

### **AC magnetic loss reduction of SLM processed Fe-Si for additive manufacturing of electrical machines**

Tiismus, Hans; Kallaste, Ants; Belahcen, Anouar; Tarraste, Marek; Vaimann, Toomas; Rassõlkin, Anton; Asad, Bilal; Ghahfarokhi, Payam Shams Energies 2021 / 13 p. : ill <https://doi.org/10.3390/en14051241> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Accessible battery model with aging dependency**

Savard, Christophe; Iakovleva, Emilia; Ivanchenko, Daniil; Rassõlkin, Anton Energies 2021 / art. 3493, 16 p <https://doi.org/10.3390/en14123493> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Achieving of Magnus effect with Agros Suite**

Lukin, Aleksandr; Demidova, Galina; Rassõlkin, Anton Periodica polytechnica electrical engineering and computer science 2021 / p. 131-137 : ill <https://doi.org/10.3311/PPee.17743> [Journal metrics at Scopus](#) [Article at Scopus](#)

### **Active and reactive power control of DFIG using optimized fractional order-PI controller**

Javed, Umar; Arshad, Muhammad Asad; Shabbir, Noman; Kütt, Lauri; Rassõlkin, Anton 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. 398-404 <https://doi.org/10.1109/PEMC48073.2021.9432608>

### **ADCS development for student CubeSat satellites - TalTech case study**

Rassõlkin, Anton; Vaimann, Toomas; Org, Peeter; Leibak, Alar; Gordon, Rauno; Priidel, Eiko Proceedings of the Estonian Academy of Sciences 2021 / p. 268-285 : ill <https://doi.org/10.3176/proc.2021.3.06> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Additive design possibilities of electrical machines**

Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 5 p. : ill <https://doi.org/10.1109/RTUCON.2018.8659828>

### **Additive Manufacturing and Performance of E-Type Transformer Core**

Tiismus, Hans; Kallaste, Ants; Belahcen, Anouar; Rassõlkin, Anton; Vaimann, Toomas; Ghahfarokhi, Payam Shams Energies 2021 / art. 3278 <https://doi.org/10.3390/en14113278> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Additive manufacturing of prototype axial flux switched reluctance electrical machine**

Tiismus, Hans; Kallaste, Ants; Belahcen, Anouar; Vaimann, Toomas; Rassõlkin, Anton 2021 28th International Workshop on Electric Drives : Improving Reliability of Electric Drives (IWED) 2021 / 4 p. : ill <https://doi.org/10.1109/IWED52055.2021.9376337>

### **Adjusted electrical equivalent circuit model of induction motor with broken rotor bars**

Rassõlkin, Anton; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Petrov, Aleksei; Plokhov, Igor; Kotelnikov, Aleksandr PQ2016 : the 10th International Conference 2016 Electric Power Quality and Supply Reliability Conference (PQ) : August 29-31, 2016, Tallinn, Estonia : proceedings 2016 / p. 213-218 : ill <https://doi.org/10.1109/PQ.2016.7724115>

### **Adjusted electrical equivalent circuit model of induction motor with broken rotor bars and eccentricity faults**

Petrov, Aleksei; Plokhov, Igor; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants; Belahcen, Anouar Proceeding of the 2017 IEEE 11th International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (SDEMPED) : [Tinos (Greece), August 29 - September 01, 2017] 2017 / p. 58-64 : ill <https://doi.org/10.1109/DEMPED.2017.8062334>

### **Advanced course of electrical drivers : laboratory works**

Vodovozov, Valery; Rassõlkin, Anton 2013 [http://www.ester.ee/record=b2909098\\*est](http://www.ester.ee/record=b2909098*est)

### **Advanced Modelling Frameworks for the Digital Twin of an Autonomous Electric Vehicle Propulsion Drive System = Autonomoose elektrisõiduki veelektrijami digitaalse kaksiku täiustatud modelleerimise raamistikud**

Mohamed, Mahmoud Ibrahim Hassanin 2025 <https://digikogu.taltech.ee/et/Item/6df09867-e34b-45f1-b04e-b97c08b90589> [http://www.ester.ee/record=b5746300\\*est](http://www.ester.ee/record=b5746300*est) <https://doi.org/10.23658/taltech.31/2025>

### **An overview of electrical vehicle and hybrid electrical vehicle drives**

Rassõlkin, Anton 13th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 14-19, 2013 2013 / p. 76-80

### **Analysis of possible faults and diagnostic methods of the Cartesian industrial robot**

Autsou, Siarhei; Rassõlkin, Anton; Vaimann, Toomas; Kudelina, Karolina Proceedings of the Estonian Academy of Sciences 2022 / p. 227-24 : ill <https://doi.org/10.3176/proc.2022.3.04> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Analysis of the local and global forces acting on the coil structure of a modular slotless permanent magnet generator**

Kallaste, Ants; Vaimann, Toomas; Belahcen, Anouar; Shams Ghahfarokhi, Payam; Rassõlkin, Anton Scientific Journal of

**Analytical modelling of synchronous reluctance motor including non-linear magnetic condition**

**Naseer, Muhammad Usman; Kallaste, Ants; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton** IET electric power applications 2022 / p. 511-524 <https://doi.org/10.1049/elp2.12172> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Artificial intelligence in monitoring and diagnostics of electrical energy conversion systems**

**Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Pomarnacki, Raimondas; Belahcen, Anouar; Van Khang, Hyunh** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 2020 / 4 p <https://doi.org/10.1109/IWED48848.2020.9069566>

**Artificial Intelligence-Based Predictive Analytics for Battery Energy Storage Systems in Electric Vehicle Applications = Tehisintellektil põhinev ennustav andmeanalüüs akupõhiste energiasalvestussüsteemide jaoks elektrisõidukites**

**Zequera, Rolando Antonio Gilbert** 2025 [https://www.ester.ee/record=b5758189\\*est](https://www.ester.ee/record=b5758189*est) <https://digikogu.taltech.ee/et/Item/7ecb1e38-a591-47c5-b37e-7c2e901d05f1> <https://doi.org/10.23658/taltech.61/2025>

**Automatic tolerance analysis of permanent magnet machines with encapsulated FEM Models using Digital-Twin-Distiller**

**Orosz, Tamas; Gadó, Krisztián; Katona, Mihály; Rassõlkin, Anton** Processes 2021 / art. 2077, p. 1-15 : ill <https://doi.org/10.3390/pr9112077> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Autonomous last mile shuttle ISEAUTO for education and research**

**Sell, Raivo; Leier, Mairo; Rassõlkin, Anton; Ernits, Juhan-Peep** International journal of artificial intelligence and machine learning 2020 / p. 18-30 <https://doi.org/10.4018/IJAIML.2020010102>

**Autonomous vehicle shuttle in Smart City testbed**

**Sell, Raivo; Soe, Ralf-Martin; Wang, Ruxin; Rassõlkin, Anton** Intelligent System Solutions for Auto Mobility and Beyond : Advanced Microsystems for Automotive Applications 2020 2021 / p. 143-157 [https://doi.org/10.1007/978-3-030-65871-7\\_11](https://doi.org/10.1007/978-3-030-65871-7_11)

**Axial synchronous magnetic coupling modeling and printing with selective laser melting**

**Tiismus, Hans; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton; Belahcen, Anouar** 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982344>

**Axially asymmetric design for additive manufacturing of synchronous reluctance machines**

**Naseer, Muhammad Usman; Kallaste, Ants; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton** 2023 IEEE International Conference on Electric Machines and Drives (IEMDC) 2023 / 5 p <https://doi.org/10.1109/IEMDC55163.2023.10238995>

**Bearing fault analysis of BLDC motor for electric scooter application**

**Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Rassõlkin, Anton; Kallaste, Ants; Lukichev, Dmitry** Designs 2020 / art. 42, 18 p. : ill <https://doi.org/10.3390/designs4040042> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Bearing fault analysis of BLDC motor intended for electric scooter application**

**Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants** 2021 IEEE 13th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED) 2021 / p. 427-432 <https://doi.org/10.1109/SDEMPED51010.2021.9605519>

**Broken rotor bar fault detection of the grid and inverter-fed induction motor by effective attenuation of the fundamental component**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Iqbal, Muhammad Naveed** IET electric power applications 2019 / p. 2005-2014 <https://doi.org/10.1049/iet-epa.2019.0350> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Calculation of the traction effort of ISEAUTO self-driving vehicle**

**Rassõlkin, Anton; Gevorgov, Levon; Vaimann, Toomas; Kallaste, Ants; Sell, Raivo** 2018 25th International Workshop on Electric Drives: Optimization in Control of Electric Drives (IWED) 2018 / p. 1-5 : ill <https://doi.org/10.1109/IWED.2018.8321397>

**Calculation of the traction effort of switching locomotive**

**Rassõlkin, Anton; Hõimoja, Hardi** 11th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 16-21, 2012 2012 / p. 61-65 : ill

**Case study of supplementary PMSM for low-speed wind turbine**

**Poliakov, Nikolai; Vorobev, Konstantin; Demidova, Galina; Rassõlkin, Anton; Ramensky, Dmitry** 2021 XVIII International Scientific Technical Conference Alternating Current Electric Drives (ACED) : proceedings 2021 / 5 p. : ill <https://doi.org/10.1109/ACED50605.2021.9462253>

### **Challenges of additive manufacturing of electrical machines**

**Tiismus, Hans; Kallaste, Ants; Belahcen, Anouar; Rassõlkin, Anton; Vaimann, Toomas** 2019 IEEE 12th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED), 27-30 Aug. 2019, Toulouse, France : proceedings 2019 / p. 44-48 : ill <https://doi.org/10.1109/DEMPED.2019.8864850>

### **Charge Diagnostics and State Estimation of Battery Energy Storage Systems Through Transformer Models**

**Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** IEEE Access 2025 / p. 17733–17744 : ill <https://doi.org/10.1109/ACCESS.2025.3532858>

### **Clustering and outlier analysis for key performance indicators in battery energy storage systems applications**

**Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227417>

### **Comparative analysis of electric drives met for vehicle propulsion**

**Vodovozov, Valery; Raud, Zoja; Lehtla, Tõnu; Rassõlkin, Anton; Lillo, Nikolai** 9th International Conference on Ecological Vehicles and Renewable Energies EVER 2014 2014 / [8] p. : ill

### **Comparative simulation study of pump system efficiency driven by induction and synchronous reluctance motors**

**Gevorkov, Levon; Dominguez-Garcia, Jose Luis; Rassõlkin, Anton; Vaimann, Toomas** Energies 2022 / art. 4068 <https://doi.org/10.3390/en15114068> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Comparative study of field-oriented control model in application for induction and synchronous reluctance motors for life-cycle analysis**

**Autsou, Siarhei; Saroka, Viktor; Karpovich, Dzmitry; Rassõlkin, Anton; Gevorkov, Levon; Vaimann, Toomas; Kallaste, Ants; Belahcen, Anouar; Rassõlkin, Anton** 2018 25th International Workshop on Electric Drives: Optimization in Control of Electric Drives (IWED) 2018 / p. 1-5 : ill <https://doi.org/10.1109/IWED.2018.8321371>

### **Comparison of synchronous reluctance machine and permanent magnet-assisted synchronous reluctance machine performance characteristics**

**Heidari, Hamidreza; Andriushchenko, Ekaterina; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Demidova, Galina** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 2020 / 5 p. : ill <https://doi.org/10.1109/IWED48848.2020.9069583>

