



# CONFERENCE PROGRAM

IEEE Kremenchuk University Week:  
2022 IEEE 4th International Conference on  
**MODERN ELECTRICAL  
AND ENERGY SYSTEM**

**MEES`22**

Kremenchuk Mykhailo Ostrohradskyi  
National University, Ukraine,  
October 20-22, 2022

## SCHEDULE OF CONFERENCE

Date	Duration		Event	Meeting ID
October 20 Thursday	10.30-12.00	PLENARY SESSION	Opening Remarks Mykhaylo Zagirnyak IEEE Senior member, Chair of Honorary Committee, Rector of Kremenchuk Mykhailo Ostrohradskyi National University, Ukraine	<a href="#">Zoom ID</a> 773 670 1972  <a href="#">Password</a> <a href="#">MEES2022</a>
			Greeting to the conference participants Vladimir Klepikov President of UAEE, National Technical University «Kharkiv Polytechnic Institute», Ukraine	
			Greeting to the conference participants Ievgen Pichkalov Vice Chair/Chair Elect of IEEE Ukraine Section	
			Greeting to the conference participants Andrzej Krawczyk Polish Society of Applied Electromagnetism, Warsawa, Poland	
			Keynote Speech I Valentyna Shevchenko National Technical University «Kharkiv Polytechnic Institute», Ukraine	
			Keynote Speech II Borys Kuznetsov, Ihor Bovdui A. Pidhornyi Institute of Mechanical Engineering Problems of the National Academy of Sciences of Ukraine	
October 20 Thursday	12.30-14.30	ORAL SESSION	Industrial electronics	<a href="#">Zoom ID</a> 773 670 1972  <a href="#">Password</a> <a href="#">MEES2022</a>
October 20 Thursday	15.00-17.00	ORAL SESSION	Industrial Informatics & Industry Application	<a href="#">Zoom ID</a> 773 670 1972  <a href="#">Password</a> <a href="#">MEES2022</a>
October 21 Friday	10.00-11.00	ORAL SESSION	Power Electronics	<a href="#">Zoom ID</a> 773 670 1972  <a href="#">Password</a> <a href="#">MEES2022</a>
	11.00-13.00		Power & Energy Systems	
October 21 Friday	14.00-17.00	POSTER SESSION	Industrial Informatics & Industry Application	<a href="#">Zoom ID</a> 674 540 1553  <a href="#">Password –</a> <a href="#">MEES2022</a>

October 21 Friday	14.00-16.00	POSTER SESSION	Electrical and Power Engineering Education	<a href="#">Zoom ID</a> 256 118 3340 <a href="#">Password –</a> <a href="#">MEES2022</a>
October 22 Saturday	10.00-12.00	POSTER SESSION	Industrial electronics	<a href="#">Zoom ID</a> 674 540 1553 <a href="#">Password –</a> <a href="#">MEES2022</a>
October 22 Saturday	10.00-11.30	POSTER SESSION	Power & Energy Systems	<a href="#">Zoom ID</a> 256 118 3340 <a href="#">Password –</a> <a href="#">MEES2022</a>
October 22 Saturday	11.00-13.00	ORAL SESSION	Electrical and Power Engineering Education	<a href="#">Zoom ID</a> 773 670 1972 <a href="#">Password</a> <a href="#">MEES2022</a>
October 22 Saturday	13.00-14.30	DISCUSSION	PANEL DISCUSSION. SUMMING UP THE CONFERENCE	<a href="#">Zoom ID</a> 773 670 1972 <a href="#">Password</a> <a href="#">MEES2022</a>
October 22 Saturday	14.30-15.00	CLOSING CEREMONY	Oleksii Chorny Chair of Organizing Committee, Kremenchuk Mykhailo Ostrohradskyi National University. Ukraine	<a href="#">Zoom ID</a> 773 670 1972 <a href="#">Password</a> <a href="#">MEES2022</a>

**19.10.2022**

**TEST CONNECTION**

[Zoom ID 773 670 1972](https://zoom.us/j/7736701972)

Password – MEES2022

Time: 12:00-13:00

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20.10.2022

## PLENARY SESSION

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Time: 10.30-12.00

CHAIRMAN: Mykhaylo Zagirnyak, Oleksii Chorny

1.	<b>Mykhaylo Zagirnyak</b> IEEE Senior member, Chair of Honorary Committee, Rector of Kremenchuk Ostrohradskyi National University. Ukraine	Opening Remarks
2.	<b>Vladimir Klepikov</b> President of UAEE, National Technical University «Kharkiv Polytechnic Institute». Ukraine	Greeting to the conference participants
3.	<b>Ievgen Pichkalov</b> Vice Chair/Chair Elect of IEEE Ukraine Section	
4.	<b>Andrzej Krawczyk</b> Polish Society of Applied Electromagnetism. Warsawa, Poland	
5.	<b>Valentyna Shevchenko</b> Kremenchuk Mykhailo National Technical University «Kharkiv Polytechnic Institute». Ukraine	Determination of the permissible range of turbogenerators non-nominal operating modes at thermal power plants
6.	<b>Borys Kuznetsov, Ihor Bovdui</b> A. Pidhornyi Institute of Mechanical Engineering Problems of the National Academy of Sciences of Ukraine	Active shielding of magnetic field in residential buildings closed to overhead power lines
7.	<b>Oleksii Chorny</b> Chair of Organizing Committee, Head of the Institute of Education and Science in Electrical Engineering and Information Technologies, Kremenchuk Mykhailo Ostrohradskyi National University. Ukraine	Organizational issues of the conference

