

A MPPT control method for full soft-switching high step-up current-fed DC-DC converter

Kosenko, Roman; Roasto, Indrek 2015 56th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2015 / p. 199-203 : ill <https://ieeexplore.ieee.org/document/7343153>

A simple modular active power electronic transformer

Roasto, Indrek; Strzelecki, Ryszard Proceedings : 2014 IEEE 23rd International Symposium on Industrial Electronics (ISIE) : Grand Cevahir Hotel and Convention Center, Istanbul, Turkey, 01-04 June, 2014 2014 / p. 1976-1980 : ill

Active power electronic transformer as a power conditioner for nonlinear loads [Electronic resource]

Roasto, Indrek; Romero-Cadaval, Enrique; Martins, Joao; **Jalakas, Tanel** CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 63-68 : ill [CD-ROM]

Active power electronic transformer based on modular building blocks

Roasto, Indrek; Romero-Cadaval, Enrique; Martins, Joao Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5922-5927 : ill <https://doi.org/10.1109/IECON.2013.6700106> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Ainulaadne pingemuundur taastuenergeetikale

Roasto, Indrek Mente et Manu 2009 / 22. mai, lk. 2 : fot https://www.ester.ee/record=b1242496*est

Alalisvoolu tagasitulek - unistus või reaalsus?

Roasto, Indrek; Vinnikov, Dmitri; Blinov, Andrei; Chub, Andrii; Carvalho da Silva, Edivan Laercio Elektriala 2023 / lk. 22-25 : ill, portr https://www.ester.ee/record=b1240496*est

An improved high-power DC/DC converter for distributed power Generation [Electronic resource]

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel EPQU'09 : 10th International Conference on Electrical Power Quality and Utilisation : 15-17 September 2009, Lodz, Poland 2009 / [6] p. [CD-ROM]

An improved interface converter for a medium-power wind-hydrogen system

Vinnikov, Dmitri; Hõimoja, Hardi; Andrijanovitš, Anna; Roasto, Indrek; Lehtla, Tõnu; Klytta, Marius 2nd International Conference on Clean Electrical Power Renewable Energy Resources Impact : Capri (Italy) June 9-11, 2009 2009 / p. 426-432 : ill <https://ieeexplore.ieee.org/document/5212019>

An indirect adaptive control paradigm for wind generation systems

Kamal, Tariq; Karabacak, Murat; Hassan, Syed Zulqadar; Fernández Ramírez, Luis M.; **Roasto, Indrek;** Khan, Laiq Advanced control and optimization paradigms for wind energy systems 2019 / p. 235-257 https://doi.org/10.1007/978-981-13-5995-8_10 [Article collection metrics at Scopus](#) [Article at Scopus](#)

Analysis and design of 3.3 kV IGBT based three-level DC/DC converter with high-frequency isolation and current doubler rectifier

Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2009 / p. 97-102 : ill

Analysis and evaluation of PWM and PSM shoot-through control methods for voltage-fed qZSI based DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri EPE-PEMC 2010 : 14th International Power Electronics and Motion Control Conference : 6-8 September 2010, Ohrid, Republic of Macedonia 2010 / p. T3-100 - T3-105

Analysis of battery charger topologies for an electric vehicle

Jalakas, Tanel; Roasto, Indrek; Vinnikov, Dmitri BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 223-226 : ill

Analysis of capacitor-related mid-voltage point shift problems in high-voltage half-bridge DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu Proceedings of 2008 IEEE 39th Annual Power Electronics Specialists Conference : PESC 2008 : Rhodes, Greece, 15-19 June 2008 2008 / p. 3619-3622

Analysis of capacitor-related mid-voltage point shift problems in high-voltage half-bridge DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu PESC 08 : 39th IEEE Annual Power Electronics Specialists Conference : Rhodes, Greece, 15-19 June 2008 : book of one page paper summaries 2008 / p. 573 <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=4592517>

Analysis of current doubler rectifier based high frequency isolation stage for intelligent transformer [Electronic resource]

Beldjajev, Viktor; Roasto, Indrek; Vinnikov, Dmitri CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 336-341 [CD-ROM]

Analysis of implementation possibilities and benefits of three-level half-bridge NPC topology in static auxiliary converters

for rolling stock [Electronic resource]

Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek POWERENG 2009 : 2nd International Conference on Power Engineering, Energy and Electrical Drives : 18-20 March, 2009, Lisbon, Portugal 2009 / p. 587-592 : ill. [CD-ROM]
<https://ieeexplore.ieee.org/document/4915180>

Analysis of new bidirectional DC-DC converter based on current doubler rectifier

Beldjajev, Viktor; Roasto, Indrek 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. 234-237 : ill

Analysis of switching conditions of IGBTs in modified sine wave qZSIs operated with different shoot-through control methods

Vinnikov, Dmitri; Roasto, Indrek; Zakis, Janis; Ott, Silver; Jalakas, Tanel Elektronika ir elektrotehnika = Electronics and electrical engineering 2011 / p. 45-50 : ill
https://www.researchgate.net/publication/269779178_Analysis_of_Switching_Conditions_of_IGBTs_in_Modified_Sine_Wave_qZSIs_Operated_with_Different_Shoot-Through_Control_Methods

Analytical and experimental investigation of neutral point clamped quasi-impedance-source inverter

Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 113-118 : ill

Analytical comparison between capacitor assisted and diode assisted cascaded quasi-Z-source inverters

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel; Strzelecki, Ryszard; Adamowicz, Marek Przegląd elektrotechniczny = Electrical review 2012 / p. 212-217 : ill
https://www.researchgate.net/publication/290652933_Analytical_comparison_between_capacitor_assisted_and_diode_assisted_cascaded_quasi-Z-source_inverters

