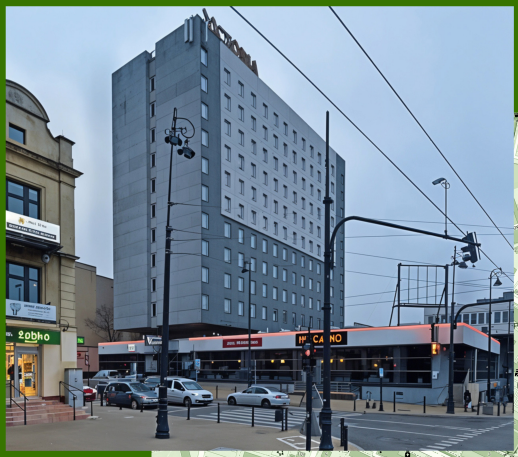
11th International Conference

September 12-15, 2024

Electromagnetic Devices and Processes in Environment Protection

Lublin
VICTORIA Hotel

Conference Program



ElmECO

Organization Committee:

1. Dr. Eng. Oleksandr Boiko - Chair
2. Prof. Paweł Surdacki - Vice Chair
3. Prof. Henryka Danuta Stryczewska
4. Prof. Grzegorz Komarzyniec
5. Prof. Michał Majka
6. Prof. Ryszard Goleman
7. Prof. Sławomir Kozak
8. Dr. Eng. Michał Łanczont
9. Dr. Eng. Tomasz Giżewski
10. Dr. Eng. Joanna Kozieł
11. M.Sc. Eng. Radosław Gad
12. M.Sc. Eng. Włodzimierz Janowski
13. M.Sc. Karolina Pasicka
14. Dr. Eng. Michał Aftyka
15. Dr. Eng. Joanna Michałowska
16. Dr. Eng. Michał Lech
17. Michał Pierzchała
18. M.Sc. Eng. Damian Kostyła
19. M.Sc. Eng. Alicja Zielonka

Scientific Committee:

1. Henryka Danuta Stryczewska (Lublin, Poland)
2. Shin-ichi Aoqui (Kumamoto, Japan)
3. Antoni Cieśla (Cracow, Poland)
4. Marian Ciszek (Wroclaw, Poland)
5. Marek Kocik (Gdansk, Poland)
6. Sławomir Kozak (Lublin, Poland)
7. Monika Lewandowska (Szczecin, Poland)
8. Michał Majka (Lublin, Poland)
9. Ryszard Pałka (Szczecin, Poland)
10. Grzegorz Raniszewski (Lodz, Poland)
11. Mariusz Stępień (Gliwice, Poland)
12. Paweł Surdacki (Lublin, Poland)
13. Agnieszka Szypłowska (Lublin, Poland)
14. Andrzej Wac-Włodarczyk (Lublin, Poland)
15. Andrzej Wilczek (Lublin, Poland)
16. Andrzej Zaleski (Wroclaw, Poland)
17. Marian Łukaniszyn (Opole, Poland)
18. Andrzej Sikorski (Bialystok, Poland)
19. Łukasz Szymański (Lodz, Poland)
20. Agnieszka Łękawa-Raus (Warsaw, Poland)
21. Leszek Kacprzyk (Poznan, Poland)
22. Grzegorz Komarzyniec (Lublin, Poland)
23. Janusz Kozak (Lublin, Poland)
24. Ryszard Goleman (Lublin, Poland)
25. Paweł Węgierek (Lublin, Poland)
26. Oleksandr Boiko (Lublin, Poland)
27. Joanna Michałowska (Lublin, Poland)
28. Tomasz Giżewski (Lublin, Poland)
29. Fumiaki Mitsugi (Kumamoto, Japan)
30. Makiko Kobayashi (Kumamoto, Japan)

Patronage:

PAN Committee of Electrical Engineering of the Polish Academy of Sciences

PAN Polish Academy of Sciences

PTETS

Lubelskie Towarzystwo Naukowe

Ministry of Science and Higher Education Republic of Poland

Doskonała Nauka

SEP Association of Polish Electricians Lublin Branch

The Conference is co-financed by the Polish National budget, allocated by the Ministery of Science and Higher Education under the Excellent Science II Program „Co-financing of Scientific Conferences", grant no. KONF/SP/0473/2023/01.

