electric drive of a main electric locomotive
2	Borys Kuznetsov, Ihor Bovdui, Tatyana Nikitina, Borys Kobylanskyi, Valerij Kolomiets	Multiobjective Parametric Synthesis of Robust Control by Rolling Mills Main Electric Drives
3	Viktoriia Nozhenko, Dmytro Rodkin, Valerii Tytiuk, Kostyantyn Bohatrov, Evgeniia Burdilna, Oleksandr Ilchenko	Features of the Control Actions Formation During the Start-up of Vibration Machines at Passing of the Resonance Zone
4	Stiliyan Nikolov, Reneta Dimitrova, Lubomir Dimitrov	Mathematical M model of Displacements in Tools Used in Boring Operations on Machining Centers
5	Oleksandr Derets, Hanna Derets	Adaptive Algorithm for Optimization in Speed of Third Order Sliding Mode Control Systems
6	Oleksandr Derets, Oleksandr Sadovoi	Structural Synthesis of an Acceleration Observer with Sliding Mode Control for Precision Electric Drives
7	Roman Volianskyi, Oleksandr Sadovoi, Oleg Klyuyev, Iurii Shramko, Yuliia Sokhina, Nina Volianska	Anti-swing Control System for the One Class of Underactuated Dynamic Objects
8	Bohdan Vorobiov, Dmitry Pshenichnikov	Modeling of the Operation of an Asynchronous Electric Drive of an Electric Vehicle in Slip Modes
9	Vladimir Burlaka, Sergey Gulakov, Svetlana Podnebennaya	Motor Protection Device For Wound Rotor Induction Machines
10	Yevgeniy Trotsenko, Olexandr Protsenko, Vladislav Mykhailenko, Serhii Burian	Effect of Direct Voltage Ripples on Partial Discharge Activity in Solid Dielectric
11	Volodymyr Nykyforov, Oksana Sakun, Mykhailo Yelizarov, Olga Chorna	Control of Magnetic Induction of an Induction Motor Magnetic Field on the Basis of Biological Express Systems

24.09.2020

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**ControlSection 1, 3: The theory of automated electric drive,
and diagnostics of electromechanical and conversion systems**

Time: 10:00 - 13:00

CHAIRMAN: Valerii Tytiuk, Oleksandr Somka

12	Vyacheslav Shebanin, Igor Atamanyuk, Yuriy Kondratenko	Synthesis of Control Systems on the Basis of a Canonical Vector Decomposition of Random Sequences
13	Mykola Antonov and Iurii Krysan	An Electronic Key with Galvanic Isolation for Monitoring the State of Elements in Energy Converters
14	Serhii Husach, Rostyslav Yatsiuk, Dmytro Mamchur	Induction Motors Operation Condition Evaluation and Damage Degree Estimation Methods
15	Volodymyr Myrhorod, Iryna Hvozdeva, Vitalii Budashko	Multi-parameter Diagnostic Model of the Technical Conditions Changes of Ship Diesel Generator Sets
16	Boris Gorkunov, Sergii Lvov, Yevhen Borysenko, Vira Shamardina, Abdel Nour Saliba, Olga Chorna	Application of electromagnetic transducer for noncontact monitoring of shaft torque in electromechanical systems
17	Viacheslav Prus	An integrated approach to the analysis of the aging of electric machines
18	Vladimir Klepikov, Yevhenii Sakun	Speed and Angle Synchronisation Control of Two-Speed Electric Vehicle Transmission
19	Kostiantyn Kuchynskiy, Viacheslav Prus	The distribution of the magnetic field in the rotors of synchronous machines of various designs at large slides
20	Andrii Kipenskyi, Serhii Kryvosheiev, Ievgen Korol, Yurii Voitovych	Control of the pulse converter in case the presence of input perturbations and current overloads in the output circuit

24.09.2020

POSTER SESSION

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Section 4: Simulation in electrical engineering

Time: 10:00 - 13:00

CHAIRMAN: Serhii Kovbasa, Yevheniia Chebotarova

1	Natalia Sosnytska, Mykola Morozov, Larysa Khalanchuk	Modeling of electron state in quantum dot structures
2	Mykola Tryputen, AlisaKuznetsova, Oleksii Chorny, Kovzel Maksim, Vitaliy Kuznetsov, Maksym Tryputen	Developing Stochastic Model of a Workshop Power Grid
3	Marek Pavlík, Andrii Gladyr, Ján Zbojovský	Comparison of measured and simulated data of shielding effectiveness, reflection and absorption of electromagnetic field
4	Mykhailo Kotsur, Dmytro Yarymbash, Igor Kotsur, Sergiy Yarymbash	Determination of Stray-Load Losses from Field Current Ripple of a Synchronous Machine by Field Simulation Methods
5	Mykhailo Kotsur, Dmytro Yarymbash, Yulia Bezverkhnia, Igor Kotsur	Determination of a Busbar's Parameters by Electromagnetic Field Simulation
6	Nataliia Zaiets, Igor Kondratenko, Volodimir Shtepa	Developing the Energy Management Model of the Enterprises of Continuous Production
7	Mykhailo Poliakov, Vladimir Vasilevskij, Petr Andrienko	Layered model of the consumption of the insulation resource of the windings of a power oil-immersed transformer
8	Gennadii Martynenko	Practical Application of the Analytical Method of Electromagnetic Circuit Analysis for Determining Magnetic Forces in Active Magnetic Bearings
9	Gennadii Martynenko, Volodymyr Martynenko	Rotor Dynamics Modeling for Compressor and Generator of the Energy Gas Turbine Unit with Active Magnetic Bearings in Operating Modes
10	Dmytro Yarymbash, Mykhailo Kotsur, Sergiy Yarymbash, Iryna Kylymnyk	An Accuracy Enhancement of Parameters Calculation Of The Jiles-Atherton Model
11	Milan Guzan, Adam Fehér, Tibor Vince, Matej Bereš, Andrii Kalinov	Creating an Application in MATLAB to Visualize Changes in Statistical Parameters
12	Milan Guzan, Adam Fehér, Patrik Jacko, Jozef Dziak, Mariia Maliakova	Modeling of Resonant Circuits in Excel