Bidirectional operation of the power electronic interface for nearly-zero energy buildings

Roasto, Indrek; Jalakas, Tanel; Rosin, Argo 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 2018 / p. 2456-2464 : ill <https://ieeexplore.ieee.org/document/8515405>

CCM and DCM operation analysis of cascaded quasi-z-source inverter

Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard; Adamowicz, Marek Proceedings of IEEE International Symposium on Industrial Electronics : ISIE'2011 : 27-30 June 2011, Gdansk, Poland 2011 / p. 159-164 : ill

Code development of a DSP-FPGA based control platform for power electronics applications

Minambres-Marcos, Victor; Roasto, Indrek; Szczepankowski, P.; Romero-Cadaval, Enrique; Vinnikov, Dmitri; Barrero-Gonzalez, Fermin 2015 IEEE International Conference on Industrial Technology (ICIT 2015) : Seville, Spain, 17-19 March 2015 2015 / p. 2890-2895 : ill <https://doi.org/10.1109/ICIT.2015.7125524> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Combined active frequency drift islanding detection method for NZEB energy router

Jalakas, Tanel; Roasto, Indrek; Najafzadeh, Mahdiyyeh 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 6 p
<https://doi.org/10.1109/RTUCON48111.2019.8982258>

Comparative study of capacitor-assisted extended boost qZSIs operating in continuous conduction mode

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 297-300 : ill

Comparison of control methods for high-voltage high-power three-level half-bridge DC/DC converters [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri; Galkin, Ilja 6th International Conference-Workshop Compatibility and Power Electronics : May 20-22, 2009 : CPE 2009 : conference proceedings 2009 / p. 258-264 : ill. [CD-ROM]
https://www.researchgate.net/publication/241160163_Comparison_of_control_methods_for_high-voltage_high-power_three-level_half-bridge_DCDC_converters

Comparison of different microcontroller development boards for power electronics applications

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu 5th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology : Kuressaare, January 14-19, 2008 2008 / p. 103-107 : ill

Comparison of pulse width modulation methods for a quasi impedance source inverter

Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II 2011 / p. 25-29 : ill

Configurable PCB to teach DC-DC converters in power electronics

Roasto, Indrek 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. 19-20 : ill https://www.ester.ee/record=b5291755*est

Control methodology of the rolling stock auxiliary power supply

Roasto, Indrek; Vinnikov, Dmitri 4th International Symposium Topical Problems of Education in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology : Kuressaare, Estonia, January 15-20, 2007 / p. 122-125 : ill

Control of bidirectional grid-forming inverter for nearly zero energy buildings

Roasto, Indrek; Jalakas, Tanel; Rosin, Argo 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 6 p. : ill
<https://doi.org/10.1109/RTUCON.2018.8659848>

Control of quasi-Z-source dc-dc converter by the overlap of active states : new possibilities and limitations

Roasto, Indrek; Liivik, Liisa; Vinnikov, Dmitri 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. 217-220 : ill

Control of ultracapacitors energy exchange [Electronic resource]

Roasto, Indrek; Lehtla, Tõnu; Möller, Taavi; Rosin, Argo EPE-PEMC 2006 : 12th International Power Electronics and Motion Control Conference : Portorož, Slovenia, August 30 - September 1, 2006 : proceedings 2006 / p. 1401-1406 : ill. [CD-ROM]
<https://ieeexplore.ieee.org/document/4778599>

Control strategies of ultracapacitors

Roasto, Indrek; Lehtla, Tõnu; Rosin, Argo 3rd International Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : Kuressaare, Estonia, January 16-21, 2006 / p. 85-88

Control system simulation of a 40kW half-bridge isolated DC/DC converter [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri EPE 2007 : 12th European Conference on Power Electronics and Applications : 2-5 September 2007, Aalborg, Denmark 2007 / [10] p. [CD-ROM] <https://ieeexplore.ieee.org/document/4417224>

DC droop control strategies and tuning principles

Roasto, Indrek; Blinov, Andrei; Vinnikov, Dmitri; Mackay, Laurens; Jalakas, Tanel 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 <https://doi.org/10.1109/RTUCON60080.2023.10412947>

DC nano grid control in the residential energy router with the presence of constant power loads

Najafzadeh, Mahdiyyeh; Vinnikov, Dmitri; Husev, Oleksandr; Roasto, Indrek 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 / p. 1-6 <https://doi.org/10.1109/ENERGYCON53164.2022.9830523>

DC-link capacitor minimization in residential energy router through battery utilization

Najafzadeh, Mahdiyyeh; Vinnikov, Dmitri; Husev, Oleksandr; Jalakas, Tanel; Roasto, Indrek 2021 IEEE 15th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Florence, Italy, 14-16 July 2021 2021 / p. 1-6 : ill <https://doi.org/10.1109/CPE-POWERENG50821.2021>

Design and development of 3.3 kV IGBT based three-level DC/DC converter

Vinnikov, Dmitri; Roasto, Indrek Electrical engineering research report 2009 / [6] p

Design and development of solid state circuit breaker with residual current protection for residential prosumer DC microgrids

Jalakas, Tanel; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri; Kurnitski, Jarek Proceedings of the Estonian Academy of Sciences 2025 / p. 281-290 <https://doi.org/10.3176/proc.2025.2S.02>

Design and development of three-level half-bridge NPC converter with dual 3.3 kV IGBT modules

Jalakas, Tanel; Vinnikov, Dmitri; Roasto, Indrek 6th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : [Kuressaare, January 12-17, 2009] 2009 / p. 43-48 : ill

Design and evaluation of a base module of active power electronic transformer

Roasto, Indrek; Minambres-Marcos, Victor; Romero-Cadaval, Enrique; Strzelecki, Ryszard 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. 384-389 : ill <http://dx.doi.org/10.1109/CPE.2015.7231106>