ORAL SESSION

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Industrial electronics

Time: 12.30-14.30

CHAIRMAN: Umirbek Umbetov, Viacheslav Prus, Oleksandr Somka

1.	Oleksandr Derets, Oleksandr Sadovoi and Hanna Derets	Sliding mode aperiodization with the $n$ -i switching method by modifying the quasi-optimal motion profile
2.	Iurii Zachepa and Nataliia Zachepa, Mykola Antonov, Andrii Pyrozhok	Starting system of asynchronous electric drive with dynamic torque control powered by an autonomous energy source
3.	Kostyantyn Horiashchenko, Serhiy Horiashchenko, Ievgeniia Golinka and Georgy Drapak	Development of a synchronous motor with frequency control system for light industry equipment
4.	Mykola Ostroverkhov, Valeriy Chibelis and Maxim Falchenko	Synthesis of control algorithms for a permanent magnet synchronous motor in sliding mode
5.	Sergei Peresada, Dmytro Rodkin and Yevhen Nikonenko	Sensorless control of interior permanent magnet synchronous motors: Estimated reference frame approach
6.	Valerii Tytiuk, Oleksii Chorni, Victor Busher, Tatyana Siverskaya, Mila Baranovskaya and Vitalii Kuznetsov	Mathematical model of a three-phase induction motor with asymmetrical twelve-zone stator windings
7.	Stanislav Tolmachev and Oleksandr Il'chenko	Calculation of effective magnetic properties rod matrices of high-gradient magnetic separators
8.	Roman Voliansky, Nataliya Krasnoshapka, Iurii Shramko, Oleksii Statsenko, Oleksandr Sadovoi and Felix Andika Dwiyanto	The interval perturbed motion of the generalized nonlinear dynamical plants
9.	Majhar Pathan, Sunita Badave, Imran Ali. Syed. Syed and Sriram Mishra	Stabilization of Induction motor with fuzzy controlled floating DC link converter during grid voltage disturbances
10.	Serhii Buriakovskiy, Larysa Asmolova, Ihor Obruch, Artem Maslii and Danylo Pomazan	Simulation modeling of a hybrid diesel locomotive power plant based on a free-piston engine
11.	Gennadii Martynenko, Volodymyr Martynenko and Iryna Pidkurkova	Parametric Numerical Analysis of Restoring Magnetic Forces Dependences in Radial Active Magnetic Bearings with a Given Control Law

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**Industrial Informatics & Industry Application**

Time: 15.00-17.00

CHAIRMAN: Tibor Vince, Andrii Perekrest, Viktoriia Kulynych

1.	Igor Lutsenko, Svetlana Koval, Elena Vikhrova, Iryna Oksanych and Bogdan Gladushkin	The calculating method of operation mode efficiency for continuous dynamic system from a cybernetic view point
2.	Olena Chala, Artem Bronnikov, Igor Nevludov and Denis Mospan	The use of neural networks for the technological objects recognition tasks in computer-integrated manufacturing
3.	Artem Zaliatov and Maryna Baikova	The development of the automatic control system for the production process of the heating the bandages of large composite rolling rolls to be dismantled
4.	Valeriy Sydorenko, Yurii Rychok and Maryna Oladko	Method for evaluation the pattern of Internet service customers based on stylometric analysis of their text content
5.	Serhii Vladov, Yurii Shmelov, Ruslan Yakovliev, Marina Petchenko and Svitlana Drozdova	Neural network method for helicopters turboshaft engines working process parameters identification at flight modes
6.	Oleksandr Salenko, Mykhaylo Zagirnyak, Vadym Orel, Sergii Shlyk and Viktoriia Kulynych	FDM products strength increasing using the algorithmic means of 3-D printers working
7.	Marta Kania, Ewa Korzeniewska, Rafał Zawiślak, Alyona Nikitina and Andrzej Krawczyk	Wearable solutions for the sign language
8.	Yulia Salenko, Alexander Maslov, Roman Vakulenko and Vladyslav Zaporozhets	Research on electromechanical drive dynamics for the single-piston concrete pump
9.	Andrii Perekrest, Dmitriy Kukhareenko, Mykhailo Kushch-Zhyrko and Kyrylo Vadurin	Software and hardware solution of a complex tumor visualization system for use in a medical institution of an industrial enterprise
10.	Igor Konokh, Nataliia Istomina, Stanislav Sribnyi and Vitalii Naida	Designing the cybernetic model of ore grinding technological operation
11.	Roman Arhat, Denys Havrylov, Viktor Vorobyov, Vladimir Drahobetskyi, Roman Haikov and Viktoriya Kulynych	Connecting elements for electric cables with a hollow section

