Artificial intelligence driven approaches for fault prognostics of electrical machines using vibration spectrum analysis = Tehisintellektil põhinevad lähenemisviisid elektrimasinate rikete prognoosimiseks vibratsioonispektri analüüsi abil
Kudelina, Karolina 2024 https://www.ester.ee/record=b5685285*est https://doi.org/10.23658/taltech.28/2024 https://digikogu.taltech.ee/et/Item/229f1bbb-6178-414a-9e2e-2c98a30a783c

Condition monitoring and diagnostic of electrical machines using IoT and machine learning
Raja, Hadi Ashraf 21st International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Pärnu, Estonia, June 15-18, 2022 2022 / p. 31-32 : ill https://www.ester.ee/record=b5504019*est

Condition monitoring and fault detection for electrical machines using IOT
Raja, Hadi Ashraf; **Vaimann, Toomas**; **Rassõlkin, Anton**; **Kallaste, Ants** Proceedings of the Future Technologies Conference (FTC) 2022. Volume 2 2023 / p. 162-173 https://doi.org/10.1007/978-3-031-18458-1_12 Conference proceedings at Scopus Article at Scopus

Cost-efficient real-time condition monitoring and fault diagnostics system for BLDC motor using IoT and Machine learning
Raja, Hadi Ashraf; **Raval, Hardik**; **Vaimann, Toomas**; **Kallaste, Ants**; **Rassõlkin, Anton**; Belahcen, Anouar Diagnostika '22 : 2022 International Conference on Diagnostics in Electrical Engineering : conference proceedings 2022 / 4 p. https://doi.org/10.1109/Diagnostika55131.2022.9905102

A current spectrum-based algorithm for fault detection of electrical machines using low-power data acquisition devices
Asad, Bilal; **Raja, Hadi Ashraf**; **Vaimann, Toomas**; **Kallaste, Ants**; Pomarnacki, Raimondas; Hyunh, Van Khang Electronics 2023 / art. 1746 https://doi.org/10.3390/electronics12071746 Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Custom simplified machine learning algorithms for fault diagnosis in electrical machines
Raja, Hadi Ashraf; **Asad, Bilal**; **Vaimann, Toomas**; **Kallaste, Ants**; **Rassõlkin, Anton**; Belahcen, Anouar Diagnostika '22 : 2022 International Conference on Diagnostics in Electrical Engineering : Conference proceedings 2022 / 4 p. https://doi.org/10.1109/Diagnostika55131.2022.9905174

Development and utilization of synthetic signals for fault diagnostics of electrical machines
Raja, Hadi Ashraf; **Kudelina, Karolina**; **Asad, Bilal**; **Vaimann, Toomas**; **Rassõlkin, Anton**; **Kallaste, Ants** IEEE journal of emerging and selected topics in industrial electronics 2024 / 9 p https://doi.org/10.1109/JESTIE.2024.3395650

Digital twin of wind generator for modelling various turbine characteristics
Raja, Hadi Ashraf; **Autsou, Siarhei**; **Kudelina, Karolina**; **Rjabtšikov, Viktor**; **Vaimann, Toomas**; **Kallaste, Ants**; Pomarnacki, Raimondas; Hyunh, Van Khang 2023 International Conference on Electrical Drives and Power Electronics (EDPE) 2023 / p. 1-5 https://doi.org/10.1109/EDPE58625.2023.10274050

Digital twin of wind generator to simulate different turbine characteristics using IoT
Raja, Hadi Ashraf; **Kudelina, Karolina**; **Rjabtšikov, Viktor**; **Vaimann, Toomas**; **Kallaste, Ants**; Pomarnacki, Raimondas; Hyunh, Van Khang Proceedings of the Future Technologies Conference (FTC) 2023. Vol. 1 2023 / p. 123-132 https://doi.org/10.1007/978-3-031-47454-5_9 Conference proceedings at Scopus Article at Scopus

Enhancing transmission line reliability : an AI-driven approach to fault identification and classification
Shabbir, Noman; **Kamran, Daniel**; **Raja, Hadi Ashraf** Electronics 2024

Establishing visualization-to-hardware communication through middleware for digital twin with ROS-compatible microcontrollers latency tests
Belolipetskaja, Diana; **Rassõlkin, Anton**; **Raja, Hadi Ashraf**; Stupans, Andrejs; Maksimkins, Pavels Proceeding of EAI International Conference of Robotic Sensor Networks (ROSENET) 2024 2025