Design and testing of an universal autonomous surface vehicle

Roasto, Indrek; Jalakas, Tanel; Mölder, Heigo; Möller, Taavi; Tabri, Kristjan; Enok, Mart 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. 705-710 : ill <https://doi.org/10.1109/PEMC48073.2021.9432567>

Design concepts for a hybrid diesel electric shunting locomotive powertrain

Hõimoja, Hardi; Roasto, Indrek; Kesküla, A. BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 293-296 :

Design guidelines of new step-up DC/DC converter for fuel cell powered distributed generation systems

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard 8th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Pärnu, January 11-16, 2010 : proceedings] 2010 / p. 33-41 : ill

Design issues of redundant protection and supervision system for the special purpose power converters [Electronic resource]

Vinnikov, Dmitri; Roasto, Indrek; Vodovozov, Valery International Conference on Renewable Energies and Power Quality : ICREPQ'09 : Valencia, Spain, 15th to 17th April 2009 2009 / [6] p. [CD-ROM] <https://www.icrepq.com/ICREPQ%2709/356-vinnikov.pdf>

Design issues of SSCBs for residential DC microgrid

Jalakas, Tanel; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri 2024 IEEE 65th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2024 / 6 p <https://doi.org/10.1109/RTUCON62997.2024.10830826>

Design of a simple modular active power electronic transformer

Strzelecki, Ryszard; **Roasto, Indrek;** Romero-Cadaval, Enrique Proceedings : IECON 2014 - 40th Annual Conference of the IEEE Industrial Electronics Society : Sheraton Hotel Dallas, Dallas, TX, USA, 30. October-01. November, 2014 2014 / p. 1410-1415 : ill <https://doi.org/10.1109/IECON.2014.7048686> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Design of solid state circuit breaker

Jalakas, Tanel; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri 2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / p. 1-5 <https://doi.org/10.1109/RTUCON56726.2022.9978903>

Development and verification of control and protection algorithms for the special purpose high power converters

Roasto, Indrek; Vinnikov, Dmitri; Vodovozov, Valery Intelligent Technologies in Logistics and Mechatronics Systems : ITELMS'2008 : proceedings of the 3rd International Workshop : May 22-23, 2008, Panevezys, Lithuania 2008 / p. 23-27 : ill

Development of experimental load management system for nearly zero-energy building

Maask, Vahur; Rosin, Argo; Roasto, Indrek 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.2018.8659826>

Digital current mode control algorithms for high-power half-bridge DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri; Jalakas, Tanel; Strzelecki, Ryszard Przegląd elektrotechniczny 2011 / p. 180-186 : ill <http://www.red.pe.org.pl/articles/2011/8/36.pdf>

Digital signal processor based sinusoidal PWM for voltage source inverters

Ott, Silver; Roasto, Indrek 9th International Symposium "Topical problems in the field of electrical and power engineering". Doctoral school of energy and geotechnology. II : Pärnu, Estonia, June 14-19, 2010 2010 / p. 225-228 : ill

Droop control with incorporated dead zone for indirect energy management in DC nanogrids

Roasto, Indrek; Blinov, Andrei; Vinnikov, Dmitri 2024 IEEE 21st International Power Electronics and Motion Control Conference (PEMC) 2024 / 6 p <https://doi.org/10.1109/PEMC61721.2024.10726394>

Dual active bridge based isolation stage for power electronic transformer

Beldjajev, Viktor; Roasto, Indrek 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 / lk. 216-219 : ill

Effects of voltage transients on the DC droop control in residential nanogrids

Roasto, Indrek; Blinov, Andrei; Vinnikov, Dmitri; Jalakas, Tanel 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 5 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227464>

Electric power management and control in DC buildings—state-of-the-art and emerging technologies

Blinov, Andrei; Roasto, Indrek; Chub, Andrii; Emiliani, Pietro; Vinnikov, Dmitri Power Quality : Infrastructures and Control 2023 / p. 67-96 https://doi.org/10.1007/978-981-19-7956-9_3

Electric vehicle fast charger high voltage input multiport converter topology analysis [Electronic resource]

Jalakas, Tanel; Roasto, Indrek; Vinnikov, Dmitri CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 326-331 : ill [CD-ROM]

Electric vehicle multiport fast charger based on the concept of active power electronic transformer

Jalakas, Tanel; Roasto, Indrek; Gallardo-Lozano, Javier; Romero-Cadaval, Enrique 2014 16th European Conference on Power

EMC considerations on PCB design for a high-power converter control system [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri; Klytta, Marius Proceedings of 5th International Conference 2007 : Compatibility in Power Electronics : 29 May - 1 June 2007, Gdynia, Poland 2007 / [4] p. [CD-ROM] <https://ieeexplore.ieee.org/document/4296544>

Energy router based energy management system for nearly zero energy buildings

Najafzadeh, Mahdiyyeh; Roasto, Indrek; Jalakas, Tanel 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 6 p. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982366>

Experimental analysis of extended boost quasi-Z-source inverters

Ott, Silver; Jalakas, Tanel; Roasto, Indrek; Vinnikov, Dmitri 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. 65-67 : ill

Experimental analysis of extended boost quasi-Z-source inverters

Ott, Silver; Jalakas, Tanel; Vinnikov, Dmitri; Roasto, Indrek BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 259-262 : ill

Experimental study of new integrated DC/DC converter for hydrogen-based energy storage

Vinnikov, Dmitri; Andrijanovič, Anna; Roasto, Indrek; Jalakas, Tanel 2011 10th International Conference on Environment and Electrical Engineering (EEEIC), 8-11 May 2011, Rome, Italy : conference proceedings 2011 / [4 p.] : ill <https://ieeexplore.ieee.org/document/5874667>