### **A comparison of the vector control of synchronous reluctance motor and permanent magnet-assisted synchronous reluctance motor**

**Heidari, Hamidreza; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Andriushchenko, Ekaterina; Belahcen, Anouar; Razzaghi, Arash** 2021 XVIII International Scientific Technical Conference Alternating Current Electric Drives (ACED) : proceedings 2021 / 6 p. : ill <https://doi.org/10.1109/ACED50605.2021.9462265>

### **Compliance testing concept of grid-connected inverter-based resources using simulated input**

**Dvoracek, Jiri; Drapela, Jiri; Moravek, Jan; Vojtek, Martin; Toman, Petr; Rassõlkin, Anton; Vaimann, Toomas** 2023 23rd International Scientific Conference on Electric Power Engineering (EPE) 2023 / p. 1-6 <https://doi.org/10.1109/EPE58302.2023.10149232>

### **Concept of the test Bench for electrical vehicle propulsion drive data acquisition**

**Rassõlkin, Anton; Rjabtšikov, Viktor; Vaimann, Toomas; Kallaste, Ants; Kuts, Vladimir** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 35-42 : ill <https://doi.org/10.1109/ICEPDS47235.2020.9249078>

### **Conceptual modelling of an EV-permanent magnet synchronous motor digital twin**

**Mohamed, Mahmoud Ibrahim Hassanin; Rjabtšikov, Viktor; Jegorov, Sergei; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC) : Brasov, Romania, 25-28 Sept. 2022 : proceedings 2022 / p. 156-160 <https://doi.org/10.1109/PEMC51159.2022.9962943>

### **Conceptual test bench for small class unmanned autonomous vehicle performance estimation**

**Pütsep, Kristjan; Rassõlkin, Anton; Vaimann, Toomas** 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. 695-698 : ill <https://doi.org/10.1109/PEMC48073.2021.9432509>

### **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](https://doi.org/10.1007/978-3-031-18458-1_12) [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **Condition monitoring of a Cartesian robot with a mechanically damaged gear to create a fuzzy logic control and diagnosis algorithm**

**Autsou, Siarhei; Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants** Applied sciences 2024 / art. 4241

### **Control challenges of 3D printed switched reluctance motor**

**Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Tiismus, Hans** 2019 26th International Workshop on Electric Drives : Improvement in Efficiency of Electric Drives (IWED) : Moscow Power Engineering Institute, Moscow, Russia 30th of January - 02nd of February 2019 : proceedings 2019 / 5 p. : ill <https://doi.org/10.1109/IWED.2019.8664282>

### **Converter state-space model estimation using dynamic mode decomposition**

Suskis, Pavels; Zakis, Janis; Suzdalenko, Alexander; Khang, Huynh Van; **Rassõlkin, Anton; Vaimann, Toomas**; Pomarnacki, Raimondas 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 / 5 l <https://doi.org/10.1109/ENERGYCON53164.2022.9830201>

### **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>

### **Current challenges in operation, performance, and maintenance of photovoltaic panels**

Orosz, Tamas; **Rassõlkin, Anton**; Arsenio, Pedro; Poor, Peter; **Valme, Daniil**; Sleisz, Adam Energies 2024 / art. 1306 <https://doi.org/10.3390/en17061306> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Curricula reforms through structural reforms**

**Vaimann, Toomas; Rassõlkin, Anton; Palu, Ivo** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 1-5 : ill <https://doi.org/10.1109/ICEPDS47235.2020.9249084>

### **Curricula updates through students' participation in international competition**

**Valme, Daniil; Belolipetskaja, Diana; Rassõlkin, Anton; Leoste, Janika; Rüttnann, Tiia** Robotics in education : proceedings of the RiE 2024 conference 2024 / p. 352-364 [https://doi.org/10.1007/978-3-031-67059-6\\_31](https://doi.org/10.1007/978-3-031-67059-6_31) [Conference proceedings at Scopus](#) [Article at Scopus](#) [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>

### **Data science-based techniques for modelling and diagnostics of battery cells based on end-of-life criteria**

**Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2023 International Conference on Electrical Drives and Power Electronics (EDPE) 2023 / 6 p <https://doi.org/10.1109/EDPE58625.2023.10274007>

### **Deep Learning methodology for charging management applications in battery cells based on Neural Networks**

**Zequera, Rolando Antonio Gilbert; Rjabtšikov, Viktor; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** IEEE Transactions on Intelligent Vehicles 2025 / p. 668-682 <https://doi.org/10.1109/TIV.2024.3417216>

### **Design and performance of laser additively manufactured core induction motor**

**Tiismus, Hans; Kallaste, Ants; Naseer, Muhammad Usman; Vaimann, Toomas; Rassõlkin, Anton** IEEE Access 2022 / p. 50137-50152 <https://doi.org/10.1109/ACCESS.2022.3173317> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Design and prototyping of directly driven outer rotor permanent magnet generator for small scale wind turbines [Online resource]**

**Vaimann, Toomas; Kudrjavitsev, Oleg; Kilk, Aleksander; Kallaste, Ants; Rassõlkin, Anton** Advances in electrical and electronic engineering 2018 / p. 271-278 : ill <https://doi.org/10.15598/aeer.v16i3.2698> [Journal metrics at Scopus](#) [Article at Scopus](#)

### **Design of a research laboratory drive system for a synchronous reluctance motor for vector control and performance analysis**

**Heidari, Hamidreza; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Andriushchenko, Ekaterina; Belahcen, Anouar** Inventions 2021 / art. 64, 21 p. : ill <https://doi.org/10.3390/inventions6040064> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Design of rotors for synchronous reluctance motor : analytical treatment and optimization**

Orlova, Svetlana; Pugachov, Vladislav; **Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 2019 21st European Conference on Power Electronics and Applications (EPE '19 ECCE Europe), 3-5 Sept. 2019, Genova, Italy : proceedings 2019 / 9 p. : ill <https://doi.org/10.23919/EPE.2019.8914760>

### **Design optimization of permanent magnet clutch**

**Andriushchenko, Ekaterina; Kallaste, Ants; Belahcen, Anouar; Heidari, Hamidreza; Vaimann, Toomas; Rassõlkin, Anton**



**Design optimization of permanent magnet clutch with Ārtap framework**

**Andriushchenko, Ekaterina;** Kaska, Jan; **Kallaste, Ants; Belahcen, Anouar; Vaimann, Toomas; Rassõlkin, Anton** Periodica polytechnica electrical engineering and computer science 2021 / p. 106-112 <https://doi.org/10.3311/PPee.17007> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Design procedure and preliminary analysis for the introduction of axial asymmetry in the synchronous reluctance machines**

**Naseer, Muhammad Usman; Kallaste, Ants; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton** 2023 IEEE Workshop on Electrical Machines Design, Control and Diagnosis (WEMDCD) : proceedings 2023 / 6 p. : ill <https://doi.org/10.1109/WEMDCD55819.2023.10110903>

**A detailed testing procedure of numerical differential protection relay for EHV auto transformer**

**Ehsan, Umer; Jawad, Muhammad; Javed, Umar; Zaidi, Khurram Shabih; Rehman, Ateeq Ur; Rassõlkin, Anton; Althobaiti, Maha M.; Hamam, Habib; Shafiq, Muhammad** Energies 2021 / art. 8447 <https://doi.org/10.3390/en14248447> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Determination of forced convection coefficient over a flat side of coil**

**Ghahfarokhi, Payam Shams; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton; Belahcen, Anouar** 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [4] p. : ill <https://doi.org/10.1109/RTUCON.2017.8124759>

**Determination of natural convection heat transfer coefficient over the fin side of a coil system**

**Shams Ghahfarokhi, Payam; Belahcen, Anouar; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton** International journal of heat and mass transfer 2018 / p. 677-682 : ill <https://doi.org/10.1016/j.ijheatmasstransfer.2018.05.071> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Development and testing of vertical take-off and landing aerial vehicle with tandem electric ducted fan motor**

**Pütsep, Kristjan; Nerep, Tõivo; Tiismus, Hans; Rassõlkin, Anton** Proceedings of the Estonian Academy of Sciences 2023 / p. 184-193 <https://doi.org/10.3176/proc.2023.2.08> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**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>

**Development case study of the first Estonian self-driving car, ISEAUTO**

**Rassõlkin, Anton; Sell, Raivo; Leier, Mairo** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 81-88 : ill <https://doi.org/10.2478/ecce-2018-0009>

**Development methodology for creating the digital twin for propulsion drive of an electric vehicle = Elektrisõiduki veoajami digitaalse kaksiku arendusmetoodika**

**Rjabtšikov, Viktor** 2024 [https://www.ester.ee/record=b5685462\\*est](https://www.ester.ee/record=b5685462*est) <https://digikogu.taltech.ee/et/Item/6cbd2dba-76a5-4931-a9f3-53b9d4d87c1e> <https://doi.org/10.23658/taltech.29/2024>

**Development of control methods for synchronous reluctance motors = Sünkroonreluktantsmootorite juhtimismeetodite edasiarendus**

**Heidari, Hamdreza** 2022 <https://doi.org/10.23658/taltech.8/2022> <https://digikogu.taltech.ee/et/Item/f249726a-f96c-4d94-b892-afc9ae4fda9e> [https://www.ester.ee/record=b5491774\\*est](https://www.ester.ee/record=b5491774*est)

**Development of emerging technology-driven NordPlus competence network in the Baltic and Nordic regions**

**Kunicina, Nadezhda; Bruzgien, Rasa; Narbutaite, Lina; Rassõlkin, Anton; Mohamed, Mahmoud Ibrahim Hassanin; Balandin, Sergey** 2024 35th Conference of Open Innovations Association (FRUCT) : proceedings Proceedings of the 2024 / p. 407-412 : ill <https://doi.org/10.23919/FRUCT61870.2024.10516359>

**Development of mutual recognition of education approach in advanced computer-oriented engineering technologies in the Baltic region**

**Kunicina, Nadezhda; Rassõlkin, Anton; Bruzgiene, Rasa; Plonis, Darius; Caiko, J.** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p <https://doi.org/10.1109/RTUCON60080.2023.10413098>

**Diagnostic possibilities of induction motor bearing currents**

**Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Demidova, Galina; Karpovich, Dzmitry** 2021 XVIII International Scientific Technical Conference Alternating Current Electric Drives (ACED) : proceedings 2021 / 5 p. : ill <https://doi.org/10.1109/ACED50605.2021.9462298>

**Digital shadow of an electric vehicle-permanent magnet synchronous motor drive for real-time performance monitoring**  
**Mohamed, Mahmoud Ibrahim Hassanin; Rjabtšikov, Viktor; Rassõlkin, Anton** Digital twins and applications 2025 / 12 p  
<https://doi.org/10.1049/dgt2.12024>

**Digital Twin as a virtual sensor for wind turbine applications**

**Mohamed, Mahmoud Ibrahim Hassanin; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants; Zakis, Janis; Hyunh, Van Khang; Pomarnacki, Raimondas** Energies 2023 / art. 6246 <https://doi.org/10.3390/en16176246> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Digital twin for propulsion drive of autonomous electric vehicle**

**Rassõlkin, Anton; Kuts, Vladimir; Kallaste, Ants; Vaimann, Toomas** 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 4 p. : ill  
<https://doi.org/10.1109/RTUCON48111.2019.8982326>

