

Adaptive frequency-based power management for off-grid hybrid photovoltaic converters

Gonschorowsk, Ezequiel; Cardoso, Rafael; **Carvalho da Silva, Edivan Laercio**; Stein, Carlos Marcelo De Oliveira; Carati, Emerson Giovanni; Denardin, Gustavo Weber; da Costa, Jean Patric Eletronica de potencia 2024 / art. e202440
<https://doi.org/10.18618/REP.e202440>

Addressing cross-coupling issues in magnetically integrated three-port DC-DC converters

Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Sohail, Umer; **Chub, Andrii** 2024 IEEE 21st International Power Electronics and Motion Control Conference (PEMC) 2024 / 5 p <https://doi.org/10.1109/PEMC61721.2024.10726373>

Air-core coupled inductor based modular solid-state circuit breaker with reduced components for DC buildings

Pogulaguntla, Aditya; Dsa, Daniel; Yagna, Griddaluru Venkata; Banavath, Satish Naik; **Carvalho da Silva, Edivan Laercio**; **Chub, Andrii**; **Vinnikov, Dmitri** IEEE journal of emerging and selected topics in power electronics 2024 / 12 p
<https://doi.org/10.1109/JESTPE.2024.3485735>

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

Analysis of holdup time for DC grid-forming isolated active front-end converters

Carvalho da Silva, Edivan Laercio; **Blinov, Andrei**; **Chub, Andrii**; **Vinnikov, Dmitri** IECON 2022 - 48th Annual Conference of the IEEE Industrial Electronics Society 2022 / p. 1-6 <https://doi.org/10.1109/IECON49645.2022.9969075> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Analysis of the use of supercapacitors and batteries as energy storage elements for off-grid hybrid photovoltaic inverters

Gonschorowski, E.; Cardoso, Rafael; **Carvalho da Silva, Edivan Laercio**; de Oliveira Stein, Carlos Marcelo; Carati, Emerson Giovanni; Denardin, Gustavo Weber; da Costa, Jean Patric 2023 IEEE 8th Southern Power Electronics Conference and 17th Brazilian Power Electronics Conference (SPEC/COBEP) 2023 / 7 p <https://doi.org/10.1109/SPEC56436.2023.10407182>

Comparative evaluation of a DAB converter and SRC for DC buildings application

Carvalho da Silva, Edivan Laercio; **Chub, Andrii**; **Blinov, Andrei**; Banavath, Satish Naik; **Vinnikov, Dmitri** 2024 IEEE 21st International Power Electronics and Motion Control Conference (PEMC) 2024 / 6 p <https://doi.org/10.1109/PEMC61721.2024.10726346>

Comparison of decoupling control strategies for multiple active bridge DC-DC converter

Cai, Yicong; Buticchi, Giampaolo; Gu, Chunyang; Li, Jing; **Carvalho da Silva, Edivan Laercio**; Zhang, He 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023
<https://doi.org/10.1109/CPE-POWERENG58103.2023.10227395>

Design considerations of dual-active bridge DC grid-forming converter for DC buildings

Carvalho da Silva, Edivan Laercio; Sidorova, Aleksandra; **Blinov, Andrei**; **Chub, Andrii**; **Vinnikov, Dmitri** IEEE transactions on industrial electronics 2024 / p. 10601-10611 <https://doi.org/10.1109/TIE.2023.3331125> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Distributed price-based power management for multibuses DC nanogrids EEMS

Carvalho da Silva, Edivan Laercio; Bellinaso, Lucas V.; Cardoso, Rafael; Michels, Leandro IEEE journal of emerging and selected topics in power electronics 2022 / p. 5509-5521 <https://doi.org/10.1109/JESTPE.2022.3152101> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Dynamic reconfiguration for wide output voltage range isolated buck-boost PFC converter

Verbytskyi, Ievgen; **Nadeem, Mohammad Mahad**; **Blinov, Andrei**; **Carvalho da Silva, Edivan Laercio**; **Chub, Andrii**; **Vinnikov, Dmitri** 2023 IEEE 8th Southern Power Electronics Conference and 17th Brazilian Power Electronics Conference (SPEC/COBEP) 2023 / 5 p. : ill <https://doi.org/10.1109/SPEC56436.2023.10407792>

Effect of droop control curves on the efficiency of dual-active bridge converters

Carvalho da Silva, Edivan Laercio; **Blinov, Andrei**; **Chub, Andrii**; **Vinnikov, Dmitri** IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society IECON Proceedings (Industrial Electronics Conference) 2023 / 6 p
<https://doi.org/10.1109/IECON51785.2023.10312056> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Evaluation of dual-active bridge converter for DC energy buildings