Experimental study of shoot-through control methods for qZSI-based DC/DC converters [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri; Jalakas, Tanel; Zakis, Janis; Ott, Silver SPEEDAM 2010 : International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Pisa, Italy, 14th-16th June, 2010 : proceedings 2010 / p. 29-34 : [CD-ROM] <https://ieeexplore.ieee.org/document/5542046>

Experimental study of voltage-fed quasi-z-source inverter based isolated DC/DC converter

Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard Electrical engineering research report 2009 / [7] p

Experimental verification of novel bi-directional qZSI based DC/DC converter for short term energy storage systems [Electronic resource]

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Ribickis, Leonids International Conference on Renewable Energies and Power Quality (ICREPQ'11) : Las Palmas de Gran Canaria (Spain), 13th to 15th April 2011 2011 / [5] p. : ill. [CD-ROM] <https://www.icrepq.com/icrepq%2711/550-zakis.pdf>

Extended boost quasi-Z-source inverters : possibilities and challenges

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel; Ott, Silver Elektronika ir elektrotehnika = Electronics and electrical engineering 2011 / p. 51-56 : ill https://www.researchgate.net/publication/229042778_Extended_Boost_Quasi-Z-Source_Inverters_Possibilities_and_Challenges

Fault detection and protection system for the power converters with high-voltage IGBTs [Electronic resource]

Vinnikov, Dmitri; Roasto, Indrek; Lehtla, Tõnu ICECS 2008 : The 15th IEEE International Conference on Electronics, Circuits and Systems : August 31 - September 3, 2008, Malta 2008 / p. 922-925 : ill. [CD-ROM] <https://ieeexplore.ieee.org/document/4675005>

Feasibility study of model predictive control for grid-connected twisted buck-boost inverter

Matiushkin, Oleksandr; Husev, Oleksandr; Rodriguez, Jose; Young, Hector; **Roasto, Indrek** IEEE transactions on industrial electronics 2022 / p. 2488-2499 <https://doi.org/10.1109/TIE.2021.3068663> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Four novel PWM shoot-through control methods for impedance source DC-DC converters

Vinnikov, Dmitri; Roasto, Indrek; Liivik, Liisa; Blinov, Andrei Journal of power electronics 2015 / p. 299-308 : ill <https://doi.org/10.6113/JPE.2015.15.2.299> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Galvanically isolated quasi-Z-source DC-DC converter with a novel ZVS and ZCS technique

Husev, Oleksandr; Liivik, Liisa; Blaabjerg, Frede; Chub, Andrii; Vinnikov, Dmitri; Roasto, Indrek IEEE transactions on industrial electronics 2015 / p. 7547-7556 : ill <https://doi.org/10.1109/TIE.2015.2455522> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Grid-forming operation of energy-router based on model predictive control with improved dynamic performance

Najafzadeh, Mahdiyyeh; Strzelecka, Natalia; **Husev, Oleksandr; Roasto, Indrek;** Nassereddine, Kawsar; **Vinnikov, Dmitri;** Strzelecki, Ryszard Energies 2022 / 14 p. : ill <https://doi.org/10.3390/en15114010> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High-performance quasi-Z-source series resonant DC-DC converter for photovoltaic module-level power electronics applications

Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta; Roasto, Indrek IEEE transactions on power electronics 2017 / p. 3634-3650 : ill <https://doi.org/10.1109/TPEL.2016.2591726> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High-voltage IGBT based converters for rolling stock : possibilities and challenges

Roasto, Indrek; Jalakas, Tanel; Vinnikov, Dmitri 2011 <https://www.amazon.com/HIGH-VOLTAGE-BASED-CONVERTERS-ROLLING-STOCK/dp/3843391211>

High-voltage pulse transformer for IOT modulators

Jalakas, Tanel; Janson, Kuno; Mölder, Heigo; Roasto, Indrek IET electric power applications 2020 / p. 2348-2354 <https://doi.org/10.1049/iet-epa.2019.0877> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hybrid residual current device and solid state circuit breaker for residential DC microgrids

Jalakas, Tanel; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 5 p <https://doi.org/10.1109/BEC61458.2024.10737970> [Article at Scopus](#) [Conference proceedings at Scopus](#) [Article at WOS](#)

Impact of component losses on the efficiency of a new quasi-Z-source based dual active bridge

Beldjajev, Viktor; Roasto, Indrek; Zakis, Janis Technological innovation for the Internet of things : 4th IFIP WG 5.5/SOCOLNET Doctoral Conference on Computing, Electrical and Industrial Systems : DoCEIS 2013 : Costa de Caparica, Portugal, April 15-17, 2013 : proceedings 2013 / p. 485-492 : ill https://doi.org/10.1007/978-3-642-37291-9_52 [Article collection metrics at Scopus](#) [Article at Scopus](#)

Impact of component losses on the efficiency of the bi-directional current doubler rectifier based isolation-stage

Beldjajev, Viktor; Roasto, Indrek IECON 2012 : 38th Annual Conference of the IEEE Industrial Electronics Society : Industrial Electronics for Sustainable Development 2012 / p. 5209-5215 : ill <https://ieeexplore.ieee.org/document/6389548>

Impact of component losses on the voltage boost properties and efficiency of the QZS-converter family

Roasto, Indrek; Vinnikov, Dmitri COMPEL : The international journal for computation and mathematics in electrical and electronic engineering 2012 / p. 1945-1963 : ill <https://www.emerald.com/insight/content/doi/10.1108/03321641211267227/full/html>

Impact of component losses on the voltage boost properties and efficiency of the qZS-converter family [Electronic resource]

Vinnikov, Dmitri; Roasto, Indrek CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 303-308 [CD-ROM] https://www.researchgate.net/publication/241185271_Impact_of_component_losses_on_the_voltage_boost_properties_and_efficiency_of_the_QZS-converter_family

Improved DC-Link voltage transient response and stability issues in energy router with fuzzy logic control method

Najafzadeh, Mahdiyyeh; Husev, Oleksandr; Roasto, Indrek; Jalakas, Tanel 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 / 6 p. : ill <https://doi.org/10.1109/RTUCON51174.2020.9316477>

Intelligent transformer : possibilities and challenges

Beldjajev, Viktor; Roasto, Indrek; Lehtla, Tõnu Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 95-100 : ill

Investigation of radiated emissions of a galvanically isolated qZS DC-DC converter

Jalakas, Tanel; Jarkovoi, Marek; Roasto, Indrek; Zakis, Janis; Garganev, Alexander 2015 IEEE 5th International Conference on Power Engineering, Energy and Electrical Drives (POWERENG) : proceedings : May 11-13, 2015, Riga, Latvia 2015 / p. 176-181 : ill <http://dx.doi.org/10.1109/PowerEng.2015.7266314>

Iselaev käis ise mere taga ära

Vill, Ants Director. Inseneeria 2019 / lk. 61-67 : fot http://www.ester.ee/record=b2336521*est <https://director.ee/2019/10/02/iselaev-kais-mere-taga/?v=a57b8491d1d8>

Isesõitvat autot täiendab nüüd robotlaev

Tamm, Kadri TööstusEST 2019 / lk. 34-38 : ill http://www.ester.ee/record=b4481084*est <https://toostusest.ee/uudis/2019/05/14/isesoitvat-autot-taiendab-nuud-robotlaev/>

Isolation stage for power electronic transformer : dual active bridge vs bi-directional current doubler rectifier [Electronic resource]

Beldjajev, Viktor; Roasto, Indrek; Zakis, Janis SPEEDAM 2012 : Sorrento (Italy) - June 20-22, 2012 : 21st edition of the International Symposium on Power Electronics, Electrical drives, Automation and Motion 2012 / p. 849-854 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6264545>

Juhtmevaba elekter on veel lapsekingades

Laboratory setup for studying ultracapacitors in industrial applications

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control Conference : 1-3 September 2008, Poznan, Poland : abstracts 2008 / p. 77-78 <https://ieeexplore.ieee.org/document/4635561>

Laboratory setup for studying ultracapacitors in industrial applications [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu EPE-PEMC 2008 : 2008 13th International Power Electronics and Motion Control Conference : 1-3 September 2008, Poznan, Poland : proceedings 2008 / p. 2034-2037 : ill. [CD-ROM]
<https://ieeexplore.ieee.org/document/4635561>

Lade- und Entladevorgänge von Ultrakondensatoren

Roasto, Indrek Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 19-24, 2004 2004 / p. 69-72 : ill

Lossless dynamic models of the quasi-Z-source converter family

Vinnikov, Dmitri; Husev, Oleksandr; Roasto, Indrek Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 73-78 <https://ui.adsabs.harvard.edu/abs/2011SJRP...29...73V/abstract>

Mathematical models of cascaded quasi-impedance source converter

Vinnikov, Dmitri; Roasto, Indrek; Zakis, Janis Технічна електродинаміка 2010 / 1, p. 59-64 : ill
<https://ortus.rtu.lv/science/lv/publications/11212>

Modeling of grid-connected quasi-Z-source series resonant topology based microinverter

Roasto, Indrek; Jalakas, Tanel; Husev, Oleksandr 2016 10th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings : Opera Nova's Congress Center, Bydgoszcz, Poland, 29. June - 01. July, 2016 2016 / p. 192-195 : ill <https://doi.org/10.1109/CPE.2016.7544183>

Multifunctional energy router for residential applications = Multifunktsionaalne energiaruuter eramutele

Najafzadeh, Mahdiyyeh 2022 <https://doi.org/10.23658/taltech.25/2022> <https://digikogu.taltech.ee/et/Item/6914b8ca-7ca5-49d1-868a-a6de9192f8b4> https://www.ester.ee/record=b5501867*est

Multi-mode quasi-Z-source series resonant DC/DC converter for wide input voltage range applications

Vinnikov, Dmitri; Chub, Andrii; Roasto, Indrek; Liivik, Liisa Applied Power Electronics Conference and Exposition : APEC 2016 : Long Beach Convention & Entertainment Center, March 20-24, 2016 2016 / p. 2533-2539 : ill
<https://doi.org/10.1109/APEC.2016.7468221> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Multiport interface converter with an energy storage for nanogrids

Roasto, Indrek; Rosin, Argo; Jalakas, Tanel IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2018 / p. 6088-6093 : ill <https://doi.org/10.1109/IECON.2018.8591104>

Neutral point clamped quasi-impedance-source inverter [Electronic resource]

Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 348-353 [CD-ROM]
<https://www.semanticscholar.org/paper/Neutral-point-clamped-quasi-impedance-source-Ott-Roasto/547db91f89adecec7c854cc3e4b811934890b7a6>

New bi-directional DC/DC converter for supercapacitor interfacing in high-power applications

Vinnikov, Dmitri; Roasto, Indrek; Zakis, Janis EPE-PEMC 2010 : 14th International Power Electronics and Motion Control Conference : 6-8 September 2010, Ohrid, Republic of Macedonia 2010 / p. T11-38 - T11-43 : ill
https://www.researchgate.net/publication/224184374_New_bi-directional_DCDC_converter_for_supercapacitor_interfacing_in_high-power_applications