**Digital twin for propulsion drive of autonomous electric vehicle**

**Rassõlkin, Anton** X Międzynarodowa Konferencja "Nauki społeczne i techniczne – zakres współpracy na rzecz postępu społecznego i technologicznego" 2020 / p. [36-37] : ill [https://mcabi.pl/wp-content/uploads/2020/06/skrypt\\_abstrakty\\_mailing-1.pdf](https://mcabi.pl/wp-content/uploads/2020/06/skrypt_abstrakty_mailing-1.pdf)

**Digital twin of an electrical motor based on empirical performance model**

**Rassõlkin, Anton; Rjabtšikov, Viktor; Vaimann, Toomas; Kallaste, Ants; Kuts, Vladimir; Partyshev, Andriy** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 11-14 : ill  
<https://doi.org/10.1109/ICEPDS47235.2020.9249366>

**Digital twin service unit development for an EV induction motor fault detection**

**Rjabtšikov, Viktor; Mohamed, Mahmoud Ibrahim Hassanin; Asad, Bilal; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants; Kuts, Vladimir;** Stepień, Mariusz; Krawczyk, Mateusz 2023 IEEE International Conference on Electric Machines and Drives (IEMDC) 2023 / 5 p <https://doi.org/10.1109/IEMDC55163.2023.10239085>

**Digital Twin service unit for AC motor stator inter-turn short circuit fault detection**

**Rjabtšikov, Viktor; Rassõlkin, Anton; Asad, Bilal; Vaimann, Toomas; Kallaste, Ants; Kuts, Vladimir; Jegorov, Sergei;** Stepień, Mariusz; Krawczyk, Mateusz 2021 28th International Workshop on Electric Drives : Improving Reliability of Electric Drives (IWED) 2021 <https://doi.org/10.1109/IWED52055.2021.9376328>

**Distance learning in technical education on example of Estonia and Poland**

**Vaimann, Toomas;** Stepień, Mariusz; **Rassõlkin, Anton; Palu, Ivo** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 285-288 : ill  
<https://doi.org/10.1109/ICEPDS47235.2020.9249317>

**Dynamic control system for electric motor drive testing on the test bench**

**Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 2015 9th International Conference on Compatibility and Power Electronics (CPE) : proceedings : Faculty of Science and Technology (FCT), Caparica, Lisbon, Portugal, 24-26 June, 2015 2015 / p. 252-257 : ill  
<http://dx.doi.org/10.1109/CPE.2015.7231082>

**Dynamic state space model based analysis of a three-phase induction motor using nonlinear magnetization inductance**

**Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Belahcen, Anouar** 2018 19th International Scientific Conference on Electric Power Engineering (EPE 2018) : Brno, Czech Republic, 16 - 18 May 2018 2018 / p. 260-265 : ill  
<https://doi.org/10.1109/EPE.2018.8396039>

**Eddy current loss reduction prospects in laser additively manufactured soft magnetic cores**

**Tiismus, Hans; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton** 2022 International Conference on Electrical Machines (ICEM) 2022 / p. 1511-1516 <https://doi.org/10.1109/ICEM51905.2022.9910679>

**EDUTECH - good practices in cooperation between schools and academia attracting candidates for technical education**

**Rassõlkin, Anton; Vaimann, Toomas; Kudelina, Karolina;** Stepień, Mariusz; Berger, Kevin 2020 IEEE 61st International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, Nov. 5-7, 2020 : conference proceedings 2020 <https://doi.org/10.1109/RTUCON51174.2020.9316614>

**Eesti talv ja tootja promo: millised on tegelikud väljakutsed elektriautode akude arendamisel? Teemat avab TalTechi professor**

**Rassõlkin, Anton** digi.geenius.ee 2024 [Eesti talv ja tootja promo: millised on tegelikud väljakutsed elektriautode akude arendamisel? Teemat avab TalTechi professor](#)

**Efficiency map comparison of induction and synchronous reluctance motors**

**Rassõlkin, Anton; Heidari, Hamidreza; Kallaste, Ants; Vaimann, Toomas;** Acedo, Jaime Pando; Romero-Cadaval, Enrique 2019 26th International Workshop on Electric Drives : Improvement in Efficiency of Electric Drives (IWED) : Moscow Power Engineering Institute, Moscow, Russia, 30th of January – 2nd of February 2019 : proceedings 2019 / 4 p. : ill  
<https://doi.org/10.1109/IWED.2019.8664334>

### **Electric and hybrid vehicles : From smart energy storage systems to mechanical transmission**

**Sekhri, Even; Mohamed, Mahmoud Ibrahim Hassanin; Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton** Smart Electric and Hybrid Vehicles : Advancements in Materials, Design, Technologies, and Modeling 2025 / p. 71-126  
<https://doi.org/10.1002/9781394225040.ch3>

### **Electric drive for throttle control of centrifugal pump system**

**Gevorkov, Levon; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 5 p. : ill <https://doi.org/10.1109/RTUCON.2018.8659845>

### **Electric vehicle electric drive signal analysis and mapping of direct control possibilities**

**Rassõlkin, Anton; Sell, Raivo; Tihhonov, Kirill** Международная научно-техническая конференция : АВТОМАТИЧЕСКИЙ КОНТРОЛЬ И АВТОМАТИЗАЦИЯ ПРОИЗВОДСТВЕННЫХ ПРОЦЕССОВ, 3-6 октября, 2018 г. : ПРОГРАММА КОНФЕРЕНЦИИ 2018 / p. 9 <https://www.belstu.by/Portals/0/userfiles/37/000-PROGRAMMA-konf--APP-2018.pdf>

### **Electrical resistivity of additively manufactured silicon steel for electrical machine fabrication**

**Tiismus, Hans; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton; Belahcen, Anouar** 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärda, Estonia, June 12-15, 2019 : proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/PQ.2019.8818252>

### **Energy saving estimates for regenerative braking and downhill driving of battery electric vehicles**

**Vodovozov, Valery; Rassõlkin, Anton; Lillo, Nikolai; Raud, Zoja** BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 237-240 : ill

### **Energy saving possibilities in the industrial robot IRB 1600 control [Electronic resource]**

**Rassõlkin, Anton; Hõimoja, Hardi; Teemets, Raivo** CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 226-229 [CD-ROM]  
[https://www.researchgate.net/publication/252015731\\_Energy\\_saving\\_possibilities\\_in\\_the\\_industrial\\_robot\\_IRB\\_1600\\_control](https://www.researchgate.net/publication/252015731_Energy_saving_possibilities_in_the_industrial_robot_IRB_1600_control)

### **Energy-efficient autonomous systems - capacity building cross-border educational initiative**

Kunicina, Nadezda; Plonis, Darius; Bruzgiene, Rasa; **Rassõlkin, Anton** 2025 IEEE 12th Workshop on Advances in Information, Electronic and Electrical Engineering (AIEEE) 2025 / 5 p <https://doi.org/10.1109/AIEEE66149.2025.11050877>

### **Environmental and life cycle cost analysis of a synchronous reluctance machine [Online resource]**

**Rassõlkin, Anton; Orlova, Svetlana; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants** 2016 57th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : October 13, 14, 2016 : conference proceedings 2016 / [5] p. : ill <https://doi.org/10.1109/RTUCON.2016.7763127>

### **The Erasmus+ strategic partnership as a way to attract young people to engineering**

Stepien, Mariusz; Berger, Kevin; **Rassõlkin, Anton; Vaimann, Toomas** Advances in Human Factors in Training, Education, and Learning Sciences : Proceedings of the AHFE 2019 International Conference on Human Factors in Training, Education, and Learning Sciences, July 24-28, 2019, Washington D.C., USA 2020 / p. 252-259 [https://doi.org/10.1007/978-3-030-20135-7\\_25](https://doi.org/10.1007/978-3-030-20135-7_25) [Conference proceedings at Scopus](#) [Article at Scopus](#)

### **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

### **EV-powertrain test bench for digital twin development**

**Rjabtšikov, Viktor; Mohamed, Mahmoud Ibrahim Hassanin; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC) : Brasov, Romania, 25-28 Sept. 2022 : proceedings 2022 / p. 559-563 : ill <https://doi.org/10.1109/PEMC51159.2022.9962879>

### **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>

### **Example of automatic safety systems based on power line communication and Microsoft Azure**

**Daukaev, Kamil; Rassõlkin, Anton; Belahcen, Anouar** 16th International Symposium "Topical Problems in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology III" : Pärnu, Estonia, January 16-21, 2017 2017 / p. 95-96 : ill [http://www.ester.ee/record=b4650094\\*est](http://www.ester.ee/record=b4650094*est)

### **Experimental determination of equivalent circuit parameters for a synchronous generator**

**Naseer, Muhammad Usman; Asad, Bilal; Ghahfarokhi, Payam Shams; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton**

2021 IEEE Open Conference of Electrical, Electronic and Information Sciences (eStream): proceedings of the conference, April 22, 2021, Vilnius, Lithuania 2021 / 7 p. : ill <https://doi.org/10.1109/eStream53087.2021.9431442>

**Experimental prototype of high-efficiency wind turbine based on Magnus effect**

**Lukin, Aleksandr; Demidova, Galina; Lukichev, Dmitry; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Belahcen, Anouar** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 2020 / 6 p <https://doi.org/10.1109/IWED48848.2020.9069565>

**Experimental setup to explore the drives of battery electric vehicles**

**Rassõlkin, Anton; Vodovozov, Valery** The 27th International Electric Vehicle Symposium & Exhibition : Barcelona, 17th to 20th of November 2013 2014 <https://doi.org/10.1109/EVS.2013.6914810>

**Experimental setup to explore the drives of battery electric vehicles**

**Rassõlkin, Anton; Vodovozov, Valery** World Electric Vehicle Journal 2013 / p. 1109 - 1114 <https://doi.org/10.3390/wevj6041109>  
[Journal metrics at Scopus](#) [Article at Scopus](#)

**Experimental setup to explore the propulsion motor drive testing for battery electric vehicles**

**Rassõlkin, Anton; Müür, Margus** Proceedings of 2015 IEEE Global Engineering Education Conference (EDUCON) : 18-20 March 2015, Tallinn University of Technology (TUT), Tallinn, Estonia 2015 / p. 63-67 : ill <http://dx.doi.org/10.1109/EDUCON.2015.7095952>

**Fault detecting accuracy of mechanical damages in rolling bearings**

**Kudelina, Karolina; Baraškova, Tatjana; Shirokova, Veroonika; Vaimann, Toomas; Rassõlkin, Anton** Machines 2022 / art. 86  
<https://doi.org/10.3390/machines10020086> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Fault diagnosis of the tooth belt transmission of Cartesian robot**

**Autsou, Siarhei; Vaimann, Toomas; Rassõlkin, Anton; Asad, Bilal; Kudelina, Karolina; Huynh, Van Khang** 2022 29th International Workshop on Electric Drives : Advances in Power Electronics for Electric Drives : IWED2022 : Moscow Power Engineering Institute, Moscow, Russia : 26th– 29th of January 2022 : Proceedings 2022 / 6 p  
<https://doi.org/10.1109/IWED54598.2022.9722578>

**Fault diagnosis system of Cartesian robot for various belt tension**

**Autsou, Siarhei; Vaimann, Toomas; Rassõlkin, Anton; Kudelina, Karolina** 2022 International Conference on Diagnostics in Electrical Engineering (Diagnostika) 2022 / 4 I <https://doi.org/10.1109/Diagnostika55131.2022.9905111>

