

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; Shams Ghahfarokhi, Payam 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; Shams Ghahfarokhi, Payam 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

Advanced Modelling Frameworks for the Digital Twin of an Autonomous Electric Vehicle Propulsion Drive System = Autonomoose elektrisõiduki veoelektrijami 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 <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://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

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 [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 I <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; Rützmänn, 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 [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/aeet.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 : [proceedings]

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

Shams Ghahfarokhi, Payam; 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://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

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> [Conference proceedings at Scopus](#) [Article at Scopus](#)

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, Dzmityr 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 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

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 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](#)

Eesti tudengid noppisid mainekalt Boschi võistluselt teise koha

Tamm, Liivi toostusest.ee 2025 <https://toostusest.ee/uudis/2025/09/12/eesti-tudengid-noppisid-mainekalt-boschi-voistluselt-teise-koha/>

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; Tihonov, 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

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 [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

Experimental determination of equivalent circuit parameters for a synchronous generator

Naseer, Muhammad Usman; Asad, Bilal; Shams Ghahfarokhi, Payam; 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, Veronika; 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 (Diagnostics) 2022 / 4 I <https://doi.org/10.1109/Diagnostics55131.2022.9905111>

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://digikogu.taltech.ee/et/Item/c9afdbf3-354b-41f5-a705-ed924a2af21>
<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 [Journal metrics at Scopus](#) [Article at Scopus](#)

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 : conference proceedings 2019 / 9 p. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982350>

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 / 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://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_tqjjPvPr

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 / 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](https://www.scopus.com/journalInfo.uri?eid=2-S201805007) [Article at WOS](https://www.wos.org/Article/Article%20at%20WOS)

Hybrid driven digital twin modelling framework for an EV propulsion drive system

Ibrahim, Mahmoud; Rassõlkin, Anton IET Intelligent Transport Systems 2025 / art. e70099 <https://doi.org/10.1049/itr2.70099> [Scopus](https://www.scopus.com/journalInfo.uri?eid=2-S2025070099)

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 [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

Rubanenka, Olena; Hunko, Iryna; Rubanenka, 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](https://www.toostusest.ee/inseneriope-taltechis-sai-taiendust-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 [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

12. energia- ja geotehnika-alane rahvusvaheline sümpoosion Kuressaares : [sümpoosionil 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

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

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](#)

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 Kani, Seyed 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>

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; **Shams Ghahfarokhi, Payam; 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](#)

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/2010SJRUP..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 : [journal article]

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 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 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; Rassölkin, 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; Rassölkin, 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; **Rassölkin, 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; Rassölkin, 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; Rassölkin, 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; Rassölkin, 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; **Rassölkin, 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; Rassölkin, 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; Rassölkin, 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

Rassölkin, 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](#) [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; Rassölkin, 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; **Rassölkin, 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; Rassölkin, 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; Rassölkin, 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; Autso, 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://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

Autso, 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 ukseid : mida nõuab automatiseeritud süsteemide ehitamine?

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

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

Autso, Siarhei; Rassõlkin, Anton; Demidova, Galina; Vaimann, Toomas; Karpovich, Dzmitry; 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

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>

Remote data transfer and comparative performance through PyBaMM and mathematical techniques in battery applications

Zequera, Rolando Antonio Gilbert; Rassõlkin, Anton; Belolipetskaja, Diana 2025 IEEE Seventh International Conference on DC Microgrids (ICDCM) 2025 / 6 p <https://doi.org/10.1109/ICDCM63994.2025.11144690>

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

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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Shams Ghahfarokhi, Payam; 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; Kuczmanski, 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 science and engineering 2021 / art. 012008, 7 p.:ill <https://doi.org/10.1088/1757-899X/1140/1/012008>

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_netiti.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 / 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; Shams Ghahfarokhi, Payam 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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Spectrum analysis additional vibrations of Cartesian robot by different control modes

Autsou, Sjarhei; 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
<https://doi.org/10.1016/j.addma.2022.102778> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

TalTechi professor soovib kolme elektriautot, mille akud on teiste omadest paremad

Rassõlkin, Anton digi.geenius.ee 2024 [TalTechi professor soovib kolme elektriautot, mille akud on teiste omadest paremad](#)

Teaduspreemia tehnikateaduste alal tööde tsükli "Kihtlisandustehnoloogial 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

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 elektrijamite tulevik

toostusest.ee 2024 [Teooria ja praktika sümbioos inseneriõppes ehk elektrijamite tulevik](#)

Teooria ja praktika sümbioos inseneriõppes ehk elektrijamite tulevik

TööstusEST 2024 / lk. 22-23 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, Алустга, 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 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

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

Autsoo, 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), Kärda, 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; Shams Ghahfarokhi, Payam; 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; Shams Ghahfarokhi, Payam 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; Autso, Siarhei; Karpovich, Dzmitry; 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. : 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; Rjabtšikov, Viktor; Rassõlkin, Anton; Vaimann, Toomas; Kallaste, Ants 2022 International Conference on Electrical Machines (ICEM) 2022 / p. 2384-2390 <https://doi.org/10.1109/ICEM51905.2022.9910755>

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

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

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

Ühiskond vajab hädasti elektrotehnika ja mehhatroonika insenere

Tamm, Liivi TööstusEST 2025 / lk. 62-65 : fot, portr https://www.ester.ee/record=b4481084*est

Ülevaade lõputöödest : TalTechi elektrotehnika ja mehhatroonika õppekaval sai magistrikraadi seitse lõpetajat

Rassõlkin, Anton Elektriala 2025 / lk. 32-33 : fot https://www.ester.ee/record=b1240496*est

Использование нечеткой логики для управления тепловыми процессами

Podobed, M.; Karpovich, Dzmitry; 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; Shchelikalın, Vyacheslav; Smirnova, Anastasia; Rassõlkin, Anton; Kallaste, Ants; Vaimann, Toomas Вестник Псковского государственного университета. Технические науки 2016 / с. 100-109