New fuel cell power conditioning system for supplying dedicated loads

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel; Lehtla, Tõnu; Laugis, Juhan 2010 9th International Conference on Environment and Electrical Engineering : Prague, Czech Republic, 16-19 May 2010 2010 / p. 341-344 : ill
<https://ieeexplore.ieee.org/document/5489939>

New high-gain step-up DC/DC converter for a fuel cell interfacing in hydrogen buffer

Vinnikov, Dmitri; Husev, Oleksandr; Andrijanovič, Anna; Roasto, Indrek Технічна електродинаміка 2011 / p. 93-100 : ill

A new high-power DC/DC converter for residential fuel cell power systems [Electronic resource]

Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek 11th Spanish Portuguese Conference on Electrical Engineering (11CHLIE) : 1-4 of July 2009, Zaragoza, Spain 2009 / [6] p. [CD-ROM]

New integrated converter for hydrogen buffer interfacing in distributed energy systems [Electronic resource]

Vinnikov, Dmitri; Andrijanovič, Anna; Roasto, Indrek; Lehtla, Tõnu International Conference on Renewable Energies and

Power Quality (ICREPO'11) : Las Palmas de Gran Canaria (Spain), 13th to 15th April 2011 / [6] p. : ill. [CD-ROM]
https://www.researchgate.net/publication/316913371_New_integrated_converter_for_hydrogen_buffer_interfacing_in_distributed_energy_systems

New shoot-through control methods for qZSI-based DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri; Zakis, Janis; Husev, Oleksandr IEEE transactions on industrial informatics 2013 / p. 640-647 : ill <https://doi.org/10.1109/TII.2012.2224353> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

New step-up DC/DC converter for fuel cell powered distributed generation systems: some design guidelines

Vinnikov, Dmitri; Strzelecki, Ryszard; Zakis, Janis; Roasto, Indrek Przegląd elektrotechniczny 2010 / 8, p. 245-252
<https://www.semanticscholar.org/paper/New-Step-Up-DC-DC-Converter-for-Fuel-Cell-Powered-Vinnikov-Roasto/00d1f7e78e0fe0d6e2a114c0515e6eb5eb196f4e>

New step-up DC/DC converter with high-frequency isolation

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society : Porto, Portugal, 3-5 November 2009 : preprint proceedings 2009 / p. 667-672 : ill <https://ieeexplore.ieee.org/document/5415000>

New step-up DC/DC converter with high-frequency isolation

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society. ICEIE 2009 : 3rd IEEE International Conference on E-learning in Industrial Electronics : Porto, Portugal, 3-5 November 2009 : abstracts 2009 / p. 280 <https://ieeexplore.ieee.org/document/5415000>

New voltage mode control method for the quasi-Z-source-based isolated DC/DC converters [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri 2012 IEEE International Conference on Industrial Technology : proceedings CD 2012 / p. 655-660 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6210011>

Non-shoot-through mode behavior of DC/DC converters with a quasi Z source inverter

Jalakas, Tanel; Roasto, Indrek; Vinnikov, Dmitri 15th International Power Electronics and Motion Control Conference, EPE-PEMC 2012 ECCE Europe, Novi Sad, Serbia 2012 / 4 p. : ill <https://ieeexplore.ieee.org/document/6397204>

Novel droop control strategy for indirect battery management in DC nanogrids

Roasto, Indrek; Vinnikov, Dmitri; Blinov, Andrei Proceedings of the Estonian Academy of Sciences 2024 / p. 345-355
<https://doi.org/10.3176/proc.2024.4.03>

Output rectifier for the high-voltage high-frequency isolated DC/DC converter

Roasto, Indrek; Vinnikov, Dmitri; Klytta, Marius Scientific proceedings of Riga Technical University. Serija 4, Power and electrical engineering 2007 / p. 75-83 : ill

Performance analysis of protection methods in residential DC microgrids

Jalakas, Tanel; Banavath, Satish Naik; Chub, Andrii; Roasto, Indrek; Vinnikov, Dmitri 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227388>

Performance and feasibility analysis of electricity price based control models for thermal storages in households

Rosin, Argo; Link, Siim; Lehtla, Madis; Martins, Joao; Drovtar, Imre; Roasto, Indrek Sustainable cities and society 2017 / p. 366-374 : ill <https://doi.org/10.1016/j.scs.2017.04.008> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Performance improvement method for the voltage-fed qZSI with continuous input current

Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard; Adamowicz, Marek MELECON 2010 : the 15th IEEE Mediterranean Electrotechnical Conference : 25th-28th April 2010, Malta : book of abstracts 2010 / p. 135 <https://ieeexplore.ieee.org/document/5476229>

PIC microcontroller learning system

Jalakas, Tanel; Möller, Taavi; Roasto, Indrek 3rd International Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : Kuressaare, Estonia, January 16-21, 2006 2006 / p. 99-101 : ill

Power converter interfaces for electrochemical energy storage systems - a review

Fernao Pires, Vitor; Romero-Cadaval, Enrique; Vinnikov, Dmitri; Roasto, Indrek; Martins, Joao Energy conversion and management 2014 / p. 453-475 : ill <https://doi.org/10.1016/j.enconman.2014.05.003> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Power electronic interface converter for resource efficient buildings

Roasto, Indrek; Rosin, Argo; Jalakas, Tanel IECON 2017 - 43rd Annual Conference of the IEEE Industrial Electronics Society : proceedings : China National Convention Center, Beijing, China, 29. October - 01. November, 2017 2017
<https://doi.org/10.1109/IECON.2017.8216617>

Practical design guidelines of qZSI based step-up DC/DC converter

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2010 / p. 107-114 : ill
https://www.researchgate.net/publication/258448386_Practical_Design_Guidelines_of_qZSI_Based_Step-Up_DCDC_Converter