**Fault tolerant control and diagnosis strategies for cartesian industrial robot motion control planning system =**

**Tõrketaluvusega juhtimis- ja diagnostikastrateegiad tööstusliku karteesianroboti liikumise planeerimise juhtimissüsteemi jaoks**

**Autsou, Siarhei** 2025 [https://www.ester.ee/record=b5734587\\*est](https://www.ester.ee/record=b5734587*est) <https://digikogu.taltech.ee/et/Item/c9afdbf3-354b-41f5-a705-ede924a2af21>  
<https://doi.org/10.23658/taltech.14/2025>

**Fault tolerant control of a grid-connected microgrid with high penetration of renewable energy**

**Senanayaka, Jagath; Khang, Huynh Van; Vaimann, Toomas; Rassõlkin, Anton** 24th International Conference on Electrical Machines and Systems (ICEMS) 2021 / p. 938-943 <https://doi.org/10.23919/ICEMS52562.2021.9634364>

**Fault-tolerant control of a grid-connected bipolar DC microgrid with high penetration of intermittent renewable energy**

**Senanayaka, Jagath; Khang, Huynh Van; Rassõlkin, Anton; Vaimann, Toomas; Zakis, Janis; Pomarnacki, Raimondas** IECON 2022 - 48th Annual Conference of the IEEE Industrial Electronics Society 2022 / p. 1-6  
<https://doi.org/10.1109/IECON49645.2022.9968572> [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Feasibility study of a local power supply system for sparsely populated areas in Estonia**

**Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Märss, Maido** Agronomy research 2016 / p. 1720-1729 : ill  
[http://www.ester.ee/record=b1787401\\*est](http://www.ester.ee/record=b1787401*est) [Journal metrics at Scopus](#) [Article at Scopus](#)

**Flood prevention through condition monitoring of pumping stations**

**Gevorkov, Levon; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 5 p. : ill  
<https://doi.org/10.1109/RTUCON48111.2019.8982305>

**Force-based feedback for haptic device of mobile assembly robot**

**Lukin, Aleksandr; Demidova, Galina; Rassõlkin, Anton; Vaimann, Toomas; Roozbahani, Hamid** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 2020 / 5 p. : ill <https://doi.org/10.1109/IWED48848.2020.9069581>

**From ADAS to Material-Informed Inspection : Review of Hyperspectral Imaging Applications on Mobile Ground Robots**

**Valme, Daniil; Rassõlkin, Anton; Liyanage, Dhanushka Chamara** Sensors 2025 / art. 2346 <https://doi.org/10.3390/s25082346>  
<https://www.mdpi.com/1424-8220/25/8/2346>



## **Fully automated tuning of microwave coaxial cavity filters = Mikrolaine-koaksiaalfiltrite täisautomaatne häälestamine**

**Sekhri, Even** 2024 [https://www.ester.ee/record=b5685094\\*est](https://www.ester.ee/record=b5685094*est) <https://digikogu.taltech.ee/et/Item/38784e65-568e-4dd9-aef9-bb5eec5a2a9c>  
<https://doi.org/10.23658/taltech.20/2024>

## **Fundamentals of electrical machines**

**Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton; Janson, Kuno** 2026 [https://www.routledge.com/Fundamentals-of-Electrical-Machines/Kallaste-Vaimann-Rassolkin-Janson/p/book/9781032518206?srsltid=AfmBOopOWsvE7PCg4afDRJAsSt-7MPjB1tipnsK8Yhta6i\\_tqjPvPr](https://www.routledge.com/Fundamentals-of-Electrical-Machines/Kallaste-Vaimann-Rassolkin-Janson/p/book/9781032518206?srsltid=AfmBOopOWsvE7PCg4afDRJAsSt-7MPjB1tipnsK8Yhta6i_tqjPvPr)

## **Generative design in development of mechanical components for Magnus effect-based wind turbine**

**Lukin, Aleksandr; Perepelkina, Svetlana; Demidova, Galina; Lukichev, Dmitry; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020  
2020 / p. 6-10 : ill <https://doi.org/10.1109/ICEPDS47235.2020.9249344>

## **Generative design in weight optimization of reconfigurable continuous track robot**

**Valme, Daniil; Kudelina, Karolina; Belolipetskaja, Diana; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2021 28th International Workshop on Electric Drives : Improving Reliability of Electric Drives (IWED) 2021 / 6 p  
<https://doi.org/10.1109/IWED52055.2021.9376329>

## **Harmonics distortion in inverter-fed motor-drive systems : case study**

**Heidari, Hamidreza; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Belahcen, Anouar** 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärda, Estonia, June 12-15, 2019 : proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/PQ.2019.8818230>

## **Health and charge indicators for battery energy storage systems in electric vehicles applications**

**Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC) : Brasov, Romania, 25-28 Sept. 2022 : proceedings 2022 / p. 427-432  
<https://doi.org/10.1109/PEMC51159.2022.9962858>

## **Heat pump induction motor faults caused by soft starter topology — case study**

**Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Huynh, Van Khang** 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. 454-459 : ill <https://doi.org/10.1109/PEMC48073.2021.9432506>

## **Hilbert transform, an effective replacement of Park's vector modulus for the detection of rotor faults**

**Asad, Bilal; Vaimann, Toomas; Kallaste, Ants; Rassõlkin, Anton; Belahcen, Anouar** 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärda, Estonia, June 12-15, 2019 : proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/PQ.2019.8818227>

## **Hybrid FEA-Simulink modelling of permanent magnet assisted synchronous reluctance motor with unbalanced magnet flux**

**Pando-Acedo, Jaime; Rassõlkin, Anton; Lehtikoinen, Antti; Vaimann, Toomas; Kallaste, Ants; Romero-Cadaval, Enrique; Belahcen, Anouar** 2019 IEEE 12th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED), 27-30 Aug. 2019, Toulouse, France : proceedings 2019 / p. : 174-180 : ill <https://doi.org/10.1109/DEMPED.2019.8864925>

## **Hybrid thermal model of a synchronous reluctance machine**

**Shams Ghahfarokhi, Payam; Kallaste, Ants; Belahcen, Anouar; Vaimann, Toomas; Rassõlkin, Anton** Case studies in thermal engineering 2018 / p. 381-389 : ill <https://doi.org/10.1016/j.csite.2018.05.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Hyperspectral imaging for vehicle traction effort prediction: ISEAUTO case study**

**Valme, Daniil; Rassõlkin, Anton; Liyanage, Dhanushka Chamara** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 5 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227463>

## **Hysteresis loss evaluation of additively manufactured soft magnetic core**

**Tiismus, Hans; Kallaste, Ants; Belahcen, Anouar; Rassõlkin, Anton; Vaimann, Toomas** 2020 International Conference on Electrical Machines (ICEM), 23-26 august 2020, Gothenburg, Sweden : online : proceedings 2020 / p. 1657-1661  
<https://doi.org/10.1109/ICEM49940.2020.9270836>

## **Hysteresis measurements and numerical losses segregation of additively manufactured silicon steel for 3D printing electrical machines**

**Tiismus, Hans; Kallaste, Ants; Belahcen, Anouar; Vaimann, Toomas; Rassõlkin, Anton; Lukichev, Dmitry** Applied sciences 2020 / art. 6515, 15 p <https://doi.org/10.3390/app10186515> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## **Identification and characterization of modulation scheme in an EV-PMSM control strategy for digital twin modeling**

**Mohamed, Mahmoud Ibrahim Hassanin; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** Diagnostika 2024 - 2024 International Conference on Diagnostics in Electrical Engineering, Proceedings 2024 / 5 p  
<https://doi.org/10.1109/Diagnostika61830.2024.10693927>

#### **Impact of bearing faults on vibration level of BLDC motor**

**Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants** IECON 2021 – 47th Annual Conference of the IEEE Industrial Electronics Society, 2021 2021 / p. 1-6 : ill <https://doi.org/10.1109/IECON48115.2021.9589268> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [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; Autso, 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; Autso, 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>

#### **Implementation and analysis of rolling bearing faults caused by shaft currents**

**Kudelina, Karolina; Autso, Siarhei; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants** International Workshop on Electric Drives: Optimization in Control of Electric Drives (IWED) 2022 <https://doi.org/10.1109/IWED54598.2022.9722596>

#### **Implementation of Digital Twins for electrical energy conversion systems in selected case studies**

**Rassõlkin, Anton; Orosz, Tamas; Demidova, Galina; Kuts, Vladimir; Rjabtšikov, Viktor; Vaimann, Toomas; Kallaste, Ants** Proceedings of the Estonian Academy of Sciences 2021 / p. 19-39 : ill <https://doi.org/10.3176/proc.2021.1.03> [https://doi.org/wp-content/plugins/kirj/pub/proc-1-2021-19-39\\_20210201183802.pdf](https://doi.org/wp-content/plugins/kirj/pub/proc-1-2021-19-39_20210201183802.pdf) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Improving legibility of motor current spectrum for broken rotor bars fault diagnostics**

**Asad, Bilal; Vaimann, Toomas; Kallaste, Ants; Rassõlkin, Anton; Belahcen, Anouar; Iqbal, Muhammad Naveed** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2019 / p. 1–8 : ill <https://doi.org/10.2478/ecce-2019-0001>

#### **Induction machine fault detection using smartphone recorded audible noise**

**Vaimann, Toomas; Sobra, Jan; Belahcen, Anouar; Rassõlkin, Anton; Rolak, Michal; Kallaste, Ants** IET science, measurement and technology 2018 / p. 554-560 : ill <https://doi.org/10.1049/iet-smt.2017.0104> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Induction motor bearing currents - causes and damages**

**Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Asad, Bilal; Demidova, Galina** 2021 28th International Workshop on Electric Drives : Improving Reliability of Electric Drives (IWED) 2021 / 5 p  
<https://doi.org/10.1109/IWED52055.2021.9376354>

#### **Influence of different tooth belt transmission faults on the work of a cartesian robot**

**Autso, Siarhei; Vaimann, Toomas; Rassõlkin, Anton; Kudelina, Karolina; Asad, Bilal** Proceedings of the 2022 20th International Conference on Mechatronics - Mechatronika, (ME), Pilsen, Czech Republic, December 7–9, 2022 2022 / 5 p. : ill <https://doi.org/10.1109/ME54704.2022.9982815>

#### **The influence of solar energy on the development of the mining industry in the republic of Cuba**

**Shklyarskiy, Yaroslav E.; Guerra, Dias Daniel; Iakovleva, Emiliia V.; Rassõlkin, Anton** Journal of Mining Institute 2021 / p. 427 - 440  
<https://doi.org/10.31897/PMI.2021.3.12> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Influence of solar power plants on 0.4 kV consumers**

**Rubanenko, Olena; Hunko, Iryna; Rubanenko, Oleksandr; Rassõlkin, Anton** 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 5 p. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982257>

#### **Initial design estimation of synchronous machines**

**Naseer, Muhammad Usman; Kallaste, Ants; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton** International Workshop on Electric Drives: Optimization in Control of Electric Drives (IWED) 2022 <https://doi.org/10.1109/IWED54598.2022.9722585>

#### **Inseneriõpe TalTechis sai täiendust ABB kingitud seadmetega**

toostusest.ee 2025 [Inseneriõpe TalTechis sai täiendust ABB kingitud seadmetega](#)