Thursday, 12/09/24				
	9^{00} – 10^{00}		Registration	
	10^{15} – 11^{15}		Opening session	
	11^{30} – 12^{30}		Anniversary session: "60th anniversary of Faculty of Electrical Engineering and Computer Science of Lublin University of Technology" and 30th anniversary of ELMECO Conference.	
	12^{30} – 14^{00}		Lunch	
	Oral session 1 (Kenji Ebihara, Henryka Danuta Stryczewska)			
	14^{00} – 14^{20}	O1	Bartek Głowacki, Decentralised energy infrastructure integrated with superconductivity, hydrogen and natural gas	
	14^{20} – 14^{40}	O2	Mariusz Stępień, Recent development of HTS large scale applications for energy transition	
	15^{00} – 15^{20}	O3	Walid Helou, Overview of the high power continuous-wave Ion Cyclotron Range of Frequencies system of the ITER tokamak	
	15^{20} – 15^{40}	O4	Umanand Loganathan, Energy internet - the next generation smart grid	
	15^{40} – 16^{00}	O5	Oleksii Girka, The high voltage RF resonator test facility for the new vacuum feedthrough of the ASDEX Upgrade ICRF antennas	
	16^{00} – 16^{30}		Coffee break	
	Oral session 2 (Makiko Kobayashi, Oleksandr Boiko)			
	16^{30} – 16^{50}	O6	Agnieszka Łękawa-Raus, Functional electronic materials based on wood, carbon nanotubes, and graphene	
	16^{50} – 17^{10}	O7	Aleksander Vahl, Via bottom-up synthesis of nanoobjects and nanocomposites towards brain-inspired electronics	
	17^{10} – 17^{30}	O8	Daniil Nikitin, Gas-aggregated nanoparticles and where to apply them: from optics to neuromorphic science	
	17^{30} – 17^{50}	O9	Zbigniew Kołaciński, How to destroy cancer cells with nanotechnology?	
	19^{00} – 21^{30}		Dinner	

Friday, 13/09/24	Oral session 3 (Marisuz Stępień, Walid Helou)			
	9^{00} – 9^{20}	O10	Kenji Ebihara, Ozone nano-mist generation by dielectric barrier discharges and automatic remote insect pest disinfection system in agriculture	
	9^{20} – 9^{35}	OL1	Than Nu Nu San, Visualization and Calibration Free Quantification of Two-Dimensional Sound Pressure Distribution with Optical Wave Microphone CT Scanning	
	9^{35} – 9^{50}	OL2	Htet Lin Aung, Estimation the direction of arrival sound source using optical wave microphone and raspberry pi camera module	
	9^{50} – 10^{05}	OL3	Si Thu Han, Phase distribution of acoustic pressure visualized by optical wave microphone within the distance of one-cycle wavelength of acoustic wave	
	10^{05} – 10^{20}	OL4	Nway Htet Htet Myo, Synchronized Investigation of pressure wave influence on atmospheric pressure plasma jet and plasma-induced liquid flow using optical wave microphone and high-speed camera	
	10^{20} – 11^{40}	Poster session (Mariusz Najgebauer, Shin-ichi Aoqui) and Coffee break		
	Oral session 4 (Umanand Loganathan, Zbigniew Kołaciński)			
	11^{40} – 12^{00}	O11	Andrzej Demenko, Development of Methods for Modeling Low-Frequency Electromagnetic Field	
	12^{00} – 12^{20}	O12	Nataliia Istomina, Multi-agent simulation of switched reluctance motors	
	12^{20} – 12^{40}	O13	Dariusz Zieliński, Eliminating the current pulsations at the terminals of electrochemical energy storage during the asymmetrical operation of a 4-wire converter	
	12^{40} – 13^{00}	O14	Wojciech Jarzyna, Improving the efficiency of a three-phase transformer with a 4-wire DC/AC converter for voltage symmetry in asymmetrical networks with PV sources	
	13^{00} – 14^{00}	Lunch		
	14^{30} – 18^{00}	Excursion #1		
	19^{00} – 24^{00}	Gala dinner		

