

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

**Lukin, Aleksandr; Demidova, Galina; Rassölkin, 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](#)

### **Aggregated conducted electromagnetic interference generated by DC/DC converters with deterministic and random modulation**

Loschi, Hermes; Smolenski, Robert; Lezynski, Piotr; Nascimento, Douglas; **Demidova, Galina** Energies 2020 / art. 3698 <https://doi.org/10.3390/en13143698>

### **Aggregated conducted electromagnetic interference generated by DC/DC converters with deterministic and random modulation**

Loschi, Hermes; Smolenski, Robert; Lezynski, Piotr; Nascimento, Douglas; **Demidova, Galina** Industrial and Technological Applications of Power Electronics Systems 2021 / p. 331-339 <https://doi.org/10.3390/en13143698>

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

Poliakov, Nikolai; Vorobev, Konstantin; **Demidova, Galina; Rassölkin, 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>

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

**Heidari, Hamidreza; Andriushchenko, Ekaterina; Rassölkin, 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 / 5 p. : ill <https://doi.org/10.1109/IWED48848.2020.9069583>

### **Concept of hardware-in-the-loop test platform for microgrid with multi-agent approach**

Kuzin, Aleksei; Lukichev, Dmitry; **Demidova, Galina**; Anuchin, Aleksey 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/RTUCON51174.2020.9316626>

### **Cylindrical blades Magnus wind turbine optimization and control system**

Alassaf, Omar; Lukin, Aleksandr; **Demidova, Galina**; Kozlov, Gleb; Volkhontsev, Andrey; Poliakov, Nikolai 29th International Workshop on Electric Drives: Advances in Power Electronics for Electric Drives (IWED) 2022 / p. 1-5 <https://doi.org/10.1109/IWED54598.2022.9722582>

### **Development of digital twin for robotic arm**

Bratchikov, Stepan; Abdullin, Artur; **Demidova, Galina**; Lukichev, Dmitry 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. 717-723 <https://doi.org/10.1109/PEMC48073.2021.9432535>

### **Diagnostic possibilities of induction motor bearing currents**

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

### **Distributed energy laboratory concept focused on power electronics units**

Poliakov, Nikolai; **Demidova, Galina; Zolov, Pavel** International Conference on Electromechanical and Power Systems (SIELMEN) 2021 / p. 387-392 <https://doi.org/10.1109/SIELMEN53755.2021.9600330>

### **Encoderless rotor position estimation of a switched reluctance drive operated under model predictive control**

Anuchin, Aleksey; Shpak, Dmitry; **Demidova, Galina** 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/RTUCON51174.2020.9316621>

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

**Lukin, Aleksandr; Demidova, Galina; Lukichev, Dmitry; Rassölkin, 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 / 6 p <https://doi.org/10.1109/IWED48848.2020.9069565>

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

Lukin, Aleksandr; **Demidova, Galina; Rassölkin, 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>

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

Lukin, Aleksandr; Perepelkina, Svetlana; Demidova, Galina; Lukichev, Dmitry; **Rassölkin, Anton; Vaimann, Toomas; Kallaste, Ants** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020

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

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

### **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>

### **Industrial and technological applications of power electronics systems**

2021 <https://doi.org/10.3390/books978-3-0365-0823-8>

### **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>

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

**Rassõlkin, Anton**; Tammi, Kari; **Demidova, Galina**; HosseinNia, Hassan Sustainability 2022 / art. 1671  
<https://doi.org/10.3390/su14031671> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Model predictive control of a direct current motor utilizing lookup tables**

Anuchin, Alecksey; Bogdanov, Andrei; **Demidova, Galina** International Conference on Power Drives Systems (ICPDS) 2020 / 4 p  
<https://doi.org/10.1109/ICEPDS47235.2020.9249336>

### **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>

### **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>

### **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](#)

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

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

### **Preface to "Industrial and Technological Applications of Power Electronics Systems"**

Strzelecki, Ryszard; **Demidova, Galina**; **Vinnikov, Dmitri** Industrial and Technological Applications of Power Electronics Systems 2021 / p. ix <https://doi.org/10.3390/books978-3-0365-0823-8>

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

Autsou, 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>

### **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>

### **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

**Small magnus wind turbine : modeling approaches**

Lukin, Aleksandr; **Demidova, Galina; Rassölkin, 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](#)

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

**Iqbal, Muhammad Naveed; Kütt, Lauri; Asad, Bilal; Vaimann, Toomas; Rassölkin, 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](#)

**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; **Rassölkin, 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; Rassölkin, 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](#)

**Wide-range operation of high step-up DC-DC converters with multimode rectifiers**

**Chub, Andrii; Vinnikov, Dmitri; Korkh, Oleksandr; Jalakas, Tanel; Demidova, Galina** Electronics 2021 / art. 914, 20 p. : ill <https://doi.org/10.3390/electronics10080914> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Usoltcev, Aleksandr; Lukichev, Dmitry; Demidova, Galina; **Rassölkin, 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>

**Идентификация карты намагничивания вентиляно-индукторного электропривода в режиме реального времени**

**Demidova, Galina** Известия СПбГЭТУ "ЛЭТИ" 2021 / с. 69–75 [https://izv.etu.ru/assets/files/izvestiya-1\\_2021-69-75.pdf](https://izv.etu.ru/assets/files/izvestiya-1_2021-69-75.pdf)