#### **Integration of autonomous vehicles and Industry 4.0**

**Sell, Raivo; Rassõlkin, Anton; Wang, Ruxin; Otto, Tauno** Proceedings of the Estonian Academy of Sciences 2019 / p. 389–394 : ill <https://doi.org/10.3176/proc.2019.4.07> [http://www.kirj.ee/32705/?tpl=1061&c\\_tpl=1064](http://www.kirj.ee/32705/?tpl=1061&c_tpl=1064) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal](#)

[metrics at WOS](#) [Article at WOS](#)

#### **Intelligent functions development on autonomous electric vehicle platform**

**Wang, Ruxin; Sell, Raivo; Rassõlkin, Anton; Otto, Tauno;** Malayjerdi, Ehsan Journal of machine engineering 2020 / p. 114-125  
<https://doi.org/10.36897/jme/117787> [Journal metrics at Scopus](#) [Article at Scopus](#)

#### **Interface development for digital twin of an electric motor based on empirical performance model**

**Rassõlkin, Anton; Rjabtšikov, Viktor; Kuts, Vladimir; Vaimann, Toomas; Kallaste, Ants; Asad, Bilal; Partyshev, Andriy** IEEE Access 2022 / p. 15635-15643 <https://doi.org/10.1109/ACCESS.2022.3148708> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Investigation of FEM software for Magnus Effect Simulation**

**Lukin, Aleksandr; Demidova, Galina; Lukichev, Dmitry; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2021 28th International Workshop on Electric Drives : Improving Reliability of Electric Drives (IWED) 2021 / 5 p  
<https://doi.org/10.1109/IWED52055.2021.9376396>

#### **Investigation of the forces acting on the coils of a Modular Slotless Permanent Magnet Generator**

**Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton; Belahcen, Anouar** 21st International Conference on the Computation of Electromagnetic Fields (Compumag 2017) : Daejeon, South Korea, 18-22 June 2017 2017 / p. 707-708 : ill  
[http://www.compumag.org/CMAG2017/\[PD-M3-9\]\\_727.pdf](http://www.compumag.org/CMAG2017/[PD-M3-9]_727.pdf)

#### **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>

#### **ISEAUTO - First Estonian Self-Driving Vehicle**

**Rassõlkin, Anton** 18th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology III : Toila, Estonia, January 14-19, 2019 : [proceedings] 2019 / p. 11-12  
[https://www.ester.ee/record=b5183874\\*est](https://www.ester.ee/record=b5183874*est)

#### **12. energia- ja geotehnika-alane rahvusvaheline sümposium Kuressaares : [sümposiumil kaitsesid oma doktoritööd Andrei Blinov, Zoja Raud, Veiko Karu, Heigo Mölder ja Lauri Kütt, parima ettekande tunnustuse sai Anton Rassõlkin, kõik TTÜst]**

**Rassõlkin, Anton; Möller, Taavi** Mente et Manu 2012 / lk. 3 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

#### **Kolmogorov-Arnold networks for algorithm design in battery energy storage system applications**

**Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** Energy Reports 2025 / p. 2664-2677  
<https://doi.org/10.1016/j.egyr.2025.02.002>

#### **Laser additively manufactured magnetic core design and process for electrical machine applications**

**Tiismus, Hans; Kallaste, Ants; Vaimann, Toomas; Lind, Liina; Virro, Indrek; Rassõlkin, Anton; Dedova, Tatjana** Energies 2022 / art. 3665 <https://doi.org/10.3390/en15103665> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Lauri Eensalu: lahendused peavad olema terviklikud ja toetama äri kasvu**

Eensalu, Lauri TööstusEST 2025 / lk. 40-42 : fot [https://www.ester.ee/record=b4481084\\*est](https://www.ester.ee/record=b4481084*est)

#### **A library of samples for testing variable load electric drives**

**Liivik, Liisa; Vodovozov, Valery; Rassõlkin, Anton** Digest book and electronic proceedings : 54th International Scientific Conference of Riga Technical University : Section of Power and Electrical Engineering 2013 / p. 12.1-12.6 : ill

#### **Life cycle analysis of electrical motor-drive system based on electrical machine type**

**Rassõlkin, Anton; Belahcen, Anouar; Kallaste, Ants; Vaimann, Toomas; Heidari, Hamidreza; Asad, Bilal** Proceedings of the Estonian Academy of Sciences 2020 / p. 162-177 : ill <https://doi.org/10.3176/proc.2020.2.07> [journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Lifecycle analysis of different motors from the standpoint of environmental impact**

**Orlova, Svetlana; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Belahcen, Anouar** Latvian journal of physics and technical sciences 2016 / p. 37-46 : ill <https://doi.org/10.1515/lpts-2016-0042> [Journal metrics at Scopus](#) [Article at Scopus](#)

#### **Main faults and diagnostic possibilities of BLDC motors**

**Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Lukichev, Dmitry** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 2020 / 6 p. : ill <https://doi.org/10.1109/IWED48848.2020.9069553>

### **Mechatronics technology and transportation sustainability : editorial**

**Rassõlkin, Anton**; Tammi, Kari; **Demidova, Galina**; HosseinNia, Hassan Sustainability 2022 / art. 1671

<https://doi.org/10.3390/su14031671> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Metamodel-based optimization of synchronous reluctance motor rotor**

Orlova, Svetlana; Pugachov, Vladislav; Auzins, Janis; **Rassõlkin, Anton** 2021 28th International Workshop on Electric Drives : Improving Reliability of Electric Drives (IWED) 2021 / 6 p. : ill <https://doi.org/10.1109/IWED52055.2021.9376358>

### **Methodology for flight controllers for nano, micro and mini drones classification**

**Pütsep, Kristjan**; **Rassõlkin, Anton** 2021 International Conference on Engineering and Emerging Technologies (ICEET), Istanbul, Turkey, 27-28 Oct. 2021 : conference proceedings 2021 / 7 p. : ill <https://doi.org/10.1109/ICEET53442.2021.9659572>

### **Methods of condition monitoring and fault detection for electrical machines**

**Kudelina, Karolina**; **Asad, Bilal**; **Vaimann, Toomas**; **Rassõlkin, Anton**; **Kallaste, Ants**; Khang, Huynh Van Energies 2021 / art. 7459, 20 p. : ill <https://doi.org/10.3390/en14227459> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Model for energy management of residential building heating system**

Gevorkov, Levon; Šmidl, Vaclav; Sirovy, Martin; **Rassõlkin, Anton**; **Kallaste, Ants**; **Vaimann, Toomas** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 2020 / 4 p <https://doi.org/10.1109/IWED48848.2020.9069503>

### **Model for torque estimation of pump system with horizontal pipe network**

**Gevorkov, Levon**; Smidl, Vaclav; Sirovy, Martin; **Rassõlkin, Anton**; **Kallaste, Ants**; **Vaimann, Toomas** 2019 26th International Workshop on Electric Drives : Improvement in Efficiency of Electric Drives (IWED) : Moscow Power Engineering Institute, Moscow, Russia, 30th of January – 2nd of February 2019 : proceedings 2019 / 5 p. : ill <https://doi.org/10.1109/IWED.2019.8664304>

### **Modeling battery energy storage systems based on remaining useful lifetime through regression algorithms and binary classifiers**

**Zequera, Rolando Antonio Gilbert**; **Rjabtšikov, Viktor**; **Rassõlkin, Anton**; **Vaimann, Toomas**; **Kallaste, Ants** Applied sciences 2023 / art. 7597 <https://doi.org/10.3390/app13137597> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Modern mechatronics and robotics education program: border cooperation between Estonia and Russia**

**Rassõlkin, Anton**; **Vaimann, Toomas**; **Kudelina, Karolina**; Demidova, Galina; Lukichev, Dmitry; Perepelkina, Svetlana Proceedings of the 2020 IEEE Global Engineering Education Conference (EDUCON) : Engineering Education for the Future in a Multicultural and Smart World, 27-30 April, 2020, Porto, Portugal 2020 / p. 1272-1277 : ill <https://doi.org/10.1109/EDUCON45650.2020.9125406>

### **Modern training courses increasing awareness of environmental protection**

Veg, Lukas; Jelen, M.; **Rassõlkin, Anton**; Stępien, M.; Zygmanski, Marcin Przegląd elektrotechniczny = Electrical review 2025 / p. 68-72 <https://doi.org/10.15199/48.2025.05.14> <http://pe.org.pl/articles/2025/5/14.pdf>

### **Modernisation issues of diesel-electric shunting locomotive power units**

**Hõimoja, Hardi**; **Jalakas, Tanel**; **Rosin, Argo**; **Rassõlkin, Anton** Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2010 / p. 57-62 : ill <https://ui.adsabs.harvard.edu/abs/2010SJRP...26...58H/abstract>

### **A modified dynamic model of single-sided linear induction motors considering longitudinal and transversal effects**

**Heidari, Hamidreza**; **Rassõlkin, Anton**; Razzaghi, Arash; **Vaimann, Toomas**; **Kallaste, Ants**; **Andriushchenko, Ekaterina**; **Belahcen, Anouar**; Lukichev, Dmitry Electronics 2021 / art. 933, 14 p. : ill <https://doi.org/10.3390/electronics10080933> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Modified initial design procedure for synchronous reluctance motor**

**Naseer, Muhammad Usman**; **Kallaste, Ants**; **Asad, Bilal**; **Vaimann, Toomas**; **Rassõlkin, Anton** 2022 International Conference on Electrical Machines (ICEM) 2022 / p. 1969-1975 <https://doi.org/10.1109/ICEM51905.2022.9910594>

### **Modified technique of parameter identification of a permanent magnet synchronous motor with PWM inverter in the presence of dead-time effect and measurement noise**

Mamatov, Aleksandr; Lovlin, Sergey; **Vaimann, Toomas**; **Rassõlkin, Anton**; Vakulenko, Sergei; Abramian, Andrei Electronics 2019 / art. 1200, 19 p <https://doi.org/10.3390/electronics8101200> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Modified winding function analysis of synchronous reluctance motor for design iteration purposes**

**Naseer, Muhammad Usman**; **Kallaste, Ants**; **Asad, Bilal**; **Vaimann, Toomas**; **Rassõlkin, Anton** IEEE transactions on magnetics 2022 / art. 7500704 <https://doi.org/10.1109/TMAG.2022.3164189> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)



### **Modified winding function-based model of squirrel cage induction motor for fault diagnostics**

Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Iqbal, Muhammad Naveed IET electric power applications 2020 / p. 1722-1734 <https://doi.org/10.1049/iet-epa.2019.1002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **MPPT algorithms for wind turbines : review and comparison**

Lukin, Aleksandr; Demidova, Galina; Alassaf, Omar; Lukichev, Dmitry; Rassõlkin, Anton; Vaimann, Toomas 29th International Workshop on Electric Drives: Advances in Power Electronics for Electric Drives (IWED) 2022 / p. 1-6 <https://doi.org/10.1109/IWED54598.2022.9722597>

### **Needs for retraining of fossil fuel mining area workforce in Estonia and Poland [Electronic resource]**

Rassõlkin, Anton studyinestonia.ee 2022 [Needs for retraining of fossil fuel mining area workforce in Estonia and Poland](#)