An EV-traction inverter data-driven modelling for digital twin development
Ibrahim, Akram Abdalla Mohammed; **Raja, Hadi Ashraf**; **Rassõlkin, Anton**; **Vaimann, Toomas**; **Kallaste, Ants** 2023 23rd International Scientific Conference on Electric Power Engineering (EPE) 2023 / 5 p. : ill https://doi.org/10.1109/EPE58302.2023.10149230

Fault detection and predictive maintenance of electrical machines : perspective chapter
Raja, Hadi Ashraf; **Kudelina, Karolina**; **Asad, Bilal**; **Vaimann, Toomas** New Trends in Electric Machines - Technology and Applications 2022 https://doi.org/10.5772/intechopen.107167

Feasibility investigation for residential battery sizing considering EV charging demand
Shabbir, Noman; **Kütt, Lauri**; **Daniel, Kamran**; **Astapov, Victor**; **Raja, Hadi Ashraf**; **Iqbal, Muhammad Naveed**; **Husev, Oleksandr** Sustainability 2022 / art. 1079 https://doi.org/10.3390/su14031079 Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

The impact of control environments on global parameters of electrical machines in case of broken rotor bars
Kudelina, Karolina; **Raja, Hadi Ashraf**; **Autsou, Siarhei**; **Asad, Bilal**; **Vaimann, Toomas**; **Rassõlkin, Anton**; **Kallaste, Ants**
Diagnostika '22 : 2022 International Conference on Diagnostics in Electrical Engineering : Conference proceedings 2022 / 4 p. https://doi.org/10.1109/Diagnostika55131.2022.9905149

The impact of load on global parameters of electrical machines in case of healthy and broken rotor bars
Kudelina, Karolina; **Raja, Hadi Ashraf**; **Autsou, Siarhei**; **Asad, Bilal**; **Vaimann, Toomas**; **Rassõlkin, Anton**; **Kallaste, Ants**; **Shabbir, Noman** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 5 l. https://doi.org/10.1109/BEC56180.2022.9935614

IoT based tools and methods for electrical machine diagnostics
Raja, Hadi Ashraf 19th International Symposium “Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III” : Tartu, Estonia, January 14-17, 2020 2020 / p. 115-116 : ill https://www.ester.ee/record=b5291755*est

IoT based tools and methods for electrical machine diagnostics = Asjade interneti põhised tööriistad ja meetodid elektrimasinate diagnostikaks
Raja, Hadi Ashraf 2023 https://doi.org/10.23658/taltech.20/2023 https://digikogu.taltech.ee/et/Item/3015334f-c32b-43ae-ba2d-bfcda536aba5 https://www.ester.ee/record=b5558656*est

IoT based tools for data acquisition and monitoring of electrical machines
Raja, Hadi Ashraf 20th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Tallinn, Estonia, September 8-10, 2021 2021 / p. 85-86 : ill https://www.ester.ee/record=b5457278*est

IoT based tools for data acquisition in electrical machines and robotics
Raja, Hadi Ashraf; **Vaimann, Toomas**; **Rassõlkin, Anton**; **Kallaste, Ants**; **Belahcen, Anouar** 2021 IEEE 19th International Power Electronics and Motion Control Conference, The Silesian University of Technology Gliwice, Poland, 25 - 29 April, 2021 (PEMC) : proceedings 2021 / p. 737-742 : ill https://doi.org/10.1109/PEMC48073.2021.9432553

Machine learning and deep learning techniques for residential load forecasting : a comparative analysis
Shabbir, Noman; **Kütt, Lauri**; **Raja, Hadi Ashraf**; **Ahmadiahangar, Roya**; **Rosin, Argo**; **Husev, Oleksandr** 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2021 / p. 1-5 https://doi.org/10.1109/RTUCON53541.2021.9711741

MWFA model based synthetic data creation and utilization for the training of XGBoost based fault diagnostic algorithm of a squirrel cage induction motor
Asad, Bilal; Khan, Muhammad Amir; **Raja, Hadi Ashraf**; **Vaimann, Toomas**; **Kallaste, Ants**; **Naseer, Muhammad Usman** 2024 International Conference on Electrical Machines (ICEM) 2024 / 7 p https://doi.org/10.1109/ICEM60801.2024.10700453