Saturday, 14/09/24			Oral session 5 (Agnieszka Łękawa-Raus, Masaaki Yamazato)	
	9^{00} – 9^{20}	O15	Makiko Kobayashi, Sol-Gel Composite Material Development for Energy Harvesting	
	9^{20} – 9^{35}	OL5	Seiryu Ueda, Proposal for Security System using Optical Wave Microphone with long-distance laser beam	
	9^{35} – 9^{50}	OL6	Ryota Ono, Wearable Piezoelectric Microphone Using Sol-Gel Composite	
	9^{50} – 10^{05}	OL7	Yukino Tokushige, Effect Of Mixing Ratios On Different Grain Sizes in Pb(Zr,Ti)O3/ Pb(Zr,Ti)O3	
	10^{05} – 10^{20}	OL8	Mako Nakamura, Nitrogen Spray Corona Discharge Method for Poling under High Humidity	
	10^{20} – 10^{35}	OL9	Volodymyr Hera, Research of dependences of engine oil viscosity on electrical parameters for quality control in a cyber-physical measurement system	
	10^{35} – 11^{00}		Coffee break	
			Oral session 6 (Oleksii Girka, Paweł Surdacki)	
	11^{00} – 11^{20}	O17	Maasaki Yamazato, Antibacterial properties of iodine-doped amorphous carbon films	
	11^{20} – 11^{40}	O18	Shini-chi Aoqui, Observation of Seed Condition Change by Atmospheric Pressure Plasma Irradiation	
	11^{40} – 12^{00}	O19	Mariusz Najgebauer, Pro-ecological aspects of soft magnetic material applications	
	12^{00} – 12^{20}	O20	Oleksandr Boiko, Key factors enhancing the electrical properties of nanofluids. A mini-review of the applications in the energy-related sectors	
	12^{20} – 13^{30}		Lunch	
	15^{00} – 16^{15}		Session in Lublin Scientific Society: Krzysztof Kluszczyński, Reflective lecture and piano concert *Modelling, Simulation and Music*	
	16^{15} – 17^{30}		Excursion #2 (Old City)	
	17^{30} – 18^{30}		Visiting of Perła Brewery and local beverages testing	
Sunday, 15/09/24	09^{00} – 10^{00}	CS	Closing session	
	10^{00} – 11^{00}	RF	Refreshments	

11th International Conference

September 12-15, 2024

ElmECO

Poster Session Schedule

P1	Krzysztof Habelok Comparison Study of Critical Current Angular Dependence in YBCO Tapes
P2	Grzegorz Komarzyniec Cooperation of the plasma reactor with a converter power supply equipped with a five-limb matching transformer of special design
P3	Janusz Kozak Study on Recovery Time of Conduction-Cooled Resistive Superconducting Fault Current Limiter
P4	Katarzyna Wojtera Exploring the Interaction of Ferromagnetic Nanoparticles with RF Electromagnetic Fields for Medical Purposes
P5	Michał Jeleń Modern training courses increasing awareness of environmental protection
P6	Michał Majka The new model of conduction-cooled current leads for superconducting fault current limiters
P7	Katarzyna Mróz Application of machine learning methods to the analysis of brain neural networks: perspectives and potential benefits
P8	Mariusz Holuk Radiated Emission of PLC Controllers Used in Drive Systems

P9	Ryszard Goleman Characteristics of a compact induction motor model with 50Hz/150Hz frequency converter and 3/2 number of phases	
P10	Paweł Surdacki Analysis of the properties of HTS 2G SCS and SF windings during failure states of superconducting transformers	
P11	Toshiyuki Nakamiya Phase distribution of ultrasonic field visualized by optical wave microphone CT scan	
P12	Joanna Kozieł Analysis of electricity consumption in road lighting installations	
P13	Michał Lech Photographic analysis of a low-current, vacuum electric arc using an ultrafast camera	
P14	Joanna Michałowska Determination of the typical course values of aircraft parameters for the new measurement system in the case of aircraft takeoff and landing	
P15	Patrycja Tymińska Wójcik Innovative Cheneau brace as an optimised alternative to static orthosis improving idiopathic scoliosis therapy using self-learning and decision-making system	
P16	Henryka Danuta Stryczewska Overview of cold plasma and high temperature superconductors application in medicine	
P17	Krzysztof Nalewaj Effects of the operation of a cogeneration system on the example of an installation in a sugar factory	
P18	Michał Aftyka The influence of the type of plasma reactor power supply on the possibility of regulating the discharge power in process gases	
P19	Radosław Gad System for Decision Monitoring Technical Objects	

P20	Damian Kostyła Pressure Monitoring in Medium-Voltage Vacuum Interrupters	
P21	Alicja Zielonka The impact of renewable energy sources on the reliability parameters of electricity grids	