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**Power Electronics****Time: 10.00-11.00****CHAIRMAN: Iurii Zachepa, Andrii Gladyr**

1.	Ihor Shchur and Rostyslav-Ivan Kuzyk	Mode decomposition passivity-based control of bidirectional Zeta-SEPIC DC-DC converter
2.	Maxim Oliynichenko, Oleksii Bialobrzheskyi, Ihor Reva, Oleh Todorov, Maksim Bezzub and Artur Postil	Investigation of the voltage distortion effect by external consumers on the power consumption mode of a controlled three-phase rectifier
3.	Vitalii Atamaniuk, Oleksiy Kuznyetsov and Hanna Lunkova	Driving the PWM-controlled system to monostable behavior by periodic modulation of a carrier signal
4.	Maksim Bezzub, Olexii Bialobrzheskyi, Ihor Reva and Oleh Todorov	The effect frequency characteristics of the series active filter with a voltage-positive transformer power circuit on quality of filtering
5.	Alena Dyadenchuk, Natalia Domina and Roman Oleksenko	Simulation of solar element characteristics based on porous silicon

**Power & Energy Systems****Time: 11.00-13.00****CHAIRMAN: Galina Sivyakova, Oleksii Bialobrzheskyi, Olha Chencheva**

1.	Andriy Pavlov, Oleksandr Moroz, Oleksandr Miroshnyk, Anton Mishyn, Denys Myrhorod and Volodymyr Pazyi	Forecasting of SPP generation at different stages of its existence using the example of the 2.3 MW plant in the Kharkiv region of Ukraine
2.	Petro Andrienko, Dmytro Alekseevskiy, Olexander Blyzniakov, Olga Nemykina and Igor Nemudriy	Enhancement of the effectiveness of wind turbines with aerodynamic multiplication
3.	Klemen Sredenšek, Miralem Hadžiselimović, Bojan Štumberger and Sebastijan Seme	Modeling and experimental evaluation of lithium iron phosphate battery
4.	Roman Kryshchuk, Oleksiy Karlov and Igor Kondratenko	Influence of winding dimensions on electrical parameters of the induction system with a magnetic core for magneto-impulse processing of thin non-magnetic metal sheets



**21.10.2022**

5.	Iryna Trunina, Kateryna Pryakhina and Serhii Yakymets	Research on the development of renewable energy sources in the world due to the war in Ukraine
6.	Oleh Todorov, Olexii Bialobrzheskyi, Ihor Reva and Maksim Bezzub	Measurement monitoring possibility of 6/10 kV cable lines insulation state on the instantaneous power analysis
7.	Dmytro Danylchenko, Stanislav Fedorchuk, Oleksandr Kulapin, Andriy Ivakhnov, Vladyslav Hrytsenko and Kseniia Minakova	Research on demographically based electricity demand schedules for the potential of demand management
8.	Olexander Shavolkin, Iryna Shvedchukova, Julia Romanchenko, Ruslan Marchenko and Serhii Yakymets	Installed power of the grid-tied photovoltaic system with battery for self-consumption of the local object
9.	Oleksii Zurian	Effect of anthropogenic relief on the efficiency of hydrothermal circulation heat pump system
10.	Mykhailo Artemenko, Yurii Kutafin, Vasyl Chopyk, Valerii Mykhalskyi, Ivan Shapoval and Serhii Polishchuk	Measuring of inactive powers in three-phase power supply system
11.	Svitlana Alyokhina, Igor Nevliudov and Yurii Romashov	The feed water level improved automated control for steam generators of nuclear power plants

## POSTER SESSION

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### Industrial Informatics & Industry Application

Time: 14.00-17.00

CHAIRMAN: Andrii Perekrest, Viktoriia Kulynych

1.	Serhii Pohasii, Roman Korolev, Bohdan Vorobiov, Mykhailo Bril, Olena Serhiienko and Stanislav Milevskyi	UAVs intercepting possibility substantiation: economic and technical aspects
2.	Iurii Savchenko, Oleksandr Shapoval, Volodymyr Bakharev, Tatiana Chupilko, Maryna Babaryka and Natalija Dzyna	Mathematical model of rheological processes of composite materials deformation
3.	Oleksandr Lyamar and Dmytro Marchenko	Prospects for the application of restoring electric arc coatings in the repair of machines and mechanisms
4.	Volodymyr Zahorianskyi, Mykola Moroz, Olena Zahorianska and Olena Moroz	Modeling the optimal composition of the transport-technological complex with minimizing energy costs