Neuro-fuzzy approach for fault prediction of mechanical bearing faults using vibration analysis
Shirokova, Veroonika; **Kudelina, Karolina**; **Raja, Hadi Ashraf**; **Rjabtšikov, Viktor**; **Baraškova, Tatjana**; **Nutonen, Karle** IECON Proceedings (Industrial Electronics Conference) IECON 2024 - 50th Annual Conference of the IEEE Industrial Electronics Society 2024 / p. 1-6 https://doi.org/10.1109/IECON55916.2024.10905990

Neuro-fuzzy framework for fault prediction in electrical machines via vibration analysis
Kudelina, Karolina; **Raja, Hadi Ashraf** Energies 2024 / art. 2818 https://doi.org/10.3390/en17122818

Preliminary analysis of bearing current faults for predictive maintenance
Kudelina, Karolina; **Raja, Hadi Ashraf**; **Vaimann, Toomas**; **Kallaste, Ants**; Pomarnacki, Raimondas; Hyunh, Van Khang 2023 IEEE International Conference on Electric Machines and Drives (IEMDC) 2023 / 5 p. : ill https://doi.org/10.1109/IEMDC55163.2023.10238934

Preliminary analysis of global parameters of induction machine for fault prediction in rotor bars
Kudelina, Karolina; **Raja, Hadi Ashraf**; **Autsou, Siarhei**; **Asad, Bilal**; **Vaimann, Toomas**; **Rassõlkin, Anton**; **Kallaste, Ants** 2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC) : Brasov, Romania, 25-28 Sept. 2022 : proceedings 2022 / p. 243-248 : ill https://doi.org/10.1109/PEMC51159.2022.9962922

Preliminary analysis of mechanical bearing faults for predictive maintenance of electrical machines
Kudelina, Karolina; **Raja, Hadi Ashraf**; **Autsou, Siarhei**; **Naseer, Muhammad Usman**; **Vaimann, Toomas**; **Kallaste, Ants**; Pomamacki, Raimondas; Hyunh, Van Khang 2023 IEEE 14th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED) 2023 / p. 430-435 : ill https://doi.org/10.1109/SDEMPED54949.2023.10271451

Residential load forecasting using recurrent neural networks
Shabbir, Noman; **Ahmadiahangar, Roya**; **Raja, Hadi Ashraf**; **Kütt, Lauri**; **Rosin, Argo** 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 478-481 : ill https://doi.org/10.1109/CPE-POWERENG48600.2020.9161565

A review of harmonic detection, suppression, aggregation and estimation techniques
Daniel, Kamran; **Kütt, Lauri**; **Iqbal, Muhammad Naveed**; **Shabbir, Noman**; **Raja, Hadi Ashraf**; **Sardar, Muhammad Usman**

Applied sciences 2024 / art. 10966 https://doi.org/10.3390/app142310966

Signal processing and machine learning techniques for predictive maintenance of rotor bars in induction machine
Kudelina, Karolina; **Raja, Hadi Ashraf**; **Rjabtšikov, Viktor**; **Naseer, Muhammad Usman**; **Vaimann, Toomas**; **Kallaste, Ants**
2023 International Conference on Electrical Drives and Power Electronics (EDPE) 2023 / 7 p. : ill
https://doi.org/10.1109/EDPE58625.2023.10274030

Signal spectrum-based machine learning approach for fault prediction and maintenance of electrical machines
Raja, Hadi Ashraf; **Kudelina, Karolina**; **Asad, Bilal**; **Vaimann, Toomas**; **Kallaste, Ants**; **Rassõlkin, Anton**; Khang, Huynh Van
Energies 2022 / art. 9507 https://doi.org/10.3390/en15249507 Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Study of bearing currents in induction machine : diagnostic possibilities, fault detection, and prediction
Kudelina, Karolina; **Raja, Hadi Ashraf**; **Naseer, Muhammad Usman**; **Autsou, Siarhei**; **Asad, Bilal**; **Vaimann, Toomas**; **Kallaste, Ants** Electrical engineering 2024 / 14 p. : ill https://doi.org/10.1007/s00202-024-02411-x

Techno-economic analysis and energy forecasting study of domestic and commercial photovoltaic system installations in Estonia
Shabbir, Noman; **Kütt, Lauri**; **Raja, Hadi Ashraf**; Jawad, Muhammad; Allik, Alo; **Husev, Oleksandr** Energy 2022 / art. 124156
https://doi.org/10.1016/j.energy.2022.124156 Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS