

Address from the General Chairman

Zakis, Janis 7th International Conference-workshop Compatibility and Power Electronics : CPE 2011 : Tallinn, Estonia, June 3, 2011 : student forum 2011 / p. 3

Analysis of buck mode realization possibilities in quasi-Z-source DC-DC converters with voltage doubler rectifier

Zakis, Janis; Rankis, Ivars; Liivik, Liisa; Chub, Andrii 2015 IEEE 5th International Conference on Power Engineering, Energy and Electrical Drives (POWERENG) : proceedings : May 11-13, 2015, Riga, Latvia 2015 / p. 570-575 : ill
<http://dx.doi.org/10.1109/PowerEng.2015.7266379>

Analysis of operating modes of the novel isolated interface converter for PMSG based wind turbines

Bisenieks, Lauris; Vinnikov, Dmitri; Zakis, Janis POWERENG2011 : proceedings of the 2011 International Conference on Power Engineering, Energy and Electrical Drives : Torremolinos (Málaga), Spain, May 11-13, 2011 2011 / [8] p.: ill
<https://ieeexplore.ieee.org/document/6036538>

Analysis of operating modes of the step-up DC/DC converter with a commutating LC-filter

Zakis, Janis; Rankis, Ivars; Vinnikov, Dmitri Технічна електродинаміка 2011 / p. 87-92 : ill
<https://ortus.rtu.lv/science/en/publications/11242>

Analysis of state-of-the-art converter topologies for interfacing of hydrogen buffer with renewable energy systems

Andrijanovičs, Anna; Steiks, Ingars; Zakis, Janis; Vinnikov, Dmitri Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 87-94 : ill <https://ui.adsabs.harvard.edu/abs/2011SJRP...29...87A/abstract>

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

Asymmetrical PWM control of galvanically isolated impedance-source series resonant DC-DC converters

Vinnikov, Dmitri; Zakis, Janis; Chub, Andrii; Liivik, Elizaveta 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. 341-346 : ill <https://doi.org/10.1109/CPE.2016.7544211>

Bidirectional operation of the single-phase neutral-point-clamped quasi-Z-source inverter

Husev, Oleksandr; Zakis, Janis; Vinnikov, Dmitri; Savenko, O. 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. 221-224 : ill

Closed-loop control system design for wireless charging of low-voltage EV batteries with time-delay constraints

Shevchenko, Viktor; Pakhaliuk, Bohdan; Zakis, Janis; Veligorskyi, Oleksandr; Luszcz, Jaroslaw; **Husev, Oleksandr; Lytvyn, Oksana; Matiushkin, Oleksandr** Energies 2021 / art. 3934, 21 p. : ill <https://doi.org/10.3390/en14133934> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparative analysis of boost and quasi-Z-source converters as maximum power point trackers for PV panel integrated converters

Zakis, Janis; Rankis, Ivars; Ribickis, Leonids Proceedings : 2014 IEEE 23rd International Symposium on Industrial Electronics (ISIE) : Grand Cevahir Hotel and Convention Center, Istanbul, Turkey, 01-04 June, 2014 2014 / p. 1991-1995 : ill

Comparative analysis of high power density bidirectional DC-DC converters for portable energy storage applications

Tytelmaier, Kostiantyn; Zakis, Janis; **Husev, Oleksandr; Vinnikov, Dmitri** Elektronika ir elektrotehnika = Electronics and electrical engineering 2018 / p. 33-41 : ill <https://doi.org/10.5755/j01.eie.24.6.22287> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparative analysis of qZS-based bidirectional DC-DC converter for storage energy application

Matiushkin, Oleksandr; **Husev, Oleksandr; Tytelmaier, Kostiantyn; Kroics, Kaspars; Veligorskyi, Oleksandr; Zakis, Janis** Technological Innovation for Smart Systems : 8th IFIP WG 5.5/SOCOLNET Advanced Doctoral Conference on Computing, Electrical and Industrial Systems, DoCEIS 2017, Costa de Caparica, Portugal, May 3-5, 2017 : proceedings 2017 / p. 409-418
http://dx.doi.org/10.1007/978-3-319-56077-9_40

Comparative evaluation of the air core magnetic design for MHz+ switching frequency

Matiushkin, Oleksandr; Pakhaliuk, Bohdan; Gutierrez-Escalona, Javier; Romero-Cadaval, Enrique; Husev, Oleksandr; Zakis, Janis Applied sciences 2025 / art. 8820 <https://doi.org/10.3390/app15168820>

Comparison of performance of phase-shift and asymmetrical pulse width modulation techniques for the novel galvanically isolated buck-boost dc-dc converter for photovoltaic applications

Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman; Zakis, Janis; Liivik, Elizaveta IEEE journal of emerging and selected topics in

power electronics 2017 / p. 624-637 : ill <https://doi.org/10.1109/JESTPE.2016.2631628> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparison of three-phase three-level voltage source inverter with intermediate dc-dc boost converter and quasi-Z-source inverter

Panfilov, Dmitry; Husev, Oleksandr; Blaabjerg, Frede; **Zakis, Janis;** Khandakji, Kamal IET Power Electronics 2016 / p. 1238 - 1248 <https://doi.org/10.1049/iet-pel.2015.0539> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

Current sensorless control algorithm for single-phase three-level NPC inverter

Suzdalenko, Alexander; **Zakis, Janis;** Steiks, Ingars Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2014 / p. 28-33 : ill

Design and implementation issues of integrated magnetics for quasi-Z-source inverters

Zakis, Janis; Vinnikov, Dmitri ISEF 2011 - XV International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering : Funchal, Madeira, September 1-3, 2011 2011 / [8] p.: ill

Design and implementation of flyback MPPT converter for PV-applications

Suskis, Pavels; **Zakis, Janis; Galkin, Ilja** PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 291-296 : ill

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

Development of single-loop current sensorless control for bidirectional three-phase PWM rectifier

Suzdalenko, Alexander; **Zakis, Janis; Husev, Oleksandr** 2015 56th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2015 / p. 211-214 : ill

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](#)

Doctoral School of Energy and Geotechnology II : closing conference of the project : Pärnu, Estonia, January 12-17, 2015

2015 https://www.ester.ee/record=b4448632*est

Dynamic behaviour of qZS-based bi-directional DC/DC converter in supercapacitor charging mode [Electronic resource]

Zakis, Janis; Vinnikov, Dmitri; Husev, Oleksandr; Rankis, Ivars SPEEDAM 2012 : Sorrento (Italy) - June 20-22, 2012 : 21st edition of the International Symposium on Power Electronics, Electrical drives, Automation and Motion 2012 / p. 764-768 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6264554>

Effect of double-slope modulation signals on conducted emissions and efficiency of strongly coupled magnetic resonance WPT systems

Stepins, Deniss; **Zakis, Janis;** Audze, Janis; **Husev, Oleksandr;** Shevchenko, Viktor; Pakhaliuk, Bohdan 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2019 / 4 p <https://doi.org/10.1109/RTUCON48111.2019.8982351>

Effect of hybrid modulation on performance of wireless battery charger operating in CC/CV mode

Stepins, Deniss; Kathari, N.; **Zakis, Janis; Husev, Oleksandr;** Pakhaliuk, Bohdan; Shevchenko, Viktor IECON 2021 – 47th Annual Conference of the IEEE Industrial Electronics Society 2021 / 6 p <https://doi.org/10.1109/IECON48115.2021.9589544>

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 http://www.ester.ee/record=b2741953*est

Evaluation of control solution for grid inverter of low power wind turbine for implementation with inexpensive hardware

Galkin, Ilja; **Zakis, Janis** PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 297-302 : ill

Experimental study of high step-up quasi-Z-source DC-DC converter with synchronous rectification

Liivik, Liisa; Chub, Andrii; Vinnikov, Dmitri; Zakis, Janis 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. 409-414 : ill <http://dx.doi.org/10.1109/CPE.2015.7231110>

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 verification of light electric vehicle charger multiport topology

Jalakas, Tanel; Zakis, Janis 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. 415-418 : ill <http://dx.doi.org/10.1109/CPE.2015.7231111>

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>

Exploring the limits of early predictive maintenance in wind turbines applying an anomaly detection technique

Jankauskas, Mindaugas; Serackis, Artūras; Šapurov, Martynas; Pomarnacki, Raimondas; Baskys, Algirdas; Hyunh, Van Khang; **Vaimann, Toomas; Zakis, Janis** Sensors 2023 / art. 5695 <https://doi.org/10.3390/s23125695> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Senanayaka, Jagath; Khang, Huynh Van; **Rassölkin, 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 flexible systems for reactive power compensation

Zakis, Janis; Vinnikov, Dmitri; Laugis, Juhan; Rankis, Ivars Технічна електродинаміка 2010 / 2, p. 16-21 : ill <https://ortus.rtu.lv/science/en/publications/11210>

Feasibility study of inductor coupling in three-level neutral-point-clamped quasi-Z-source DC/AC converter

Zakis, Janis; Husev, Oleksandr; Strzelecki, Ryszard PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 273-276 : ill

