

Analysis of cost function composition based on the horizon time prediction of an indirect MPC current control in single-phase grid-connected PV inverters

Pimentel, Sergio Pires; Husev, Oleksandr; Vinnikov, Dmitri; Stepenko, Serhii 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/RTUCON48111.2019.8982377>

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](#)

Comparative feasibility study of partial power converter for interfacing battery energy storage into power system of future circular collider

Chub, Andrii; Niinemägi, Joosep; Colmenero, Manuel; Aguglia, Davide Proceedings of the Estonian Academy of Sciences 2024 / p. 396-415 <https://doi.org/10.3176/proc.2024.4.08>

Comparative study of the phase-integrated converter as universal power converter

Husev, Oleksandr; Matiushkin, Oleksandr; Vinnikov, Dmitri; Vosoughi Kurdkandi, Naser; Kouro, Samir Annual IEEE Conference on Applied Power Electronics Conference and Exposition (APEC) 2022 / p. 58-63 <https://doi.org/10.1109/APEC43599.2022.9773553> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

A comparison of a discrete-time PI and an indirect MPC current controllers for a single-phase grid-connected inverter operating with distorted grid and significant computation feedback delay

Pimentel, Sergio Pires; **Husev, Oleksandr; Vinnikov, Dmitri; Stepenko, Serhii; Kütt, Lauri**; Rodriguez, Jose 2019 IEEE 15th Brazilian Power Electronics Conference and 5th IEEE Southern Power Electronics Conference (COBEP/SPEC) 2019 / 6 p.: ill <https://doi.org/10.1109/COBEP/SPEC44138.2019.9065396>

Curricula scheduling with educational thesaurus

Raud, Zoja; Vodovozov, Valery The 2011 World Congress on Computer Science and Information Technology WCSIT'11, 24-27 January 2011, Cairo, Egypt 2011 / [7 p.] : ill

Development of students' activity through on-lecture assessment in electrical engineering

Vodovozov, Valery; Raud, Zoja; Gevorkov, Levon Proceedings : 2014 IEEE 23rd International Symposium on Industrial Electronics (ISIE) : Grand Cevahir Hotel and Convention Center, Istanbul, Turkey, 01-04 June, 2014 2014 / p. 2213-2217 : ill

Discontinuous space vector modulation technique for motor supply

Vodovozov, Valery; Egorov, Mikhail EUROCON 2011 : International Conference on Computer as a Tool : April 27-29, Lisbon, Portugal 2011 / [4 p.] : ill

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>

Envisioning the future renewable and resilient energy grids – a power grid revolution enabled by renewables, energy storage, and energy electronics

Peng, Fang Zheng; Liu, Chen-Ching; Li, Yuan; Jain, Akshay Kumar; **Vinnikov, Dmitri** IEEE journal of emerging and selected topics in industrial electronics 2024 / p. 8-26 <https://doi.org/10.1109/JESTIE.2023.3343291>

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](#)

Forward-based DC-DC converter with eliminated leakage inductance problem

Matiushkin, Oleksandr; Husev, Oleksandr; Afshari, Hossein; Romero-Cadaval, Enrique; Roncero-Clemente, Carlos IEEE transactions on industrial electronics 2025 / p. 1638-1648 <https://doi.org/10.1109/TIE.2024.3429626>

Full-bridge fault-tolerant isolated DC-DC converters : overview of technologies and application challenges

Bakeer, Abualkasim Ahmed Ali; Chub, Andrii; Vinnikov, Dmitri IEEE Power Electronics Magazine 2022 / p. 45-55 <https://doi.org/10.1109/MPEL.2022.3196565> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 low-power Wind Generation and PV grid-connected system with HPC, PC and MPPT control

Rosa, Carlos; **Vinnikov, Dmitri**; Romero-Cadaval, Enrique; Pires, Vitor; Martins, Joao Proceedings : 2014 IEEE 23rd International Symposium on Industrial Electronics (ISIE) : Grand Cevahir Hotel and Convention Center, Istanbul, Turkey, 01-04 June, 2014 2014 / p. 2024-2029 : ill

An indirect model predictive current control (CCS-MPC) for grid-connected single-phase three-level NPC quasi-z-source PV inverter

Pires Pimentel, Sergio; Husev, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos; **Stepenko, Serhii** 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.2018.8659840>

Mission profile resolution impacts on the thermal stress and reliability of power devices in PV inverters