5.	Denis Mospan, Alexey Yurko, Viktoriia Nevliudova, Dmitriy Kukhareno and Viktor Gladkyi	Possibility analysis of preserving the st segment shift when approximated by gaussian pulses
6.	Tetiana Haikova, Serhii Chernenko, Eduard Klimov, Andrii Chernysh and Mykhailo Burlyga	Increasing the energy efficiency of sheet bending equipment
7.	Oleksandr Tsymbal and Artem Bronnikov	Collaborative decision-making models for flexible manufacturing robotic system
8.	Andrii Samoilov, Nataly Rylova and Vladislav Artemenko	Increase quality of GaAs monocrystals for solar energy devices due to control of dislocations using algorithm of detection of contour lines of etching pits on surface wafer semiconductor
9.	Alla Kasych, Valentyna Glukhova, Nataliia Buhas and Tetiana Nefedova	Key factors of production robotization and its impact on labor productivity
10.	Alla Okhrimenko, Myroslava Bosovska, Liudmyla Bovsh and Margaryta Boiko	Models of the Industrial Revolution 5.0
11.	Oleg Zhulkovski, Iurii Savchenko, Inna Zhulkovska, Ivan Petrenko, Olena Davitaia and Andrii Titov	Features of mathematical simulation of the processes of combined heat transfer in waveguides
12.	Bohdan Trembach, Oleksii Balenko, Marina Markova, Veronika Brechko, Illia Trembach and Oleksii Kabatskyi	Prediction the melting characteristic's of self-shielded flux cored arc welding (FCAW S) with exothermic addition (CuO-Al)
13.	Vyacheslav Yelistratov, Olexandr Pavlenko, Olexandr Kharkov, Serhii Chernenko, Andrii Chernysh and Ihor Dmytriv	The intellectual organization main directions for the car wheel rims production within the framework of the Industry 4.0 program
14.	Roman Vakulenko, Roman Levchenko, Olha Dolhikh, Yuliya Salenko, Roman Arhat and Anton Horshkov	Improving the reliability of protective elements for electrical networks
15.	Iurii Khoroshailo, Nataliia Zaichenko, Olga Zaichenko and Olga Grigorieva	Characterization of 3D printing filament diameter with diffraction method in teraherz domain
16.	Viktor Tsiganash, Yurii Biloivanenko, Maryna Baikova, Kateryna Kamchatna-Stepanova, Marina Markova and Yuliya Ivanova	Engineering and justification of the frequency method of mode extremum for a high-power energy consumer
17.	Volodymyr Bakharev, Andrii Perekrest, Volodymyr Chenchevoi, Olha Chencheva, Andrii Domanetskyi and Svitlana Malyk	Intelligent technologies for ecomonitoring data processing in conditions of technogenic emergencies

18.	Volodymyr Drahobetskyi, Roman Chernyak, Serhii Dun, Iryna Trunina and Dmytro Moloshtan	Reliability and security increasing methods for electronic systems and units in special vehicles
19.	Volodymyr Pavlenko, Oleh Synyuk, Valeria Dromenko, Oleksii Volianyk, Serhiy Horiashchenko and Petro Kurliak	Computer-integrated system of automatic balance control in centrifuge rotors with variable imbalance
20.	Oleg Subotin, Oleg Markov and Oleksii Razzhivin	Study of the dynamics of solidification of a continuously cast ingot on the improved mathematical model of the process of soft compression
21.	Viacheslav Prus, Vitalii Naida and Oleksandr Somka	Principles of development of effective control algorithms for heating systems of communal and residential buildings
22.	Yaroslav Paranchuk, Yuriy Shabatura, Oleksiy Kuznyetsov and Taras Rudyy	Modeling of an electrical mode the arc furnace two-circuit control system
23.	Mariya Maslak, Yaroslava Yakovenko, Olga Maslak, Petro Pererva and Natalya Grishko	Problems of intellectual property in the information economy through the prism of artificial intelligence as a dual-purpose technology
24.	Artemii Bernatskyi, Mykola Sokolovskyi, Taras Nabok, Oleksandr Siora, Nataliia Shamsutdinova and Volodymyr Lukashenko	Development of a model device of a control system device for control of the power source for hybrid laser-arc welding of aluminium alloys
25.	Olexandr Salenko, Vadym Orel, Ruslan Yakovliev, Olexandr Pavlenko, Yurii Oliinyk and Svitlana Drozdova	New materials performances for drone frames repairing using 3d printing methods
26.	Alla Kasych, Olena Cherniavska, Svitlana Bondarenko, Olena Ievseitseva and Valentyna Glukhova	Industry 4.0 technologies in ensuring environmental friendliness of production and product quality
27.	Petro Pererva, Valerii Kobieliev, Mariya Maslak, Olga Maslak and Anna Kobielieva	Intellectual and innovative directions for improving the market characteristics of asynchronous electric motors
28.	Olena Parshyna, Marharyta Parshyna, Andrii Shapoval, Yurii Parshyn, Tetiana Chumak and Ljudmila Yarmolenko	Expert assessment of information protection in complex energy systems
29.	Anatolii Mazaraki, Margaryta Boiko, Myroslava Bosovska and Mariia Kulyk	Revenue management data digital transformation
30.	Olexander Kostin, Olexander Yaros, Yurii Yaros, Alexei Savenko, Volodymyr Martynenko and Igor Boyko	Methodology for evaluating the stability of arc burning of electrodes with rutile-cellulosic covering