14th International Symposium "Topical Problems in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology. II" : Pärnu, Estonia, January 13-18, 2014

2014 http://www.ester.ee/record=b3050698*est

Full soft-switching bidirectional isolated current-fed dual inductor push-pull DC-DC converter for battery energy storage applications [Online resource]

Kosenko, Roman; Zakis, Janis; Blinov, Andrei; Chub, Andrii; Veligorskyi, Oleksandr 2016 57th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : October 13, 14, 2016 : conference proceedings 2016 / [8] p. : ill <https://doi.org/10.1109/RTUCON.2016.7763138>

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 LC-filter based dual active bridge for the isolation stage of power electronic transformer [Electronic resource]

Beldjajev, Viktor; Lehtla, Tõnu; Zakis, Janis CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 132-137 : ill [CD-ROM]

Implementation of a web-based remote control system for qZS DAB application using low-cost ARM platform

Korzeniewski, Marek; Kulikowski, Krzysztof; **Zakis, Janis; Jasiński, Marek Tomasz; Malinowski, Aleksander** Bulletin of the Polish Academy of Sciences: Technical Sciences 2016 / p. 887-896 <https://doi.org/10.1515/bpasts-2016-0097> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Implementation possibilities of SMD capacitors for high power applications

Zakis, Janis; Vinnikov, Dmitri Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2012 / p. 18-23 : ill <https://intapi.sciendo.com/pdf/10.2478/v10314-012-0003-2>

Implementation possibilities of SMD capacitors for high power applications

Zakis, Janis; Vinnikov, Dmitri Riga Technical University 53rd International Scientific Conference dedicated to the 150th anniversary and The 1st Congress of World Engineers and Riga Polytechnical Institute : RTU Alumni, Paper 31 of Subsection of Power Electronic Converters and Applications 2012 / 6 p. : ill <https://intapi.sciendo.com/pdf/10.2478/v10314-012-0003-2>

Implementation possibilities of SMD capacitors for high power applications

Zakis, Janis; Vinnikov, Dmitri Riga Technical University 53rd International Scientific Conference dedicated to the 150th anniversary and the 1st Congress of World Engineers and Riga Polytechnical Institute/RTU Alumni : 11-12 October 2012, Riga, Latvija : [abstracts] 2012 / p. 128 : ill <https://intapi.sciendo.com/pdf/10.2478/v10314-012-0003-2>

Improved switched-inductor quasi-switched-boost inverter with low input current ripple

Chub, Andrii; Liivik, Liisa; Zakis, Janis; Vinnikov, Dmitri 2015 56th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2015 / p. 221-226 : 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>

Investigation of supercapacitor bidirectional power flow system

Rankis, Ivars; Zakis, Janis Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering = Rīgas Tehniskās universitātes zinātniskie raksti. Serija 4. Energētika un elektrotehnika 2012 / p. 35-40 : ill <https://ortus.rtu.lv/science/en/publications/13864>

Isolated DC/DC converter based voltage measuring system for series connected supercapacitor cells

Sirmelis, Ugis; Grigans, Linards; Kroics, Kaspars; Zakis, Janis 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. 443-446 : ill <http://dx.doi.org/10.1109/CPE.2015.7231116>

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>

LCCT-derived three-level three-phase inverters

Shults, Tatiana; Husev, Oleksandr; Blaabjerg, Frede; Zakis, Janis; Khandakji, Kamal IET power electronics 2017 / p. 996-1002 <https://doi.org/10.1049/iet-pel.2016.0023> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Loss reduction method for the isolated qZS-based DC/DC converter

Zakis, Janis; Rankis, Ivars; Liivik, Liisa Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2013 / p. 13-18 : ill

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>

Modified inductive multi-coil wireless power transfer approach based on Z-source network

Pakhaliuk, Bohdan; Husev, Oleksandr; Shevchenko, Viktor; Zakis, Janis; Khomenko, Maksym; Strzelecki, Ryszard IEEE journal of emerging and selected topics in power electronics 2021 / p. 4906-4917 : ill <https://doi.org/10.1109/JESTPE.2020.3041565> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Multiphase interleaved DC-DC converter with directly and inversely coupled inductors [Online resource]

Kroics, Kaspars; Zakis, Janis; Sirmelis, Ugis 2016 57th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : October 13, 14, 2016 : conference proceedings 2016 / [6] p. : ill <https://doi.org/10.1109/RTUCON.2016.7763102>

Multivariable optimal control of wireless power transfer systems with series-parallel compensation

Pakhaliuk, Bohdan; Husev, Oleksandr; Shevchenko, Viktor; Zakis, Janis; Stepins, Deniss 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2019 / 5 p <https://doi.org/10.1109/RTUCON48111.2019.8982314>

