

#### **Address from main organizers**

**Vinnikov, Dmitri; Liivik, Elizaveta** 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. [3]  
[https://www.ester.ee/record=b5183874\\*est](https://www.ester.ee/record=b5183874*est)

#### **Address from main organizers**

**Vinnikov, Dmitri; Liivik, Elizaveta** 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. [3]  
[https://www.ester.ee/record=b5291755\\*est](https://www.ester.ee/record=b5291755*est)

#### **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>

#### **Boost half-bridge DC-DC converter with reconfigurable rectifier for ultra-wide input voltage range applications**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta; Blaabjerg, Frede; Siwakoti, Yam P.** 2018 IEEE Applied Power Electronics Conference and Exposition (APEC 2018), San Antonio, Texas, USA, 4-8 March 2018 2018 / p. 1528-1532 : ill  
<https://doi.org/10.1109/APEC.2018.8341219> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **Common-mode voltage analysis and reduction for the quasi-Z-source inverter with a split inductor**

Liu, Wenjie; Yang, Yongheng; Kerekes, Tamas; **Liivik, Elizaveta; Vinnikov, Dmitri; Blaabjerg, Frede** Applied sciences 2020 / art. 8713, 13 p. : ill <https://doi.org/10.3390/app10238713> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Comparative analysis of reliability for string and central inverter PV systems in accordance with the FMECA**

Dumnic, Boris; **Liivik, Elizaveta; Popadic, Bane; Blaabjerg, Frede; Milicevic, Dragan; Katic, Vladimir** 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 28 Sept.-1 Oct. 2020, Dubrovnik, Croatia 2020 / p. 591-596 <https://doi.org/10.1109/PEDG48541.2020.9244404>

#### **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>

#### **Control features of multicell-type current regulator for resistance welding**

Verbytskyi, Ievgen; Bondarenko, Oleksandr; **Liivik, Elizaveta** 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [5] p. : ill  
<https://doi.org/10.1109/RTUCON.2017.8124846>

#### **Critical parameter analysis and design of the Quasi-Z-Source inverter**

Liu, Wenjie; Yang, Yongheng; **Liivik, Elizaveta; Vinnikov, Dmitri; Blaabjerg, Frede** 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering : UKRCON-2019 : conference proceedings 2019 / p. 474-480 : ill  
<https://doi.org/10.1109/UKRCON.2019.8879831>

#### **Design for accelerated testing of DC-link capacitors in photovoltaic inverters based on mission profiles**

Sangwongwanich, Ariya; Shen, Yanfeng; **Chub, Andrii; Liivik, Elizaveta; Vinnikov, Dmitri; Wang, Huai; Blaabjerg, Frede** IEEE transactions on industry applications 2021 / p. 741-753 <https://doi.org/10.1109/TIA.2020.3030568> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Efficiency improvement from topology modification of the single-switch isolated quasi-Z-source DC-DC converter [Online resource]**

**Liivik, Elizaveta; Chub, Andrii; Vinnikov, Dmitri** 2016 57th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : October 13, 14, 2016 : conference proceedings 2016 / [7] p. : ill  
<https://doi.org/10.1109/RTUCON.2016.7763118>

#### **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 [https://www.ester.ee/record=b5183874\\*est](https://www.ester.ee/record=b5183874*est)

#### **Fault analysis and field experiences of central inverter based 2 MW PV plant**

Dumnic, Boris; **Liivik, Elizaveta; Milicevic, Dragan** 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 2018 / p. 2281-2290 : ill <https://ieeexplore.ieee.org/document/8515423>

#### **Frequency control of linear induction motor**

**Jansikene, Raik; Soonpuu, Jelizaveta** ELECTROMOTION '99 : 3rd International Symposium on Advanced Electromechanical Motion Systems : July 8-9, 1999, Patras, Greece : proceedings. Vol. I 1999 / p. 201-203

**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 <http://dx.doi.org/10.1109/TPEL.2016.2591726>

**Hybrid DC-DC converters with topology morphing control and post-fault operation capability**

**Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Blinov, Andrei; Liivik, Elizaveta** Electrimacs 2019 : Selected Papers, Vol. 1 2020 / p. 433-445 [https://doi.org/10.1007/978-3-030-37161-6\\_33](https://doi.org/10.1007/978-3-030-37161-6_33) [Conference proceeding at Scopus](#) [Article at Scopus](#)

**Impact of transformer turns ratio on the power losses and efficiency of the wide range isolated buck-boost converter for photovoltaic applications**

**Mashinchi Maheri, Hamed; Vinnikov, Dmitri; Chub, Andrii; Sidorov, Vadim; Liivik, Elizaveta** Energies 2020 / art. 5645, 21 p <https://doi.org/10.3390/en13215645> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Impedance network impact on the controller design of the QZSI for PV applications**