Carvalho da Silva, Edivan Laercio; **Blinov, Andrei**; Sidorova, Aleksandra; **Chub, Andrii**; **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-POWERENG58103.2023.10227460>

Extended ZVS-On/ZCS-Off range for CF-DAB converter under DCM operation for residential energy storage systems

Carvalho da Silva, Edivan Laercio; Cardoso, Rafael; Felipe, Carla Aparecida; Stein, Carlos Marcelo De Oliveira; Bellinaso, Lucas Vizzotto; Michels, Leandro; **Vinnikov, Dmitri** IEEE Access 2023 / p. 119231-119243 <https://doi.org/10.1109/ACCESS.2023.3327219> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Grid integration of DC buildings : standards, requirements and power converter topologies

Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Emiliani, Pietro; de Carne, Giovanni; Vinnikov, Dmitri IEEE open journal of power electronics 2022 / p. 798-823 <https://doi.org/10.1109/OJPEL.2022.3217741> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hybrid inverter and control strategy for enabling the PV generation dispatch using extra-low-voltage batteries

Meneghetti, Luiz Henrique; **Carvalho da Silva, Edivan Laercio**; Carati, Emerson Giovani; Denardin, Gustavo Weber; da Costa, Jean Patric; de Oliveira Stein, Carlos Marcelo; Cardoso, Rafael Energies 2022 / art. 7539 <https://doi.org/10.3390/en15207539> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Implementation of protection features for a modular bidirectional solid-state battery disconnecter

Dsa, Daniel; Chinnusamy, Abhinav; Banavath, Satish Naik; **Carvalho da Silva, Edivan Laercio** IEEE journal of emerging and selected topics in power electronics 2024 <https://doi.org/10.1109/JESTPE.2024.3502157>

Inverters for power systems with renewable sources: basic topologies and purposes

Yamnenko, Iuliia; Tereshchenko, Tetiana; Fedin, Ihor; **Carvalho da Silva, Edivan Laercio**; Kozhushko, Yuliia; Bondarenko, Oleksandr 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227384>

Magnetically integrated multiport converter for energy management in DC-powered buildings

Carvalho da Silva, Edivan Laercio; Chub, Andrii; Blinov, Andrei; Banavath, Satish Naik; Vinnikov, Dmitri Eletrônica de Potência 2024 / art. 202445 <https://doi.org/10.18618/REP.e202445%20%20>

Multi-port i-AFE converter for grid-interactive buildings: design requirements and efficiency evaluation

Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Galkin, Ilya; Vinnikov, Dmitri 2023 IEEE 8th Southern Power Electronics Conference and 17th Brazilian Power Electronics Conference (SPEC/COBEP) 2023 / 5 p <https://doi.org/10.1109/SPEC56436.2023.10408230>

Overview of single-stage isolated AC-DC topologies for interfacing DC and AC grids

Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 p. <https://doi.org/10.1109/PEDG54999.2022.9923249>

P3R : partial power postregulated gridforming converter for prosumer DC buildings

Carvalho da Silva, Edivan Laercio; Chub, Andrii; Hassanpour, Naser; Blinov, Andrei; Rathore, Akshay Kumar; Vinnikov, Dmitri IEEE transactions on industrial electronics 2025 / p. 1628-1637 <https://doi.org/10.1109/TIE.2024.3423358>

Resonant DC transformer for grid-interactive energy efficient buildings

Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Chub, Andrii; Rathore, Akshay Kumar; Vinnikov, Dmitri 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604353>

Series-parallel resonant current-source DC-DC converter with wide output voltage range

Blinov, Andrei; Carvalho da Silva, Edivan Laercio; Verbytskyi, Ievgen; Vinnikov, Dmitri 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604346>

Three-phase bidirectional isolated AC-DC matrix-converter with full soft-switching range

Carvalho da Silva, Edivan Laercio; Blinov, Andrei; Emiliani, Pietro; Chub, Andrii; Vinnikov, Dmitri IEEE Access 2023 / p. 119270-119283 <https://doi.org/10.1109/ACCESS.2023.3327224> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Using electric vehicles to enhance power supply resilience of buildings during emergencies and critical situations

Carvalho da Silva, Edivan Laercio; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri; Kyselova, Anna 2024 IEEE 65th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCon) 2024 / 6 p <https://doi.org/10.1109/RTUCon62997.2024.10830812>