### **NordPlus network in advanced computer-oriented engineering technologies and and adaptronics**

Kunicina, Nadezhda; Rassõlkin, Anton; Bruzgiene, Rasa; Plonis, Darius 2022 IEEE 63rd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / 6 p <https://doi.org/10.1109/RTUCON56726.2022.9978831>

### **Novel approaches to electrical machine fault diagnosis**

Vaimann, Toomas; Antonino-Daviu, Jose Alfonso; Rassõlkin, Anton Energies 2023 / art. 5641 <https://doi.org/10.3390/en16155641> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Novel digital twin concept for industrial application. Study case: propulsion drive system**

Jegorov, Sergei; Rassõlkin, Anton; Rjabtšikov, Viktor; Mohamed, Mahmoud Ibrahim Hassanin; Kuts, Vladimir Proceedings of ASME 2022 International Mechanical Engineering Congress and Exposition (IMECE2022), 2B: Columbus, Ohio, USA, October 30 - November 3, 2022 / art. IMECE2022-97243, V02BT02A011, 6 p. <https://doi.org/10.1115/IMECE2022-97243>

### **A novel renewable powered stand-alone electric vehicle parking-lot model**

Jawad, Muhammad; Asghar, Hira; Arshad, Jehangir; Javed, Abbas; Qureshi, Muhammad Bilal; Ali, Sahibzada Muhammad; Shabbir, Noman; Rassõlkin, Anton Sustainable energy, grids and networks 2023 / art. 100992, 14 p. : ill <https://doi.org/10.1016/j.segan.2022.100992> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **A Novel vector control strategy for a six-phase induction motor with low torque ripples and harmonic currents**

Heidari, Hamidreza; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants; Taheri, Asghar; Holakooie, Mohammad Hosein; Belahcen, Anouar Energies 2019 / art. 1102, 14 p. : ill <https://doi.org/10.3390/en12061102> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Numerical investigation of properties of small size Axial Flux Permanent Magnet Motors**

Stepien, Mariusz; Mikos, Jan; Kallaste, Ants; Rassõlkin, Anton 2019 20th International Symposium on Power Electronics (Ee 2019) : Novi Sad, Serbia, 23 – 26 October 2019 / 4 p <https://doi.org/10.1109/PEE.2019.8923235>

### **On the issues of spatial modeling of non-standard profiles by the example of electromagnetic emission measurement data**

Iakovleva, Emiliia; Belova, Margarita; Soares, Amilcar; Rassõlkin, Anton Sustainability 2022 / art. 574 <https://doi.org/10.3390/su14010574> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Optimal control of automatic manipulator for elimination of galvanic line load oscillation**

Autsou, Siarhei; Rassõlkin, Anton; Vaimann, Toomas; Demidova, Galina; Saroka, Viktor; Karpovich, Dzmitry; Kallaste, Ants Periodica polytechnica electrical engineering and computer science 2021 / 15 p. : ill <https://doi.org/10.3311/PPee.15893> [Journal metrics at Scopus](#) [Article at Scopus](#)

### **Optimal fractional order PI controller for field oriented current control of switched reluctance motor**

Mughees, Neelam; Ashfgar, Hira; Shabbir, Noman; Rassõlkin, Anton; Kütt, Lauri 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. 479-485 <https://doi.org/10.1109/PEMC48073.2021.9432616>

### **Optimization of a 3D-printed permanent magnet coupling using genetic algorithm and Taguchi method**

Andriushchenko, Ekaterina; Kallaste, Ants; Belahcen, Anouar; Vaimann, Toomas; Rassõlkin, Anton; Heidari, Hamidreza; Tiismus, Hans Electronics 2021 / art. 494, 16 p. : ill <https://doi.org/10.3390/electronics10040494> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **An Overview of Autonomous Parking Systems : Strategies, Challenges, and Future Directions**

Olmos Medina, Javier Santiago; Maradey Lázaro, Jessica Gissella; Rassõlkin, Anton; González Acuña, Hernán Sensors 2025 / art. 4328 <https://doi.org/10.3390/s25144328> <https://www.mdpi.com/1424-8220/25/14/4328>

### **Overview of battery energy storage systems readiness for digital twin of electric vehicles**

**Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** IET Smart Grid 2023 / p. 5-16  
<https://doi.org/10.1049/stg2.12101> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **An overview of fuzzy logic approaches for fault diagnosis in energy conversion devices**

**Demidova, Galina; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants; Zakis, Janis; Suzdalenko, Alexander** 2021 28th International Workshop on Electric Drives : Improving Reliability of Electric Drives (IWED) 2021 / 7 p  
<https://doi.org/10.1109/IWED52055.2021.9376389>

#### **An overview of measurement standards for power quality**

**Shabbir, Noman; Kütt, Lauri; Jarkovoi, Marek; Iqbal, Muhammad Naveed; Rassõlkin, Anton; Daniel, Kamran** Agronomy research 2021 / p. 944–960 <https://doi.org/10.15159/ar.21.074> [Journal metrics at Scopus](#) [Article at Scopus](#)

#### **Overview of the use of Bellman dynamic programming method to eliminate oscillations in mechanical and electrical assemblies of technical objects**

**Autsou, Siarhei; Saroka, Viktor; Karpovich, Dzmitry; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärda, Estonia, June 12-15, 2019 : proceedings 2019 / 4 p <https://doi.org/10.1109/PQ.2019.8818246>

#### **Overview on digital twin for autonomous electrical vehicles propulsion drive system**

**Mohamed, Mahmoud Ibrahim Hassanin; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** Sustainability 2022 / art. 601  
<https://doi.org/10.3390/su14020601> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **A parallel estimation system of stator resistance and rotor speed for active disturbance rejection control of six-phase induction motor**

**Heidari, Hamidreza; Rassõlkin, Anton; Holakooie, Mohammad Hosein; Vaimann, Toomas; Kallaste, Ants; Belahcen, Anouar; Lukichev, Dmitry** Energies 2020 / 17 p <https://doi.org/10.3390/en13051121> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Parametric digital twin of autonomous electric vehicle transmission**

**Rassõlkin, Anton; Rjabtšikov, Viktor; Kuts, Vladimir; Kudelina, Karolina; Vaimann, Toomas; Kallaste, Ants; Partyshev, Andriy** Journal of machine engineering 2021 / p. 131-140 : ill <https://doi.org/10.36897/jme/134435> [Journal metrics at Scopus](#) [Article at Scopus](#)

#### **Performance optimization of a high-speed permanent magnet synchronous motor drive system for formula electric vehicle application**

**Ibrahim, Mahmoud; Järg, Oskar; Seppago, Raigo; Rassõlkin, Anton** Sensors 2025 / art. 3156 <https://doi.org/10.3390/s25103156>  
<https://www.mdpi.com/1424-8220/25/10/3156>

#### **Permanent magnets in sustainable energy: comparative life cycle analysis**

**Orlova, Svetlana; Rassõlkin, Anton** Energies 2024 / art. 6384 <https://doi.org/10.3390/en17246384> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Possibilities of changing the transport characteristics of the TEP70 locomotive**

**Rjabtšikov, Viktor; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants; Lukichev, Dmitry** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 / 6 p  
<https://doi.org/10.1109/IWED48848.2020.9069576>

#### **Possibilities of decreasing induction motor bearing currents**

**Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants** 2021 IEEE Open Conference of Electrical, Electronic and Information Sciences (eStream): proceedings of the conference, April 22, 2021, Vilnius, Lithuania 2021 / 5 p. : ill  
<https://doi.org/10.1109/eStream53087.2021.9431419>

#### **Possible solutions of using multi-engine power systems for switching locomotives**

**Rassõlkin, Anton** 7th International Conference-workshop Compatibility and Power Electronics : CPE 2011 : Tallinn, Estonia, June 3, 2011 : student forum 2011 / p. 7-10 : ill

#### **Power factor correction with vehicle-to-grid STATCOM implementation**

**Rassõlkin, Anton; Kallaste, Ants; Hõimoja, Hardi** PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 177-180 : ill

#### **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 soft magnetic material properties for additive manufacturing of electrical machines**

**Tiismus, Hans; Kallaste, Ants; Rassõlkin, Anton; Vaimann, Toomas** Modern Materials and Manufacturing 2019 : 12th

International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia 2019 / p. 270-275 : ill <https://www.scientific.net/KEM.799.270> [https://www.ester.ee/record=b5235278\\*est](https://www.ester.ee/record=b5235278*est) <https://doi.org/10.4028/www.scientific.net/KEM.799.270> Conference proceeding at Scopus Article at Scopus

#### **Preliminary sensors selection for reconfigurable continuous track robot obstacle detection**

**Valme, Daniil; Kudelina, Karolina; Rassõlkin, Anton** 2021 IEEE Open Conference of Electrical, Electronic and Information Sciences (eStream): proceedings of the conference, April 22, 2021, Vilnius, Lithuania 2021 / 5 p. : ill <https://doi.org/10.1109/eStream53087.2021.9431394>

#### **Principles and methods of servomotor control : comparative analysis and applications**

**Autsou, Siarhei; Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants** Applied sciences 2024 / art. 2579 <https://doi.org/10.3390/app14062579> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

#### **Proceedings of the 9th Baltic Mechatronics Symposium, Tallinn, May 15, 2024**

2024 <https://aaltodoc.aalto.fi/server/api/core/bitstreams/6903c9fa-3834-4eb4-8a37-13efc0e5b2d2/content>

#### **Production quality related propagating faults of induction machines**

**Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 311-315 : ill <https://doi.org/10.1109/ICEPDS47235.2020.9249355>

#### **Propulsion drives and control algorithms of electrical vehicles**

**Mohamed, Mahmoud Ibrahim Hassanin; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** Handbook of power electronics in autonomous and electric vehicles 2024 / p. 139-159 <https://doi.org/10.1016/B978-0-323-99545-0.00009-9>

#### **Propulsion motor drive topology selection for further development of ISEAUTO self-driving car**

**Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants; Sell, Raivo** 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 5 p. : ill <https://doi.org/10.1109/RTUCON.2018.8659887>

#### **Püsikiirushoidjad ja ise avanevad ukssed : mida nõuab automatiseeritud süsteemide ehitamine?**

digi.geenius.ee 2021 <https://digi.geenius.ee/rubriik/teadus-ja-tulevik/pusikiirushoidjad-ja-ise-avanevad-ukssed-mida-nouab-automatiseeritud-susteemide-ehitamine/>

#### **Reducing of hanger-to-motor oscillations of galvanic line auto-operator**

**Autsou, Siarhei; Rassõlkin, Anton; Demidova, Galina; Vaimann, Toomas; Karpovich, Dzmity; Saroka, Viktor** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 43-48 <https://doi.org/10.1109/ICEPDS47235.2020.9249311>

#### **Reducing of sparking caused by the parametric modulation of sliding electric contact unit at synchronous machine**

**Kozyreva, Oksana; Plokhov, Igor; Kotkov, Nikita; Gevorkov, Levon; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 17th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral school of energy and geotechnology. III : Kuressaare, Estonia, January 15-20, 2018 2018 / p. 236-239 : ill [http://ise.elnet.ee/record=b2950145~S2\\*est](http://ise.elnet.ee/record=b2950145~S2*est)