31.	Oksana Khrebtova, Oleksandr Shapoval, Oleg Markov, Volodymyr Kukhar, Natalia Hrudkina and Mykhailo Rudych	Formation of the temperature field during drawing, taking into account the dynamic modes of the technological installation
32.	Serhii Vladov, Yurii Shmelov and Ruslan Yakovliev	Modified method of identification potential defects in helicopters turboshaft engines units based on prediction its operational status
33.	Volodymyr Kukhar, Elena Balalayeva and Vadym Hornostai	Comparison of energy-power parameters and electrical energy consumption during cold rolling with emulsions at continuous 4-stand Mill 1680
34.	Tetiana Haikova, Mykola Moroz, Volodymyr Zahorianskyi, Sergii Shlyk, Roman Haikov and Anna Haikova	Features of manufacturing a two-layer electrical contact
35.	Yuliya Averyanova and Yevheniia Znakovska	Simulation of UAS operator's decision-making under different weather conditions
36.	Nataliia Zaiets, Nataliia Lutska and Lidiia Vlasenko	Improving the efficiency of a multistage evaporator station for sugar production using neural networks
37.	Yurii Lebedenko, Oksana Polyvoda, Anatolii Derkachenko, Yevhenii Modlo, Svitlana Demishonkova and Yurii Pylypenko	Research of control systems for robotic spatial planning platforms
38.	Elena Parschina, Marharyta Parshyna, Yurii Parshyn, Olena Chernysheva, Elena Kholod and Andrii Shapoval	Modelling of the production competitiveness based on neural network technologies
39.	Oleksii Razzhivin, Oleg Markov and Oleg Subotin	Automated melt temperature control system in induction furnace
40.	Sergiy Novoselov, Oksana Sychova, Denis Mospan and Igor Nevludov	Multithreaded software control of industrial manipulator movement
41.	Iurii Savchenko, Oleksandr Shapoval, Viacheslav Titov, Vitalii Shchepetov, Tatiana Chupilko and Yuliia Ulianovska	Computer simulation of safety processes of composite structures rheological properties
42.	Roman Arhat, Oleksandr Pedun, Vyacheslav Puzyr, Vladimir Drahobetskyi, Viktor Kostin and Viktoriya Kulynych	Energy savings in the press shop
43.	Yaroslava Yakovenko, Maryna Bilyk and Yevheniia Oliinyk	The transformative impact of the development of artificial intelligence on employment and work motivation in business in the conditions of the information economy

POSTER SESSION

[Zoom ID 256 118 3340](#)

Password – MEES2022

Electrical and Power Engineering Education

Time: 14.00-16.00

CHAIRMAN: Larysa Herasymenko, Iryna Soloshych, Yevhenii Lashko

1.	Olena Nazarova, Volodymyr Osadchyy, Serhiy Shulzhenko and Mykola Oliieinikov	Software and hardware complex for the study of electropneumatic mechatronic systems
2.	Svitlana Soshenko, Ksenia Sizova, Tamara Poyasok and Anfisa Shmelova	Developing electrical engineering specialties teachers' professional competence in the conditions of Martial Law
3.	Alexander S. Shevchenko, Liudmyla Shtefan and Valentina Shevchenko	S. V. V. New valeological disciplines in ukrainian electrical and power engineering education
4.	Alexander S. Shevchenko	On the observance of confidentiality in the process of teaching valeological disciplines to students of electrical and power engineering specialties
5.	Vyacheslav Yelistratov, Pavlenko Olexandr, Olexandr Kharkov, Serhii Chernenko, Andrii Chernysh and Ruslan Puzyr	Peculiarities of the of engineering disciplines teaching process organization using three-dimensional computer modeling methods
6.	Volodymyr Pavlenko, Ihor Ponomarenko, Andrii Fedorchenko, Volodymyr Onofriichuk, Olha Chorna and Vladyslav Pylypenko	Development and marketing promotion of the educational program mobile application
7.	Gennadii Slavko, Serhii Serhiienko, Anfisa Shmelova and Kateryna Kovalenko	Problems and organizational measures of implementing and providing the distance electrical engineering education at the university using lms moodle in the conditions of modern challenges in Ukraine
8.	Halyna V. Yelnykova	Qualimetric approach for new valeological disciplines assessing in ukrainian electrical and power engineering education
9.	Oleksii Chorny, Larysa Herasymenko, Valerii Tytiuk and Victor Busher	Principles development of improving the efficiency of educational information assimilation
10.	Larysa Butko, Daria Vasylenko, Viktor Osadchyy, Oxana Dobryden and Yaroslav Martynyshyn	Effective regional clusters of higher education institution and enterprises

