

# 2024 24<sup>th</sup> International Scientific Conference on Electric Power Engineering (EPE)

Friday, May 17, 2024 - third day of the conference

Session Power Plants I, II (ROOM 400), 08:00–11:30

Guarantee: **Jan Fulneček** (VŠB - Technická univerzita Ostrava, CZ)

Chairpersons: **Michał Kunicki** (Politechnika Opolska, PL) and **Dušan Medved'** (Technická univerzita v Košiciach, SK)



| Time          | No           | Authors   | Title of paper  |
|---------------|--------------|---|---|
| 8:00 - 9:30   | 9            | Maksymilian Przygodzki, Rafal Gwozdz  | Selected problems of modelling energy storage and renewable sources for long-term analyses                                  |
|               | 10           | Rafal Gwozdz, Maksymilian Przygodzki  | Long-term analysis of development and demand for energy storage in Poland   |
|               | 27           | Michal Kunicki, Michal Koziol, Ireneusz Urbaniec, Jaroslaw Zygarlicki                           | Wavelet Selection for Analysis of Acoustic Signals Emitted by Partial Discharges in Oil Insulation                          |
|               | 30           | Petr Cervenka, Jan Kruntorad  | Optimizing the Operation of Portable Traffic Monitoring Devices Using Photovoltaic Panels for Sustainability and Efficiency |
|               | 39           | Marek Hoger, Michal Bahernik  | Stochastic Modeling of a Residential PV Plant Operation   |
|               | 33           | Jan Petrov, Libor Hrdina, Petr Moldrik, Radomir Gono  | Diagnostic Methods of Photovoltaic Panels: Low-cost Electroluminescence   |
|               | 36           | Libor Hrdina, Petr Moldrik, Jan Petrov, Roman Hrbac, Tomas Mlcak, Mikolaj Bartlomiejczyk        | The Importance of Heat Pumps and Cogeneration for the Transformation of the Energy Sector to Sustainable Sources            |
| 9:30 - 10:00  | Coffee break |   |   |
| 10:00 - 11:30 | 44           | Milan Perny, Vladimir Saly, Juraj Packa, Richard Klucha   | Testing, Analysis and Diagnostics of Chosen Faults of Photovoltaic Systems  |
|               | 62           | Dusan Medved, Michal Kolcun, Jozef Kiraly, Frantisek Margita, Ardian Hyseni, Damian Mazur       | Analysis of Electric Vehicle Charging Process   |
|               | 64           | Aneta Bednarova, Radomir Gono, Stanislav Rusek, Jan Sobotik                                     | The Path to a Sustainable Power Production and Issues to Address  |
|               | 65           | Jan Sobotik, Zdenek Hradilek, Jan Fulnecek, Aneta Bednarova                                     | Analysis of an off-grid system with photovoltaic panels   |
|               | 71           | Khuong Nguyen-Vinh, Saumith Gonapaladeniya, Nam Nguyen-Quang, Zbigniew Leonowicz                | A review of Photovoltaic Technology   |
|               | 72           | Khuong Nguyen-Vinh, Nam Nguyen-Quang, Zbigniew Leonowicz, Tomas Novak, Radomir Gono, Ervin Racz | Comparing of Potential Energy From The Sun During A Year in Czechia and Vietnam   |
|               | 78           | Jan Fulnecek, Ondrej Kabot, Michal Kunicki, Lukasz Nagi   | Medium Voltage Covered Conductors: Advantages, Disadvantages and High Impedance Faults                                      |