New active clamp circuit for current-fed galvanically isolated DC/DC converters [Electronic resource]

Zakis, Janis; Vinnikov, Dmitri; Kolosov, Valery; Vasechko, Evgen CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 353-358 : ill [CD-ROM]

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

Vinnikov, Dmitri; Zakis, Janis; Husev, Oleksandr; Strzelecki, Ryszard 2012 Twenty-Seventh Annual IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando (FL), USA, 5-9 Feb. 2012 / p. 1204-1209 : ill
<https://ieeexplore.ieee.org/document/6165972>

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>

Operation possibility of grid connected quasi-Z-source inverter with energy storage and renewable energy generation in wide power range

Kroics, Kaspars; **Zakis, Janis**; Suzdalenko, Alexander; **Husev, Oleksandr**; Tytelmaier, Kostiantyn; Khandakji, Kamal 2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON) : May 29 - June 2, 2017, Kyiv, Ukraine : conference proceedings 2017 / p. 564-569 : ill <https://doi.org/10.1109/UKRCON.2017.8100303>

Optimal supercapacitor energy storage system sizing for traction substations

Sirmelis, Ugis; **Zakis, Janis**; Grigans, Linards 2015 IEEE 5th International Conference on Power Engineering, Energy and Electrical Drives (POWERENG) : proceedings : May 11-13, 2015, Riga, Latvia 2015 / p. 592-595 : ill
<http://dx.doi.org/10.1109/PowerEng.2015.7266383>

An Overview of bidirectional AC-DC grid connected converter topologies for low voltage battery integration

Kroics, Kaspars; **Husev, Oleksandr**; Tytelmaier, Kostiantyn; **Zakis, Janis**; Veligorskyi, Oleksandr International Journal of Power Electronics and Drive System (IJPEDS) 2018 / p. 1223-1239 : ill <https://doi.org/10.11591/ijpeds.v9.i3.pp1223-1239>

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>

Overview of impedance source networks for voltage source inverters

Shults, Tatiana; Husev, Oleksandr; Zakis, Janis 2015 16th International Conference of Young Specialists on Micro/Nanotechnologies and Electron Devices (EDM 2015) : Erlagol (Altai Republic), Russia, 29 June-3 July 2015 2015 / p. 514-520 : ill

Passive power decoupling approach for three-level single-phase impedance source inverter based on resonant and PID controllers

Makovenko, Elena; Husev, Oleksandr; Zakis, Janis; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** 2017 11th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2017) : Cadiz, Spain, 4-6 April 2017 2017 / p. 516-521 : ill <https://doi.org/10.1109/CPE.2017.7915225>

Performance comparison of boost and quasi-Z-source converters

Andrijanovičs, Anna; Rankis, Ivars; **Zakis, Janis** Технічна електродинаміка : тематичний випуск : силова електроніка та енергоефективність 2012 / p. 30-35 : ill <https://ortus.rtu.lv/science/en/publications/16524>

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

PWM for single phase 3L Z/qZ-Source inverter with balanced power losses

Roncero-Clemente, Carlos; **Husev, Oleksandr; Jalakas, Tanel**; Romero-Cadaval, Enrique; **Zakis, Janis**; Minambres-Marcos, Victor Elektronika ir elektrotehnika = Electronics and electrical engineering 2014 / p. 71-76 : ill
<https://doi.org/10.5755/j01.eee.20.6.7270> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

qZS inverter as synchronverter in small-scale micro-grid

Zakis, Janis; Makovenko, Elena; Zeng, Hao; **Husev, Oleksandr; Kütt, Lauri** Elektronika ir elektrotehnika = Electronics and electrical engineering 2018 / p. 58-62 : ill <https://doi.org/10.5755/j01.eie.24.2.20636> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal](#)

qZS-based soft-switching DC/DC converter with a series resonant LC circuit

Vinnikov, Dmitri; Zakis, Janis; Liivik, Liisa; Rankis, Ivars Энергосбережение, энергетика, энергоаудит = Energy saving, power engineering, energy audit 2013 / p. 42-50 : ill

QZS-based soft-switching DC/DC converter with a series resonant LC circuit [Electronic resource]

Vinnikov, Dmitri; Zakis, Janis; Liivik, Liisa; Rankis, Ivars Международная Научно-Техническая Конференция "Силовая Электроника и Энергоэффективность" : 23-27.IX 2013, Алушта, Крым 2013 / [3] p. : ill [CD-ROM]