11.	Oksana Zakharova and Larysa Prodanova	Development of energy education as a component of ensuring energy security of Ukraine
12.	Oksana Tur, Viktoriia Shabunina, Galina Sivyakova and Svitlana Doroshenko	The role of integrated electrical engineering disciplines in the development of student professional competencies
13.	Mykhaylo Zagirnyak, Andrii Gladyr, Dmytro Mamchur and Viktoriia Nozhenko	Peculiarities of blended learning laboratory workshop for electrical engineering students
14.	Inna Kocharian and Oleg Kratt	Electrical and arts education of Ukraine: a unified approach to the organization of the educational process under martial law
15.	Olena Bespartochna, Tamara Poyasok, Victoriia Perevozniuk, Olha Kvasnyk and Victoriia Shapolova	Culture of Internet Communication in Professional training of future specialists in electrical engineering
16.	Inna Khovrak, Galina Sivyakova and Ivan Khovrak	Management of lifelong education projects for sustainable development
17.	Larysa Butko, Daria Vasylenko, Svitlana Fedorenko, Oxana Dobryden and Yaroslav Martynyshyn	Summarizing the experience of using educational online platforms in ukrainian universities
18.	Larysa Herasymenko, Olena Grytsiuk, Tatiana Nabok, Tatiana Bryl and Larysa Maksimova	Assessment of learning outcomes in distance learning using the Moodle platform
19.	Viktoriia Shabunina, Oksana Tur, Volodymyr Maslak and Viktor Sarancha	Educational WebQuest as an innovative method of project-oriented training of electrical engineering students
20.	Olena Stryzhak and Nataliia Pohuda	Features of implementing the competency-based approach to teaching engineering students in the context of Industry 4.0
21.	Olena Ponomarenko, Yulia Artemenko, Yulia Shulzhenko, Oksana Zbyrannyk and Tetiana Chrdileli	Teaching electrical engineering students the skill of academic reading
22.	Olena Sushchenko, Svitlana Nazarova and Nataliia Kozubova	Formation of professional competencies complex by distance learning technologies
23.	Nataliia Shalimova, Denys Zagirniak, Olena Chernovol and Viktoriia Perevozniuk	Recognition of Prior Non-Formal and Informal Learning in Higher Education of Ukraine: Ways of Development
24.	Hanna Kapustyan and Volodymyr Maslak	Educational excursion "Stages of the Ukrainian statehood formation" - as a factor in the national worldview developing of the enrolled students at the Kremenchuk National University's institute of electrical engineering and information technologies
25.	Nataliia Dotsenko	The Technology of Application Online Learning Platforms in Electrical Engineering Education

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**Industrial electronics**

Time: 10.00-12.00

CHAIRMAN: Tetyana Korenkova, Viktoriya Kovalchuk

1.	Oleksandr Derets, Oleksandr Sadovoi and Hanna Derets	Synthesis of proximate time-optimal fourth-order relay-modal control system
2.	Andrey Stavinskii, Aleksandr Tsyganov, Elena Avdieieva and Rostislav Stavinskiy	Asynchronous motor with ferromagnetic sections of squirrel-cage winding
3.	Kostiantyn Kuchynskiy and Viacheslav Prus	Features of assessing the thermal stability of the rotor of an electric machine based on experimental studies of its heating
4.	Mohamed Zaidan Qawaqzeh, Viktoriya Kovalchuk, Tetyana Korenkova, Oleksandr Serdiuk and Oleksandr Bilyk	Monitoring of energy processes in an electrohydraulic complex with an adjustable electric drive in nonstationary operating modes
5.	Oleksiy Sadovoy, Dmytro Koshkin, Larisa Vakhonina and Volodymyr Martynenko	Comparison of active power losses of single-phase electromagnetic static devices by radial electromagnetic system
6.	Sergey Pritchyn, Oleksii Bobryshev, Oleksandr Sorokun and Serhii Pylypenko	Preparation of semiconductor substrates for sensor based on porous layers
7.	Oleksiy Sadovoy, Vyacheslav Shebanin, Larisa Vakhonina and Natalia Potryvaieva	Optimization method for electromagnetic systems of electrical apparatus
8.	Nikita Radchenko, Andriy Nekrasov, Kostiantyn Latyshev and Oleksandr Hrytsai	Research on the energy efficiency of the application of different methods of starting asynchronous electric drives
9.	Bohdan Vorobiov, Roman Zaitsev, Kseniia Minakova, Mykhailo Kirichenko, Stanislav Milevskiy and Serhii Pohasii	Regulation quality investigation on different plant model detalization usage while neural network controller training for DC motor control
10.	Andriy Kutsyk and Mykola Semeniuk	An analysis of field weakening mode in dtc based induction drive for control influences forming
11.	Yevhen Rudniev, Julia Romanchenko and Oleksiy Romanchenko	Study of impact phenomenon in mechatronic systems
12.	Viacheslav Melnykov, Andrii Kalinov and Artem Artemenko	Methods for adjustment fault-tolerant control systems for induction motors with damaged stator windings

13.	Volodymyr Chenchevoi, Olha Chencheva, Maksym Bezuhlyi, Volodymyr Kutsevol and Serhii Serhiienko	Determination of losses in steel of an induction motor at its deep saturation
14.	Tetyana Korenkova, Viktoriya Kovalchuk, Atef Saleh Al-Mashakbeh and Dmytro Rodkin	The energy method for the diagnosis of the emergency modes of electrohydraulic complex electromechanical systems
15.	Dmitro Shareyko, Serhii Havrylov, Liliana Fomenko, Oleg Savchenko and Ivan Biliuk	Reduction of numerical arrays in magnetometry problems calculations
16.	Dmitro Shareyko, Serhii Havrylov, Vitalii Mardziavko and Ivan Biluk	Increasing of the elevator noria efficiency
17.	Maksym Kohdas, Oksana Donskyh and Viacheslav Sitnick	Development of a method of increasing the sensitivity of gas sensors
18.	Oksana Khrebtova, Nataliia Zachepa, Iurii Zachepa and Alesya Khrebtova	Control system for the electric drive of the drainage dam gate lifting mechanism with a controlled moving process
19.	Mykhaylo Zagirnyak	Improving the energy parameters of medium power induction electric motors by changing the shape of the rod along the length of the squirrel cage rotor
20.	Serhii Serhiienko, Evgeniia Burdilna, Roman Voliansky and Hennadii Rykov	The electrotechnical complex of the grain thrower with improved performance characteristics
21.	Roman Manko, Mario Vukotić, Damijan Miljavec and Selma Čorović	End winding inductance analysis of the three-phase induction motor
22.	Dmytro Marchenko, Kateryna Matvyeyeva and Viacheslav Kurepin	Development of methods for digital diagnostics of engines by electronic indication
23.	Andrey Stavinskii, Aleksandr Tsyganov, Dmytro Babenko and Oleksiy Sadovoy	Comparison of thermal loads a single-phase transformer with a laminated magnetic core



**POSTER SESSION**

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**Power & Energy Systems**

Time: 10.00-11.30

CHAIRMAN: Oleksii Bialobrzheskyi, Olha Chencheva

1.	Oleh Pihnastyi and Maksym Sobol	The input material flow model of the transport conveyor
2.	Borys Kuznetsov, Tatyana Nikitina, Ihor Bovdui, Valerij Kolomiets, Borys Kobylianskyi and Olena Voloshko	Magnetic field active canceling single-circuit system for old residential one-story buildings closed to double-circuit overhead power lines
3.	Borys Kuznetsov, Tatyana Nikitina, Ihor Bovdui, Valerij Kolomiets, Borys Kobylianskyi and Olena Voloshko	Active canceling of magnetic field with circular space-time characteristic based on multi criteria game solution
4.	Iurii Zachepa, Nataliia Zachepa and Oksana Khrebtova, Volodymyr Chenchevoi, Ilya Turaev, Boris Kobiliansky	Experimental studies of operating modes local autonomous power supply sources with induction generators
5.	Sergii Shevchenko, Dmytro Danylchenko, Andrii Potryvai, Oleksandr Mirosnyk, Vladyslav Tsiupa and Stanislav Dryvetskyi	Improvement of the simulation model of a solar power plant, modernization of the block for accounting for the effect of cooling panels by wind currents
6.	Maryna Bilyk, Iryna Trunina, Anna Chumakova and Olga Usanova	Energy management for the development of smart regions
7.	Lesia Sakun, Yulia Viedienina, Mykola Khomenko, Dmytro Riezniak and Maksym Kovalenko	Introduction of energy storage facilities as an element of Industry 4.0 of the energy sector of Ukraine
8.	Kateryna Zaika, Mykola Khomenko and Andrey Pochtovyuk	The potential of using renewable energy sources for the regional industrial sector
9.	Youssef Amine Ait Ben Hassi, Youssef Hennane, Abdelmajid Berdai and Valerii Tytiuk	Primary and secondary controls with reactive power sharing in mesh microgrids
10.	Mohamed Qawaqzeh, Olha Sotnik, Oleksandr Mirosnyk, Serhii Halko, Oleksii Sotnik and Yurii Khandola	Calculation of the consequences of a decrease in the power factor level in rural electrical networks supplying municipal and household electrical consumers
11.	Mykola Zablodskiy and Mykhailo Spodoba	Comparison of theoretical and experimental data of energy consumption when heating the substrate in a biogas reactor

