

Applications of game theory to design and operation of modern power systems: a comprehensive review

Navon, Aviad; Yosef, Gefen Ben; Machlev, Ram; Shapira, Shmuel; Chowdhury, Nilanjan Roy; **Belikov, Juri**; Orda, Ariel; Levron, Yoash Energies 2020 / art. 3982, 34 p <https://doi.org/10.3390/en13153982> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Distributed storage placement policy for minimizing frequency deviations: A combinatorial optimization approach based on enhanced cross-entropy method

Machlev, Ram; Chowdhury, Nilanjan Roy; **Belikov, Juri**; Levron, Yoash International Journal of Electrical Power and Energy Systems 2022 / p. 1-14 : ill <https://doi.org/10.1016/j.ijepes.2021.107332> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effects of the COVID-19 pandemic on energy systems and electric power grids — a review of the challenges ahead

Navon, Aviad; Machlev, Ram; Carmon, David; **Onile, Abiodun Emmanuel**; **Belikov, Juri**; Levron, Yoash Energies 2021 / art. 1056, 14 p. : ill <https://doi.org/10.3390/en14041056> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Explainability and transparency of classifiers for air-handling unit faults using explainable artificial intelligence (XAI)

Meas, Molika; Machlev, Ram; **Köse, Ahmet**; **Tepljakov, Aleksei**; **Loo, Lauri**; Levron, Yoash; **Petlenkov, Eduard**; **Belikov, Juri** Sensors 2022 / art. 6338 : ill <https://doi.org/10.3390/s22176338> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Explainability-based trust algorithm for electricity price forecasting models

Heistrene, Leena; Machlev, Ram; Perl, Michael; **Belikov, Juri**; Baimel, Dmitry; Levy, Kfir; Mannor, Shie; Levron, Yoash Energy and AI 2023 / art 100259, 18 p <https://doi.org/10.1016/j.egyai.2023.100259> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Explainable AI based fault detection and diagnosis system for air handling units

Belikov, Juri; **Meas, Molika**; Machlev, Ram; **Köse, Ahmet**; **Tepljakov, Aleksei**; **Loo, Lauri**; **Petlenkov, Eduard**; Levron, Yoash Proceedings of the 19th International Conference on Informatics in Control, Automation and Robotics - ICINCO, 2022 , Lisbon, Portugal 2022 / p. 271-279 <https://doi.org/10.5220/0011350000003271>

Explainable Artificial Intelligence (XAI) techniques for energy and power systems : review, challenges and opportunities

Machlev, Ram; Heistrene, L.; Perl, M.; Levy, K. Y.; **Belikov, Juri**; Mannor, S.; Levron, Yoash Energy and AI 2022 / art. 100169, 13 p. : ill <https://doi.org/10.1016/j.egyai.2022.100169> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Explaining the decisions of deep learning models for load disaggregation (NILM) based on XAI

Machlev, Ram; Malka, Asaf; Perl, Michael; Levron, Yoash; **Belikov, Juri** 2022 IEEE Power & Energy Society General Meeting (PESGM) 2022 / art. 183865 , p. 1-5 : ill <https://doi.org/10.1109/PESGM48719.2022.9917049>

Explaining the decisions of power quality disturbance classifiers using latent space features

Machlev, Ram; Perl, Michael; Caciularu, Avi; **Belikov, Juri**; Levy, Kfir Yehuda; Levron, Yoash International journal of electrical power & energy systems 2023 / art. 108949 <https://doi.org/10.1016/j.ijepes.2023.108949> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Measuring explainability and trustworthiness of power quality disturbances classifiers using XAI - explainable artificial intelligence

Machlev, Ram; Perl, Michael; **Belikov, Juri**; Levy, Kfir; Levron, Yoash IEEE transactions on industrial informatics 2022 / p. 5127-5137 <https://doi.org/10.1109/TII.2021.3126111> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

MO-NILM: A multi-objective evolutionary algorithm for NILM classification

Machlev, Ram; **Belikov, Juri**; Beck, Yuval; Levron, Yoash Energy and buildings 2019 / p. 134-144 <https://doi.org/10.1016/j.enbuild.2019.06.046> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Neural Architecture Search (NAS) for designing optimal power quality disturbance classifiers