Sangwongwanich, Ariya; Zhou, D.; **Liivik, Elizaveta**; Blaabjerg, Frede Microelectronics reliability 2018 / p. 1003-1007 <https://doi.org/10.1016/j.microrel.2018.06.094>

Numerical simulations of wideband SiC N-N heterostructure diode

Patankar, Udayan Sunil; Koel, Ants; Pardy, Tamas LAEDC 2020 : Latin American Electron Devices Conference, San José, Costa Rica, February 25-28, 2020 2020 / 4 p <https://doi.org/10.1109/LAEDC49063.2020.9073489>

Research and development of an active learning technology for university-level education in the field of electronics and power electronics = Aktiivõppetehnoloogia uurimine ja väljatöötamine kõrghariduse õppekavale elektroonika ja jõuelektronika valdkonnas

Raud, Zoja 2012 https://www.ester.ee/record=b2781667*est

SEU study of wideband heterostructure diode for particle detection

Patankar, Udayan Sunil; Koel, Ants 2021 IEEE International Conference on Consumer Electronics (ICCE) 2021 / 4 p. : ill <https://doi.org/10.1109/ICCE50685.2021.9427613> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Simulation study of inverter-fed motor drives

Egorov, Mikhail 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. 165-168 : ill

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>

Single-switch impedance-source galvanically isolated DC-DC converter with combined energy transfer

Chub, Andrii; Vinnikov, Dmitri; Babaei, Ebrahim; **Liivik, Elizaveta**; **Korkh, Oleksandr**; Kouro, Samir 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.2018.8659851>

Snubberless boost full-bridge converters: analysis of soft switching performance and limitations

Blinov, Andrei; Kosenko, Roman; Chub, Andrii; Vinnikov, Dmitri International journal of circuit theory and applications 2019 / p. 1-25 : ill <https://doi.org/10.1002/cta.2626> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Step-Up series-resonant DC-DC converter with switched mode rectifier operating at fixed switching frequency

Chub, Andrii; Bakeer, Abualkasim Ahmed Ali; Vinnikov, Dmitri 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 28 Sept.-1 Oct. 2020, Dubrovnik, Croatia 2020 / p. 597-601 <https://doi.org/10.1109/PEDG48541.2020.9244312>

A Toolbox to design inverters for automotive applications

Vodovozov, Valery; Raud, Zoja; Lehtla, Tõnu Recent Researches in Applications of Electrical and Computer Engineering : [proceedings of the AEE'12, ACE'12, CSS'12 : Vouliagmeni Beach, Athens, Greece, March 7-9, 2012] 2012 / p. 190-195 : ill https://www.researchgate.net/publication/262257028_A_toolbox_to_design_inverters_for_automotive_applications

Topology morphing control of low-cost PV microconverters

Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Chub, Andrii; Sidorov, Vadim 2021 IEEE 19th International Power Electronics and Motion Control Conference (PEMC), 25-29 April 2021, Gliwice, Poland : proceedings 2021 <https://doi.org/10.1109/PEMC48073.2021.9432496>

Topology-morphing photovoltaic microconverter with wide MPPT voltage window and post-fault operation capability

Vinnikov, Dmitri; Chub, Andrii; Zinchenko, Denys; Sidorov, Vadim IEEE Access 2020 / art. 9171332, p. 153941-153955 : ill <https://doi.org/10.1109/ACCESS.2020.3017805> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Utility-scale energy storage systems : converters and control

Stynski, Sebastian; Luo, Wensheng; **Chub, Andrii; Vinnikov, Dmitri** IEEE industrial electronics magazine 2020 / p. 32-52 <https://doi.org/10.1109/MIE.2020.3011655> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Virtual lab to study power electronics in LabVIEW framework

Raud, Zoja; Vodovozov, Valery 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärđla, Estonia, June 12-15, 2019 : proceedings 2019 / 6 p
<https://doi.org/10.1109/PQ.2019.8818275>

Voltage control tuning of a single-phase grid-Connected 3L qZS-based inverter for PV application

Pires Pimentel, Sergio; Husev, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos; Makovenko, Elena 2018 IEEE 38th International Conference on Electronics and Nanotechnology (ELNANO 2018) : Kyiv, Ukraine, 24-26 April 2018 2018 / p. 692–698 : ill
<https://doi.org/10.1109/ELNANO.2018.8477438>