24.09.2020

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Section 4: Simulation in electrical engineering

Time: 10:00 - 13:00

CHAIRMAN: Serhii Kovbasa, Yevheniia Chebotarova

13	Volodymyr Diordiiev, Andrii Sabo, Gennadii Novikov, Anton Kashkarov	Simplified methodology for choosing a driver for technical startup in agriculture
14	Olena Nazarova, Volodymyr Osadchyy, Victor Brylysty	Research on the Influence of the Position of the Electric Vehicles Mass Center on Their Characteristics
15	Sergii Shlyk, Viacheslav Dragobetsky, Oleg Trotsko, Olha Chencheva, Dmytro Klets	The explosive expansion of electrical equipment housings with variable curvature

24.09.2020

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Section 7: Industrial application & Industry 4.0

Time: 10:00 - 13:00

CHAIRMAN: Olga Chencheva, Evgeny Lashko

1	Igor Nevludov, Oksana Sychova, Anatoliy Andrusevich, Sergiy Novoselov, Denis Mospan, Vladyslav Mospan	Simulation of the Sensor Network of Base Stations in a Local Positioning System in Intelligent Industries
2	Valerii Havrysh, Vasyl Hruban, Oleksiy Sadovoy, Ilona Batsurovska, Valentyna Fedorchuk, Katerina Yablunovskaya	Energy Saving Technologies for Automatical Move Irrigation Equipment
3	Patrik Jacko, Oleksii Kravets	Increase the accuracy of signal acquisition via External Interleaved mode
4	Volodymyr Dragobetskii, Viktoriia Neviudova, Dmytro Moloshtan, Denis Mospan, Vladyslav Mospan, Viktor Kotsyuba	Possibilities of the Electric Drive in the Implementation of the Intensifying Factors in the Plastic Deformation of Metals
5	Sergii Chernenko, Eduard Klimov, Andrii Chernysh, Volodymyr Shapko, Olexandr Kharkov	Mathematical modeling of the spatial steering linkage of a wheeled vehicle
6	Tetiana Haikova, Ruslan Puzyr, Dmytro Savelov, Volodymyr Dragobetsky, Roman Argat, Roman Sivak	The research of the morphology and mechanical characteristics of electric bimetallic contacts
7	Dmytro Marchenko	Development of technology and research of method of electric hydropulse hardening of machine parts
8	Olga Maslak, Natalya Grishko, Mariya Maslak, Yurii Shevchuk	Tool development for the assessment of the favorable environment in the framework of the investment policy formation for the electrotechnical industry enterprises
9	Olga Maslak, Valeriy Danylko, Maksym Skliar	Automation and digitalization of quality cost management of power engineering enterprises

24.09.2020

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Section 7: Industrial application & Industry 4.0

Time: 10:00 - 13:00

CHAIRMAN: Olga Chencheva, Evgeny Lashko

10	Alexander Shapoval, Ruslana Kantemyrova, Oleg Markov, Andrii Chernysh, Roman Vakulenko, Iurii Savchenko	Technology Of Production Of Refractory Composites For Plasma Technologies
11	Volodymyr Dragobetskii, Oleksiy Pavlenko, Elena Parschina, Oleg Markov, Anna Gurenko, Iurii Savchenko	Comparative Assessment of Multilayer Waveguide Manufacturing Technologies
12	Natalia Napkhonenko, Marina Karayeva, Dmytro Moloshtan, Andrey Pochtovyuk	Theoretical Basis for Assessing the Quality of Freight Forwarding Services of the Terminal

24.09.2020

**PLENARY SESSION
CLOSING CEREMONY**

[Zoom ID 768 6853 5469](#)

Password: 1kHXmm

Time: 15:00 - 15:30

CHAIRMAN: Oleksii Chorny, Serhii Serhiienko, Volodymyr Chenchevoi

Prof. Oleksii Chorny,

Chair of the Organizing Committee,
Head of the Institute of Electromechanics,
Energy Saving and Automatic Control Systems.
Kremenchuk Mykhailo Ostrohradskyi National
University (Kremenchuk, Ukraine)

The results of PAEP-2020 conference

25.09.2020

**PANEL DISCUSSION.
SUMMING UP THE CONFERENCE**

[Zoom ID 768 6853 5469](#)

Password: 1kHXmm

Time: 10:00 - 12:00

CHAIRMAN: Oleksii Chorny, Serhii Serhienko, Volodymyr Chenchevoi

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