Wang, Qianchao; Kapuza, Itamar; Baimel, Dmitry; **Belikov, Juri**; Levron, Yoash; Machlev, Ram Electric Power Systems Research 2023 / art. 109574 <https://doi.org/10.1016/j.epsr.2023.109574> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A new resonant fault current limiter for improved wind turbine transient stability

Demin, Slava; Sitbon, Moshe; Aharon, Ilan; Barbi, Eli; Machlev, Ram; **Belikov, Juri**; Levron, Yoash; Baimel, Dmitry Electric Power Systems Research 2023 / art. 109600, 8 p <https://doi.org/10.1016/j.epsr.2023.109600> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Open source dataset generator for power quality disturbances with deep-learning reference classifiers

Machlev, Ram; Chachkes, A.; **Belikov, Juri**; Beck, Yuval; Levron, Yoash Electric power systems research 2021 / art. 107152, 7 p. : ill <https://doi.org/10.1016/j.epsr.2021.107152> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

PMU placement for fault line location using neural additive models—A global XAI technique

Perl, Michael; Sun, Zhenglong; Machlev, Ram; **Belikov, Juri**; Levy, Kfir Yehuda; Levron, Yoash International journal of electrical power and energy systems 2024 / art. 109573, 10 p. : ill <https://doi.org/10.1016/j.ijepes.2023.109573> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A public dataset for synchronous motor electrical faults diagnosis with CNN and LSTM reference classifiers

Sun, Zhenglong; Machlev, Ram; Wang, Qianchao; **Belikov, Juri**; Levron, Yoash; Baimel, Dmitry Energy and AI 2023 / art. 100274, 17 p <https://doi.org/10.1016/j.egyai.2023.100274> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Readiness of small energy markets and electric power grids to global health crises: Lessons from the COVID-19 pandemic

Carmon, David; Navon, Aviad; Machlev, Ram; **Belikov, Juri**; Levron, Yoash IEEE Access 2020 / art. 9139437, p. 127234–127243 <https://doi.org/10.1109/ACCESS.2020.3008929> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Reinforcement learning model-based and model-free paradigms for optimal control problems in power systems: comprehensive review and future directions

Ginzburg-Ganz, Elinor; Segev, Itay; Balabanov, Alexander; Segev, Elior; Kaully Naveh, Sivan; Machlev, Ram; **Belikov, Juri**; Katzir, Liran; Keren, Sarah; Levron, Yoash Energies 2024 / art. 5307, 54 p. : ill <https://doi.org/10.3390/en17215307> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A review of optimal control methods for energy storage systems - energy trading, energy balancing and electric vehicles

Machlev, Ram; Zargari, Noa; Chowdhury, N; **Belikov, Juri**; Levron, Yoash Journal of energy storage 2020 / art. 101787, 16 p <https://doi.org/10.1016/j.est.2020.101787> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Uses of the digital twins concept for energy services, intelligent recommendation systems, and demand side management : a review

Onile, Abiodun Emmanuel; Machlev, Ram; **Petlenkov, Eduard**; Levron, Yoash; **Belikov, Juri** Energy reports 2021 / p. 997–1015 <https://doi.org/10.1016/j.egy.2021.01.090> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Verification of utility-scale solar photovoltaic plant models for dynamic studies of transmission networks

Machlev, Ram; Batushansky, Zohar; Soni, Sachin; Chadliev, Vladimir; **Belikov, Juri**; Levron, Yoash Energies 2020 / art. 3191, 20 p. : ill <https://doi.org/10.3390/en13123191> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Virtual inertia control methods in islanded microgrids

Škiparev, Vjatšeslav; Machlev, Ram; Chowdhury, Nilanjan Roy; Levron, Yoash; **Petlenkov, Eduard**; Belikov, Juri Energies 2021 / art. 1562, 20 p. : ill <https://doi.org/10.3390/en14061562> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)