Programmeeritavad loogikaelemendid

Roasto, Indrek Elektriala 2006 / 1, lk. 24-26 : ill

Quasi-Z-source inverter based bi-directional DC/DC converter : analysis of experimental results [Electronic resource]

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek; Ribickis, Leonids CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 394-399 [CD-ROM]
https://www.researchgate.net/publication/224245116_Quasi-Z-source_inverter_based_bi-directional_DCDC_converter_Analysis_of_experimental_results

Quasi-Z-source-based isolated DC/DC converters for distributed power generation

Vinnikov, Dmitri; Roasto, Indrek IEEE transactions on industrial electronics 2011 / p. 192-201 : ill
<https://ieeexplore.ieee.org/document/5409567>

Rahvusvaheline konverents CPE2011 Tallinnas : [1.-3. juunini toimunud jõuelektronika ja ühilduvuse alane konverents]

Roasto, Indrek Mente et Manu 2011 / lk. 2 : fot https://www.ester.ee/record=b1242496*est

Rapid prototyping - speed up your power electronic design

Roasto, Indrek 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. 47-48 : ill
https://www.ester.ee/record=b5183874*est

Recent contributions, future prospects and limitations of interlinking converter control in hybrid AC/DC microgrids

Najafzadeh, Mahdiyyeh; Ahmadihangar, Roya; Husev, Oleksandr; Roasto, Indrek; Jalakas, Tanel; Blinov, Andrei IEEE Access 2021 / art. 9312595, p. 7960-7984 <https://doi.org/10.1109/ACCESS.2020.3049023> [Journal metrics at Scopus](#) [Article at Scopus](#)
[Journal metrics at WOS](#) [Article at WOS](#)

Research and development of digital control systems and algorithms for high power, high voltage isolated DC/DC converters = Võimsate kõrgepingeliste alalisvoolumuundurite arvjuhtimissüsteemide ja -algoritmide uurimine ning väljatöötamine

Roasto, Indrek 2009 https://www.ester.ee/record=b2557768*est

Research and development of the new topologies for the isolation stage of the power electronic transformer = Jõuelektronilise trafo isolatsioonilüli uudsete topoloogiatega uurimine ja arendamine

Beldjajev, Viktor 2013 http://www.ester.ee/record=b2969664*est

Research and development of voltage converters based on 6,5 kV IGBTs

Jalakas, Tanel; Roasto, Indrek; Müür, Margus; Vinnikov, Dmitri; Laugis, Juhan International Youth Conference on Energetics IYCE-2007 : 31 May - 02 June, 2007, Budapest, Hungary : program & abstracts 2007 / p. 153-154 : ill

Robotex 2005

Roasto, Indrek Elektriala 2005 / 6, lk. 28

Selection of the duty cycle variation range and its influence on the efficiency and operability of high-power converters operating at wide input voltage swing

Vinnikov, Dmitri; Roasto, Indrek; Jalakas, Tanel 7th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Narva-Jõesuu, Estonia, 16.06-19.06.2009] 2009 / p. 26-31 : ill

Simplified digital average current mode control algorithm for half- or full-bridge isolated DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society : Porto, Portugal, 3-5 November 2009 : preprint proceedings 2009 / p. 1744-1749 : ill <https://ieeexplore.ieee.org/document/5414820/similar#similar>

Simplified digital average current mode control algorithm for half- or full-bridge isolated DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri IECON 2009 : 35th Annual Conference of the IEEE Industrial Electronics Society. ICELE 2009 : 3rd IEEE International Conference on E-learning in Industrial Electronics : Porto, Portugal, 3-5 November 2009 : abstracts 2009 / p. 166

A simplified peak current mode control algorithm for special purpose high voltage IGBT converters

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu; Auväärt, Aivar BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 305-308 : ill

Simulation and evaluation of control methods for the rolling stock static auxiliary converter based on three-level NPC inverter topology [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri; Vodovozov, Valery POWERENG 2009 : 2nd International Conference on Power Engineering, Energy and Electrical Drives : 18-20 March, 2009, Lisbon, Portugal 2009 / p. 593-598 : ill. [CD-ROM]
<https://ieeexplore.ieee.org/document/4915176/similar#similar>

Single-phase power electronics transformer with active functions for smart grid

Minambres-Marcos, Victor; **Roasto, Indrek**; Romero-Cadaval, Enrique; Strzelecki, Ryszard; Barrero-Gonzalez, Fermin 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. 528-533 : ill <http://dx.doi.org/10.1109/CPE.2015.7231131>

Soft start algorithm for a droop controlled dc nanogrid

Roasto, Indrek; Blinov, Andrei; Vinnikov, Dmitri 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 l.
<https://doi.org/10.1109/BEC56180.2022.9935608>

Soft-switching capability analysis of a qZSI-based DC/DC converter

Zakis, Janis; Vinnikov, Dmitri; Roasto, Indrek BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 301-304 : ill

Stability analysis of the quasi-Z-source DC/DC converter based on small signal model [Electronic resource]

Husev, Oleksandr; Vinnikov, Dmitri; Roasto, Indrek SPEEDAM 2012 : Sorrento (Italy) - June 20-22, 2012 : 21st edition of the International Symposium on Power Electronics, Electrical drives, Automation and Motion 2012 / p. 298-303 : ill [CD-ROM]
<https://ieeexplore.ieee.org/document/6264524>

Startup sequence for a grid connected single phase voltage source inverter

Roasto, Indrek; Jalakas, Tanel; Rosin, Argo 2017 IEEE International Symposium on Industrial Electronics (ISIE) : Edinburgh International Conference Centre, Edinburgh, Scotland, United Kingdom, 19-21 June, 2017 : proceedings 2017 / p. 1787-1791 : ill
<https://doi.org/10.1109/ISIE.2017.8001519>