#### **Reducing sparking in the transient layer of the sliding electrical contact unit**

**Kozyreva, Oksana; Plokhov, Igor; Kotkov, Nikita; Savrajev, Igor; Ilyin, Alexander; Vaimann, Toomas; Rassõlkin, Anton; Gevorkov, Levon; Kallaste, Ants** 2018 19th International Scientific Conference on Electric Power Engineering (EPE 2018) : Brno, Czech Republic, 16 - 18 May 2018 2018 / p. 223-227 : ill <https://doi.org/10.1109/EPE.2018.8395969>

#### **Research and development of trial instrumentation for electric propulsion motor drives = Elekterveoajamite katsekeskkonna uurimine ja arendamine**

**Rassõlkin, Anton** 2014 [https://www.ester.ee/record=b3091498\\*est](https://www.ester.ee/record=b3091498*est)

#### **Reserves for regenerative braking of battery electric vehicles**

**Raud, Zoja; Vodovozov, Valery; Lillo, Nikolai; Rassõlkin, Anton** PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 189-194 : ill

#### **Response surface method for optimization of synchronous reluctance motor rotor**

**Orlova, Svetlana; Auzins, Janis; Pugachov, Vladislav; Rassõlkin, Anton; Vaimann, Toomas** Machines 2022 / art. 897 <https://doi.org/10.3390/machines10100897> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

#### **Re-use and recycling of different electrical machines**

**Rassõlkin, Anton; Kallaste, Ants; Orlova, Svetlana; Gevorkov, Levon; Vaimann, Toomas; Belahcen, Anouar** Latvian journal of physics and technical sciences 2018 / p. 13-23 : ill <https://doi.org/10.2478/lpts-2018-0025> Journal metrics at Scopus Article at Scopus

#### **Reverse engineering-based modeling of an EV motor drive for digital twin development**

**Mohamed, Mahmoud Ibrahim Hassanin; Rassõlkin, Anton; Rjabtšikov, Viktor** 2024 IEEE International Conference on Electrical Systems for Aircraft, Railway, Ship Propulsion and Road Vehicles and International Transportation Electrification Conference, ESARS-ITEC 2024 2025 / 5 p <https://doi.org/10.1109/ESARS-ITEC60450.2024.10819839>

**Review of design freedom offered by additive manufacturing for performance enhancement of electrical machine**  
**Ahmad, Zahoor; Kallaste, Ants; Vaimann, Toomas; Naseer, Muhammad Usman; Hussain, Shahid; Rassõlkin, Anton** IEEE Open Journal of the Industrial Electronics Society 2024 / p. 1300-1323 <https://doi.org/10.1109/OJIES.2024.3509547>

**Review of electric vehicle testing procedures for digital twin development : a comprehensive analysis**  
**Rjabtšikov, Viktor; Rassõlkin, Anton; Kudelina, Karolina; Kallaste, Ants; Vaimann, Toomas** Energies 2023 / art. 6952  
<https://doi.org/10.3390/en16196952> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**A review of electrical machine design processes from the standpoint of software selection**  
**Daukaev, Kamil; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Belahcen, Anouar** 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCon) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [6] p. : ill <https://doi.org/10.1109/RTUCon.2017.8124818>

**Review of electrical machine diagnostic methods applicability in the perspective of Industry 4.0**  
**Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Belahcen, Anouar** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 108–116 : ill <https://doi.org/10.2478/ecce-2018-0013>

**Review of loss calculation reduction control methods of permanent magnet assisted reluctance drive**  
**Melentjev, Sergei; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Vaimann, Toomas** PQ2016 : the 10th International Conference 2016 Electric Power Quality and Supply Reliability Conference (PQ) : August 29-31, 2016, Tallinn, Estonia : proceedings 2016 / p. 199-206 : ill <https://doi.org/10.1109/PQ.2016.7724113>

**A review of synchronous reluctance motor-drive advancements**  
**Heidari, Hamidreza; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Andriushchenko, Ekaterina; Belahcen, Anouar; Lukichev, Dmitry** Sustainability 2021 / art. 729, p. 1-37 <https://doi.org/10.3390/su13020729> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Review of the Estonian Railroad rolling stock and solutions for locomotive modernization**  
**Rassõlkin, Anton; Hõimoja, Hardi; Pettai, Elmo; Tšurkina, Natalja** 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 2011 / p. 57-61 : ill

**Review of thermal analysis of permanent magnet assisted synchronous reluctance machines**  
**Ghahfarokhi, Payam Shams; Kallaste, Ants; Belahcen, Anouar; Vaimann, Toomas; Rassõlkin, Anton** PQ2016 : the 10th International Conference 2016 Electric Power Quality and Supply Reliability Conference (PQ) : August 29-31, 2016, Tallinn, Estonia : proceedings 2016 / p. 219-224 <https://doi.org/10.1109/PQ.2016.7724116>

**A review on additive manufacturing possibilities for electrical machines**  
**Naseer, Muhammad Usman; Kallaste, Ants; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton** Energies 2021 / art. 1940  
<https://doi.org/10.3390/en14071940> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Robotic glove prototype : development and simulation**  
**Morozova, Elena; Demidova, Galina; Rassõlkin, Anton** 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCon), November 15-17, 2021 : conference proceedings 2022 / p. 1-5  
<https://doi.org/10.1109/RTUCon53541.2021.9711744>

**Robust design optimization and emerging technologies for electrical machines: challenges and open problems**  
**Orosz, Tamas; Rassõlkin, Anton; Kallaste, Ants; Arsenio, Pedro; Panek, David; Kaska, Jan; Karban, Pavel** Applied sciences 2020 / art. 6653, 33 p. : ill <https://doi.org/10.3390/app10196653> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Robust design optimization of electrical machines and devices : editorial**  
**Orosz, Tamas; Panek, David; Rassõlkin, Anton; Kuczmann, Miklos** Electronics 2022 / art. 1427  
<https://doi.org/10.3390/electronics11091427> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**ROS middle-layer integration into Unity3D as an interface option for propulsion drive simulations of autonomous vehicles**  
**Kuts, Vladimir; Rassõlkin, Anton; Jegorov, Sergei; Rjabtšikov, Viktor** Proceedings of the Estonian Academy of Sciences 2021 / p. 392-398 : ill <https://doi.org/10.3176/proc.2021.4.04> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**ROS middle-layer integration to Unity 3D as an interface option for propulsion drive simulations of autonomous vehicles**  
**Kuts, Vladimir; Rassõlkin, Anton; Partyshev, Andriy; Jegorov, Sergei; Rjabtšikov, Viktor** IOP conference series : materials



**Rotor fault diagnostic of inverter fed induction motor using frequency analysis**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton** 2019 IEEE 12th International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED), 27-30 Aug. 2019, Toulouse, France : proceedings 2019 / p. 127-133 : ill <https://doi.org/10.1109/DEMPED.2019.8864903>

**Saksamaa**

**Rassõlkin, Anton** Praktikalood III 2008 / lk. 4-5 : ill [http://www2.archimedes.ee/hkk/File/Leonardo/trykised/2007\\_praktikalood\\_netti.pdf](http://www2.archimedes.ee/hkk/File/Leonardo/trykised/2007_praktikalood_netti.pdf)

**A Scoping Review of Energy Consumption in Industrial Robotics**

**Muru, Johannes; Rassõlkin, Anton** Machines 2025 / art. 542 <https://doi.org/10.3390/machines13070542>

**Self-driving car ISEAUTO for research and education**

**Sell, Raivo; Leier, Mairo; Rassõlkin, Anton; Ernits, Juhan-Peep** Proceedings of the 2018 19th International Conference on Research and Education in Mechatronics : (REM 2018), Delft, The Netherlands, June 7-8, 2018 2018 / p. 111-116 : ill <https://doi.org/10.1109/REM.2018.8421793>

**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](#)

**Simulation of wind turbine vibrations**

**Andriushchenko, Ekaterina; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton; Meshkov, Aleksandr; Heidari, Hamidreza; Demidova, Galina** 2020 27th International Workshop on Electric Drives: MPEI Department of Electric Drives 90th Anniversary (IWED), Moscow, Russia, January 27-30, 2020 2020 / 4 p <https://doi.org/10.1109/IWED48848.2020.9069567>

**Simulation study of a centrifugal pumping plant's power consumption at throttling and speed control**

**Gevorkov, Levon; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [5] p. : ill <http://dx.doi.org/10.1109/RTUCON.2017.8124823>

**Simulation study of mixed pressure and flow control systems for optimal operation of centrifugal pumping plants**

**Gevorkov, Levon; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 89-94 : ill <https://doi.org/10.2478/ecce-2018-0010>

**Simulink based model for flow control of a centrifugal pumping system**

**Gevorkov, Levon; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 2018 25th International Workshop on Electric Drives: Optimization in Control of Electric Drives (IWED) 2018 / p. 1-4 : ill <https://doi.org/10.1109/IWED.2018.8321399>

**Simulink based model of electric drive for throttle valve in pumping application**

**Gevorkov, Levon; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** 2018 19th International Scientific Conference on Electric Power Engineering (EPE 2018) : Brno, Czech Republic, 16 - 18 May 2018 2018 / p. 256-259 : ill <https://doi.org/10.1109/EPE.2018.8395996>

**Sliding mean value subtraction-based DC drift correction of B-H curve for 3D-printed magnetic materials**

**Asad, Bilal; Tiismus, Hans; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Ghahfarokhi, Payam Shams** Energies 2021 / art. 284, 10 p <https://doi.org/10.3390/en14020284> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Small magnus wind turbine : modeling approaches**

**Lukin, Aleksandr; Demidova, Galina; Rassõlkin, Anton; Lukichev, Dmitry; Vaimann, Toomas; Anuchin, Alecksey** Applied sciences 2022 / art. 1884 <https://doi.org/10.3390/app12041884> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Spatial representation of self-driving vehicle for virtual entity of digital twin**

**Rassõlkin, Anton; Maksimkins, Pavels; Stupans, Andrejs; Rjabtšikov, Viktor; Šenfels, Armands; Kuts, Vladimir** Computer 2024 / p. 58-66 <https://doi.org/10.1109/MC.2023.3319108>

**Spectrum analysis additional vibrations of Cartesian robot by different control modes**

**Autsou, Siarhei; Vaimann, Toomas; Rassõlkin, Anton; Kudelina, Karolina** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 5 l. <https://doi.org/10.1109/BEC56180.2022.9935595>

**State of the art of additively manufactured electromagnetic materials for topology optimized electrical machines**

**Tiismus, Hans; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton** Additive manufacturing 2022 / art. 102778, 19 p. : ill

### **Steady-state thermal model of a synchronous reluctance motor**

**Shams Ghahfarokhi, Payam; Belahcen, Anouar; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton** 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 5 p. : ill <https://doi.org/10.1109/RTUCON.2018.8659846>

### **Study of e-vehicle drive behaviour under changeable control**

**Rassõlkin, Anton; Vodovozov, Valery; Raud, Zoja** Digest book and electronic proceedings : 54th International Scientific Conference of Riga Technical University : Section of Power and Electrical Engineering 2013 / p. 13.1-13.5 : ill

### **A survey of broken rotor bar fault diagnostic methods of induction motor**

**Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Belahcen, Anouar** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 117–124 : ill <https://doi.org/10.2478/ecce-2018-0014>

### **TalTech is participating in the development of remote laboratories in the field of mechatronics [Electronic resource]**

**Rassõlkin, Anton** studyinestonia.ee 2021 / 1 p <https://www.studyinestonia.ee/news/taltech-participating-development-remote-laboratories-field-mechatronics>