<b>12.</b>	Petro Lezhniuk, Viacheslav Komar, Olena Rubanenko, Milan Belik, Oleksandr Rubanenko and Ivan Smaglo	Analysis of the technical condition influence equipment of photovoltaic stations on the balancing of the electric power systems modes
<b>13.</b>	Oleh Sinchuk, Tetyana Beridze, Ihor Sinchuk and Vladyslav Baranovskyi	Simulation version of evaluating corporate power consumption by consumers of iron ore mines using nonlinear optimization means
<b>14.</b>	Youssef Hennane, Youssef Amine Ait Ben Hassi, Abdelmajid Berdai and Valerii Tytiuk	Primary, secondary and tertiary controls of a mesh multi-PCC microgrid
<b>15.</b>	Anatoliy Oksanich, Serhey Pritchyn and Maksym Kohdas	Method for improving the quality of porous gallium arsenide film for anti-reflecting coating of Solar Cells
<b>16.</b>	Oleksandr Cherednichenko, Serhiy Serbin and Mykhaylo Tkach	Multi-dimensional classification of the schemes of marine power generating units

## ORAL SESSION

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## Electrical and Power Engineering Education

Time: 11.00-13.00

CHAIRMAN: Sergii Serhienko, Larysa Herasymenko, Yevhenii Lashko

1.	Oleksii Chorny, Olha Chorna, Valerii Tytiuk, Valeriy Vatazhok and Denys Kalinin	Virtual laboratory complex for studying the theoretical foundations of construction and analysis of electromechanical systems
2.	Dmytro Babenko, Nataliia Dotsenko and Olena Gorbenko	System of blended learning in the studying of electrical engineers
3.	Oksana Polinkevych, Inna Khovrak and Viktor Trynychuk	Quality management of distance education
4.	Mykhaylo Zagirnyak, Volodymyr Lugovyi, Zhanneta Talanova and Denys Zagirniak	The challenge of optimization of the electrical and energy engineering higher education in Ukraine: regional, institutional & level aspects
5.	Maryna Grynova, Iryna Shvedchikova, Iryna Soloshych, Iryna Bunetska and Serhii Soloshych	Project approach in the formation of scientific and research competence of students of energy specialities
6.	Olena Sushchenko and Vasyl Otenko	Information technologies implementation to ensure the project-based distance learning
7.	Denys Zagirniak, Viktoriia Druzhyhina, Viktoriia Nozhenko and Valerii Druzhyhin	Modern systems engineering education in the context of the formation of professional competences
8.	Iryna Shvedchikova, Wolf Burger, Igor Panasiuk, Iryna Soloshych and Maryna Grynova	Application of pop-up learning laboratories in electrical engineering distance education
9.	Olha Chencheva, Volodymyr Chenchevoi, Andrii Perekrest and Yurii Morozov	Possibility of using technologies of augmented and virtual reality for acquisition hard and soft skills of electrical engineering specialists
10.	Olena Titova, Petro Luzan, Liubov Yarosh, Svitlana Symonenko and Nataliia Zaitseva	The test instruments development based on the items complexity
11.	Inna Yakovets, Nataliia Chuhai and Inna Kravchenko	Professional competence formation among students in the design process of biomimicry methods to solve the energy problem

**22.10.2022**

**PLENARY SESSION  
CLOSING CEREMONY**

[Zoom ID 773 670 1972](#)

Password – MEES2022

Time: 14.30-15.00

CHAIRMAN: Mykhaylo Zagirnyak, Oleksii Chorny, Viacheslav Prus

**Oleksii Chorny**

Chair of Organizing Committee,  
Head of the Institute of Education  
and Science in Electrical  
Engineering and Information  
Technologies, Kremenchuk  
Mykhailo Ostrohradskyi National  
University. Ukraine

The results of MEES-2022 conference

**PANEL DISCUSSION.  
SUMMING UP THE CONFERENCE**

[Zoom ID 773 670 1972](#)

Password – MEES2022

Time: 13.00-14.30

CHAIRMAN: Mykhaylo Zagirnyak, Oleksii Chorny, Viacheslav Prus

**VIRTUAL EXCURSION**

Virtual Tour Around the University

[http://www.kdu.edu.ua/3DMap/UA/3D\\_TOUR\(UA\).swf](http://www.kdu.edu.ua/3DMap/UA/3D_TOUR(UA).swf)

Tour Ferrexpo Poltava Mining

<http://makenow.com.ua/project.php?id=96>