Quasi-Z-source half-bridge DC-DC converter for photovoltaic applications

Vinnikov, Dmitri; Chub, Andrii; Husev, Oleksandr; Zakis, Janis IEEE International Conference on Industrial Technology (ICIT 2015) : Seville, Spain, 17-19 March 2015 / p. 2935-2940 : ill <https://doi.org/10.1109/ICIT.2015.7125531> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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

Simulation study of high step-up quasi-Z-source DC-DC converter with synchronous rectification

Liivik, Liisa; Vinnikov, Dmitri; Zakis, Janis 2014 55th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings 2014 / p. 34-37 : ill

Simulation study of the grid-connected single-phase impedance-sourced NPC inverter with different control methods

Roncero-Clemente, Carlos; **Husev, Oleksandr;** Romero-Cadaval, Enrique; **Zakis, Janis; Vinnikov, Dmitri;** Milanes-Montero, Maria Isabel 2015 IEEE International Conference on Industrial Technology (ICIT 2015) : Seville, Spain, 17-19 March 2015 / p. 2949-2954 : ill <https://doi.org/10.1109/ICIT.2015.7125533> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Simulation study of the three-level boost DC-DC converter with full ZVS for PV application

Vorobei, Vasiliy; **Zakis, Janis; Husev, Oleksandr;** Veligorskyi, Oleksandr; Savenko, Oleksandr ICPE 2015 - ECCE Asia : 9th International Conference on Power Electronics - ECCE Asia : "Green World with Power Electronics" : June 1-5, 2015, 63 Convention Center, Seoul, Korea 2015 / p. 2038-2043 : ill <http://dx.doi.org/10.1109/ICPE.2015.7168058>

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 http://www.eester.ee/record=b4650094*est

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

Some design considerations for coupled inductors for integrated buck-boost converters

Zakis, Janis; Vinnikov, Dmitri; Bisenieks, Lauris POWERENG2011 : proceedings of the 2011 International Conference on Power Engineering, Energy and Electrical Drives : Torremolinos (Málaga), Spain, May 11-13, 2011 / [6] p. : ill <https://ieeexplore.ieee.org/abstract/document/6036465>

Steady state analysis of the commutating LC filter based dual active bridge for the isolation stage of power electronic transformer [Electronic resource]

Beldjajev, Viktor; Rang, Toomas; Zakis, Janis CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 138-143 : ill [CD-ROM]

Steady state analysis of the galvanically isolated DC/DC converter with a commutating LC filter [Electronic resource]

Zakis, Janis; Vinnikov, Dmitri; Rankis, Ivars 2012 IEEE International Conference on Industrial Technology : proceedings CD 2012 / p. 838-843 : ill [CD-ROM] <https://ieeexplore.ieee.org/document/6210041>

Study of simple MPPT converter topologies for grid integration of photovoltaic systems

Zakis, Janis; Vinnikov, Dmitri Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 67-72 : ill https://www.researchgate.net/publication/258547430_Study_of_Simple_MPPT_Converter_Topologies_for_Grid_Integration_of_Photovoltaic_Systems

Survey of loss minimization methods in tram systems [Electronic resource]

Hõimoja, Hardi; Vinnikov, Dmitri; Lehtla, Madis; Rosin, Argo; Zakis, Janis SPEEDAM 2010 : International Symposium on Power Electronics, Electrical Drives, Automation and Motion : Pisa, Italy, 14th-16th June, 2010 : proceedings 2010 / p. 1356-1361 : [CD-

ROM] <https://ieeexplore.ieee.org/document/5544863>

Switched-capacitor current-fed quasi-Z-source inverter

Chub, Andrii; Husev, Oleksandr; Zakis, Janis; Rabkowski, Jacek 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. 229-232 : ill

Tehnikaülikoolil on tõmmet

Ummelas, Mart Mente et Manu 2009 / lk. 1, 4 : fot

7th International Conference-workshop Compatibility and Power Electronics : CPE 2011 : Tallinn, Estonia, June 3, 2011 : student forum

2011 https://www.ester.ee/record=b2695380*est

13th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : in memoriam of professor Juhan Laugis : Pärnu, Estonia, January 14-19, 2013

2013 http://www.ester.ee/record=b2925939*est

Verification of current sensorless control for single-phase NPC multilevel inverter

Suzdalenko, Alexander; **Zakis, Janis;** Steiks, Ingars; Chaiko, Yelena 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. 462-466 : ill <http://dx.doi.org/10.1109/CPE.2015.7231119>

Voltage balancing circuit for modular step-down DC/DC converter

Uljan, Austris; **Zakis, Janis** 2015 56th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2015 / p. 329-332 : ill