Startup strategy for grid connected PV micro inverter

Roasto, Indrek; Jalakas, Tanel BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 187-190 : ill
http://www.ester.ee/record=b2150914*est

State of the art and development trends of smart control systems for high voltage DC/DC converters

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu 6th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology : [Kuressaare, January 12-17, 2009] 2009 / p. 36-42 : ill

State of the art of active power electronic transformers for smart grids

Roasto, Indrek; Romero-Cadaval, Enrique; Martins, Joao; Smolenski, Robert IECON 2012 : 38th Annual Conference of the IEEE Industrial Electronics Society : Industrial Electronics for Sustainable Development 2012 / p. 5241-5246 : ill
<https://ieeexplore.ieee.org/document/6389543>

State of the art trends and design challenges of power electronic transformer for future distribution grids

Beldjajev, Viktor; Roasto, Indrek Технічна електродинаміка : тематичний випуск : силова електроніка та енергоефективність 2012 / p. 55-61 : ill

Step-up DC/DC converters with cascaded quasi-Z-source network

Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard; Adamowicz, Marek IEEE transactions on industrial electronics 2012 / p. 3727-3736 : ill <https://ieeexplore.ieee.org/document/6096410>

Steueralgorithmus für Laden von Ultrakondensator

Roasto, Indrek The 4th Research Symposium of Young Scientists : Actual Problems of Electrical Drives and Industry Automation : Tallinn, Estonia, May 17-21, 2003 2003 / p. 128-130 : ill

Tagasi tulevikku: alalisvoolu tagasitulek energiapöörde ajastul

Vinnikov, Dmitri; Roasto, Indrek postimees.ee 2025 <https://arvamus.postimees.ee/8268032/dmitri-vinnikov-indrek-roasto-tagasi-tulevikku-alalisvoolu-tagasitulek-energiapoorde-ajastul>

TalTechi energeetikutel valmis kodudes taastuenergia kasutamiseks uudseid lahendusi

Blinov, Andrei; Roasto, Indrek Elektriala 2018 / lk. 30 : fot http://www.ester.ee/record=b1240496*est

Target tracking by neural predictive control of autonomous surface vessel for environment monitoring and cargo transportation applications

Astrov, Igor; Udal, Andres; Roasto, Indrek; Mölder, Heigo 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 4 p <https://doi.org/10.1109/BEC49624.2020.9277115>

Teaduspreemia tehnikateaduste alal uurimuste tsükli "Uudsed alalispingemuundurid taastuenergeetikas" eest : Dimitri Vinnikov, Tanel Jalakas, Indrek Roasto

Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek Eesti Vabariigi teaduspreemiad 2014 2014 / lk. 64-74 : fot., ill

Three-level half-bridge ZVS DC/DC converter for electrolyzer integration with renewable energy systems

Andrijanovič, Anna; Vinnikov, Dmitri; Roasto, Indrek; Blinov, Andrei 10th International Conference on Environment and Electrical Engineering (EEEIC), 8-11 May 2011, Rome, Italy : conference proceedings 2011 / [4 p.] : ill

Transient response analyse of different voltage-fed qZS-family inverters

Ott, Silver; Roasto, Indrek; Vinnikov, Dmitri; Teemets, Raivo 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. 195-199 : ill

TTÜs väljatöötatud uudne kõrgepingeline abitoiteallikas

Roasto, Indrek Mente et Manu 2009 / 20. märts, lk. 2 : fot https://www.ester.ee/record=b1242496*est

Two-stage quasi-Z-source network based step-up DC/DC converter

Vinnikov, Dmitri; Roasto, Indrek; Strzelecki, Ryszard; Adamowicz, Marek ISIE 2010 : IEEE International Symposium on Industrial Electronics : Bari, Italy, 4-7 July 2010 2010 / p. 1143-1148 : ill <https://ieeexplore.ieee.org/document/5636562>

Ultracapacitors as an innovative teaching topic in Tallinn University of Technology [Electronic resource]

Roasto, Indrek; Vinnikov, Dmitri; Lehtla, Tõnu 19th International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Speedam 2008 : Ischia (Italy), June 11th-13th, 2008 : conference proceedings 2008 / p. 475-480 : ill. [CD-ROM] <https://www.semanticscholar.org/paper/Ultracapacitors-as-an-innovative-teaching-topic-in-Roasto-Vinnikov/d858917563c7de2fc0ffe1b30c5b39cd08a078db>

Ultrakondensatoren - Energiespeicher für Schienenfahrzeuge

Roasto, Indrek 2nd International Symposium "Topical Problems of Education in the Field of Electrical and Power Engineering" : Kuressaare, Estonia, January 17-22, 2005 2005 / p. 119-122 : ill

Uudsed alalispingemuundurid taastuenergeetikas

Vinnikov, Dmitri; Jalakas, Tanel; Roasto, Indrek Teadusmõte Eestis (X). Tehnikateadused. 3 : [artiklikogumik] 2019 / lk. 216-226 : ill., fot https://www.ester.ee/record=b5208765*est

Versatile laboratory tools for advanced course of power electronics

Jalakas, Tanel; Vinnikov, Dmitri; Roasto, Indrek; Raud, Zoja; Egorov, Mikhail BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 277-280 : ill

Voltage source operation of the energy-router based on model predictive control

Roasto, Indrek; Husev, Oleksandr; Najafzadeh, Mahdiyyeh; Jalakas, Tanel; Rodriguez, Jose Energies 2019 / art. 1892, 15 p. . ill <https://doi.org/10.3390/en12101892> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)