### **TalTech researchers developing a digital twin for propulsion drive of autonomous electric vehicle**

**Rassõlkin, Anton** researchinestonia.eu 2021 [TalTech researchers developing a digital twin for propulsion drive of autonomous electric vehicle](https://www.researchinestonia.eu/news/taltech-researchers-developing-a-digital-twin-for-propulsion-drive-of-autonomous-electric-vehicle)

### **TalTechi professor soovib kolme elektriauto, mille akud on teiste omadest paremad**

**Rassõlkin, Anton** digi.geenius.ee 2024 [TalTechi professor soovib kolme elektriauto, mille akud on teiste omadest paremad](https://digi.geenius.ee/record=b1226072*est)

### **Teaduspreemia tehnikateaduste alal tööde tsükli "Kihltisandustehnoloogial põhinevad elektrimasinad" eest : Toomas Vaimann, Anton Rassõlkin, Ants Kallaste (kollektiivi juht) ja Hans Tiismus**

**Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Tiismus, Hans** Eesti Vabariigi preemiad 2022 : teadus. F. J. Wiedemanni keeleauhind. Kultuur. Sport 2022 / lk. 130-145 : ill., fot [https://www.ester.ee/record=b1226072\\*est](https://www.ester.ee/record=b1226072*est)

### **Technologies for additive manufacturing of electrical machines**

**Tiismus, Hans; Kallaste, Ants; Vaimann, Toomas; Rassõlkin, Anton; Belahcen, Anouar** 2019 20th International Conference of Young Specialists on Micro/Nanotechnologies and Electron Devices (EDM) 2019 / p. 651-655 : ill <https://doi.org/10.1109/EDM.2019.8823462>

### **Teooria ja praktika sümbioos inseneriõppes ehk elektriainite tulevik**

toostusest.ee 2024 [Teooria ja praktika sümbioos inseneriõppes ehk elektriainite tulevik](https://www.toostusest.ee/record=b4481084*est)

### **Teooria ja praktika sümbioos inseneriõppes ehk elektriainite tulevik**

TööstusEST 2024 / lk. 22-23 [https://www.ester.ee/record=b4481084\\*est](https://www.ester.ee/record=b4481084*est)

### **A test bench to study propulsion drives of electric vehicles [Electronic resource]**

**Rassõlkin, Anton; Vodovozov, Valery** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 275-279 : ill [CD-ROM]

### **A test bench to study propulsion drives of electric vehicles with a supercapacitor storage system [Electronic resource]**

**Rassõlkin, Anton; Vodovozov, Valery** Международная Научно-Техническая Конференция "Силовая Электроника и Энергоэффективность" : 23-27.IX 2013, Алушта, Крым 2013 / [3] p. : ill [CD-ROM]

### **The auxiliary systems influence on the energy efficiency of diesel electric locomotives**

**Rassõlkin, Anton** 12th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Kuressaare, Estonia, June 11-16, 2012 2012 / p. 129-131 : ill

### **The cluster computation-based hybrid FEM–analytical model of induction motor for fault diagnostics**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Iqbal, Muhammad Naveed** Applied sciences 2020 / art. 7572, 15 p. : ill <https://doi.org/10.3390/app10217572> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

### **The cluster computation-based hybrid FEM–analytical model of induction motor for fault diagnostics**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Iqbal, Muhammad Naveed** Advances in machine fault diagnosis 2022 / p. 27-41 <https://doi.org/10.3390/app10217572>

### **The FEM based modeling and corresponding test rig preparation for broken rotor bars analysis**

**Asad, Bilal; Eensalu, Lauri; Vaimann, Toomas; Kallaste, Ants; Rassõlkin, Anton; Belahcen, Anouar** 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 :

**The low voltage start-up test of induction motor for the detection of broken bars**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Heidari, Hamidreza** 2020 International Conference on Electrical Machines (ICEM), 23-26 august 2020, Gothenburg, Sweden : online : proceedings 2020 / p. 1481-1487  
<https://doi.org/10.1109/ICEM49940.2020.9271018>

**The main challenges and opportunities in mechatronics**

**Rassõlkin, Anton** 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. 25-26 [https://www.ester.ee/record=b5291755\\*est](https://www.ester.ee/record=b5291755*est)

**The modeling and investigation of slot skews and supply imbalance on the development of principal slotting harmonics in squirrel cage induction machines**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Khang, Huynh Van; Ghahfarokhi, Payam Shams; Naseer, Muhammad Usman; Iqbal, Muhammad Naveed** IEEE Access 2021 / p. 165932-165946  
<https://doi.org/10.1109/ACCESS.2021.3134331> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**The usage of fuzzy logic for detecting mechanical faults in gearboxes of robotic system**

**Autsou, Siarhei; Kudelina, Karolina; Vaimann, Toomas; Rassõlkin, Anton** 2024 International Conference on Electrical Machines (ICEM) 2024 / 7 p <https://doi.org/10.1109/ICEM60801.2024.10700425>

**Thermal analysis of a SynRM using a thermal network and a hybrid model**

**Shams Ghahfarokhi, Payam; Belahcen, Anouar; Kallaste, Ants; Vaimann, Toomas; Gevorkov, Levon; Rassõlkin, Anton** 2018 XIII International Conference on Electrical Machines (ICEM 2018) : Alexandroupoli, Greece, 3-6 September 2018 2018 / p. 2682-2688 : ill <https://doi.org/10.1109/ICELMACH.2018.8507002>

**Three-phase electrical equivalent model for squirrel cage induction motor**

**Petrov, Aleksei; Rassõlkin, Anton; Vaimann, Toomas; Plokhov, Igor; Kallaste, Ants; Kotelnikov, Aleksandr; Asad, Bilal; Savraev, Igor** 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärddla, Estonia, June 12-15, 2019 : proceedings 2019 / 6 p. : ill <https://doi.org/10.1109/PQ.2019.8818241>

**Time dependency of current harmonics for switch-mode power supplies**

**Iqbal, Muhammad Naveed; Kütt, Lauri; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Demidova, Galina** Applied sciences 2020 / art. 7806, 12 p. : ill <https://doi.org/10.3390/app10217806> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**To study propulsion drives : test bench with supercapacitor storage**

**Rassõlkin, Anton; Vodovozov, Valery** Энергосбережение, энергетика, энергоаудит = Energy saving, power engineering, energy audit 2013 / p. 65-70 : ill

**Transient modeling and recovery of non-stationary fault signature for condition monitoring of induction motors**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Ghahfarokhi, Payam Shams; Kudelina, Karolina** Applied sciences 2021 / 17 p. : ill <https://doi.org/10.3390/app11062806> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Transient modeling and recovery of non-stationary fault signature for condition monitoring of induction motors**

**Asad, Bilal; Vaimann, Toomas; Belahcen, Anouar; Kallaste, Ants; Rassõlkin, Anton; Ghahfarokhi, Payam Shams** Advances in machine fault diagnosis 2022 / p. 43-59 <https://doi.org/10.3390/app11062806>

**Travel activity based stochastic modelling of load and charging state of electric vehicles**

**Iqbal, Muhammad Naveed; Kütt, Lauri; Lehtonen, Matti; Millar, Robert John; Püvi, Verner; Rassõlkin, Anton; Demidova, Galina** Sustainability 2021 / art. 1550, 14 p. : ill <https://doi.org/10.3390/su13031550> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Trends and challenges in intelligent condition monitoring of electrical machines using machine learning**

**Kudelina, Karolina; Vaimann, Toomas; Asad, Bilal; Rassõlkin, Anton; Kallaste, Ants; Demidova, Galina** Applied sciences 2021 / art. 2761, 19 p. : ill <https://doi.org/10.3390/app11062761> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Using a fuzzy regulator to reduce noise**

**Shumski, Andrei; Rassõlkin, Anton; Autsou, Siarhei; Karpovich, Dzmitry; Kallaste, Ants; Vaimann, Toomas** 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärddla, Estonia, June 12-15, 2019 : proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/PQ.2019.8818257>

**Validation of an EV-permanent magnet synchronous motor model based on analytical dynamic approach**

**Mohamed, Mahmoud Ibrahim Hassanin; Rjabtsikov, Viktor; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2022

**Vector control of synchronous reluctance motor with reduced torque ripples**

**Heidari, Hamidreza; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Andriushchenko, Ekaterina** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2021 / p. 223-227 : ill <https://doi.org/10.1109/ICEPDS47235.2020.9249309>

**Vesiniku jõul liikuvad autod ja digitaalne tulevik**

**Rassõlkin, Anton** Elektriala 2021 / lk. 22-23 : ill [https://www.ester.ee/record=b1240496\\*est](https://www.ester.ee/record=b1240496*est)

**Winding function based analytical model of squirrel cage induction motor for fault diagnostics**

**Asad, Bilal; Vaimann, Toomas; Kallaste, Ants; Rassõlkin, Anton; Belahcen, Anouar** 2019 26th International Workshop on Electric Drives : Improvement in Efficiency of Electric Drives (IWED) : Moscow Power Engineering Institute, Moscow, Russia, 30th of January - 2nd of February 2019 : proceedings 2019 / 6 p. : ill <https://doi.org/10.1109/IWED.2019.8664314>

**Visual-interactive simulation models in electrical power engineering and mechatronics programs for distance education at ITMO university**

**Usoltcev, Aleksandr; Lukichev, Dmitry; Demidova, Galina; Rassõlkin, Anton; Vaimann, Toomas** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 280-284 : ill <https://doi.org/10.1109/ICEPDS47235.2020.9249365>

**Work in progress : digital twin for propulsion drive of autonomous electric vehicle**

**Rassõlkin, Anton** 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. 9-10 : ill [https://www.ester.ee/record=b5457278\\*est](https://www.ester.ee/record=b5457278*est)

**11. energia- ja geotehnika-alane rahvusvaheline sümposium : [16.-20. jaanuaril Pärnus, parimate ettekannete eest said autasud TTÜst Veiko Karu, Zoja Raud, Anna Andrijanoviš, Imre Drovtnar, Jelena Priss, Tarmo Korõtko ja Viktor Beldjajev]**  
**Rassõlkin, Anton** Mente et Manu 2012 / lk. 3 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

**Ühiskond vajab hädasti elektrotehnika ja mehhatroonika insenere**

Tamm, Liivi TõöstusEST 2025 / lk. 62-65 : fot, portr [https://www.ester.ee/record=b4481084\\*est](https://www.ester.ee/record=b4481084*est)

**Использование нечеткой логики для управления тепловыми процессами**

**Podobed, M.; Karpovich, Dzmity; Rassõlkin, Anton** Нефтехимия - 2018 : материалы I Международного научно-технического форума по химическим технологиям и по нефтегазопереработке, Минск, 27-30 ноября 2018 г. Ч. 1 2018 / с. 270-274  
<https://elib.belstu.by/handle/123456789/27138> <https://elib.belstu.by/bitstream/123456789/27138/1/neftepererabotka-2018.%20Ch.%201.pdf>

**Обзор низкоскоростных генераторов с постоянными магнитами для ветряных установок**

**Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas; Savrajev, Igor** Вестник Псковского государственного университета. Технические науки 2016 / с. 58-68

**Технико-экономическое обоснование автономной системы электроснабжения на примере Псковской области**

**Bandurin, Ivan; Shchelikalin, Vyacheslav; Smirnova, Anastasia; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas** Вестник Псковского государственного университета. Технические науки 2016 / с. 100-109