**Liu, Wenjie; Yang, Yongheng; Kerekes, Tamas; Liivik, Elizaveta; Blaabjerg, Frede** 2020 IEEE 21st Workshop on Control and Modeling for Power Electronics (COMPEL), Aalborg, Denmark, November 9-12, 2020 2020 / 6 p <https://doi.org/10.1109/COMPEL49091.2020.9265708>

**Input-parallel output-series cascading possibilities of single-switch galvanically isolated quasi-Z-source DC-DC converters**

**Liivik, Elizaveta; Chub, Andrii; Vinnikov, Dmitri** 2016 2nd International Conference on Intelligent Energy and Power Systems (IEPS) : Kyiv, Ukraine, June 7-11, 2016 : conference proceedings 2016 / [6] p. : ill <https://doi.org/10.1109/IEPS.2016.7521873>

**Low-cost photovoltaic microinverter with ultra-wide MPPT voltage range**

**Liivik, Elizaveta; Chub, Andrii; Kosenko, Roman; Vinnikov, Dmitri** 2017 6th International Conference on Clean Electrical Power : Renewable Energy Resources Impact : Santa Margherita Ligure, 27-29 June 2017 2017 / p. 46-52 : ill <https://doi.org/10.1109/ICCEP.2017.8004790>

**Magnetically integrated high step-up resonant DC-DC converter for distributed photovoltaic systems**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta; Blaabjerg, Frede** IECON 2017 - 43rd Annual Conference of the IEEE Industrial Electronics Society : proceedings : China National Convention Center, Beijing, China, 29. October - 01. November, 2017 2017 / p. 7691-7697 : ill <https://doi.org/10.1109/IECON.2017.8217348>

**Maximizing energy harvest of the impedance source PV Microconverter under partial shading conditions**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta; Blaabjerg, Frede; Kouro, Samir** CPE-POWERENG 2018 : Conference program : 12th IEEE International Conference on Compatibility, Power Electronics and Power Engineering, 10-12 April, 2018, Doha, Qatar 2018 / 7 p.: ill <https://indd.adobe.com/view/bdbda104-4e24-4d7b-88b1-f84ccfd20748> <https://doi.org/10.1109/CPE.2018.8372556>

**Mechanical characteristics of the AC linear drives**

**Soonpuu, Jelizaveta; Jansikene, Raik** 44. Internationales Wissenschaftliches Kolloquium : Technische Universität Ilmenau : 20.-23.09.1999 1999

**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>

**Mission profile-based accelerated testing of DC-link capacitors in photovoltaic inverters**

**Sangwongwanich, Ariya; Shen, Yanfeng; Chub, Andrii; Liivik, Elizaveta; Vinnikov, Dmitri; Wang, Huai; Blaabjerg, Frede** Thirty-Fourth Annual IEEE Applied Power Electronics Conference and Exposition, March 17 – 21, 2019, Anaheim, California 2019 / p. 2833-2840 : ill <https://doi.org/10.1109/APEC.2019.8721794> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**MPPT performance enhancement of low-cost PV microconverters**

**Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Liivik, Elizaveta; Blaabjerg, Frede; Kouro, Samir** Solar energy 2019 / p. 156-166 : ill <https://doi.org/10.1016/j.solener.2019.05.024> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Multiphase galvanically isolated impedance-source DC-DC converter for residential renewable energy applications**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta** 2017 IEEE International Symposium on Industrial Electronics (ISIE) : Edinburgh International Conference Centre, Edinburgh, Scotland, United Kingdom, 19-21 June, 2017 : proceedings 2017 / p. 1775-1780 : ill <https://doi.org/10.1109/ISIE.2017.8001517>

**Multiphase quasi-z-source DC-DC converters for residential distributed generation systems**

**Chub, Andrii; Vinnikov, Dmitri; Liivik, Elizaveta; Jalakas, Tanel** IEEE transactions on industrial electronics 2018 / p. 8361-8371 : ill <https://doi.org/10.1109/TIE.2018.2801860> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**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 [https://www.ester.ee/record=b5291755\\*est](https://www.ester.ee/record=b5291755*est)

#### **Photovoltaic energy yield improvement in two-stage solar microinverters**

**Chub, Andrii; Vinnikov, Dmitri; Stepenko, Serhii; Liivik, Elizaveta;** Blaabjerg, Frede Energies 2019 / art. 3774, 17 p. : ill <https://doi.org/10.3390/en12193774> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Photovoltaic energy yield improvement in two-stage solar microinverters**

**Chub, Andrii; Vinnikov, Dmitri; Stepenko, Serhii; Liivik, Elizaveta;** Blaabjerg, Frede Emerging converter topologies and control for grid connected photovoltaic systems 2021 / p. 197-213 : ill <https://doi.org/10.3390/books978-3-03943-910-2>

#### **Photovoltaic module characteristic influence on reliability of micro-inverters**

Sangwongwanich, Ariya; **Liivik, Elizaveta; Blaabjerg, Frede** 2018 IEEE 12th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2018) : Doha, Qatar, 10-12 April 2018 2018 / p. 478-483 : ill <https://doi.org/10.1109/CPE.2018.8372565>

#### **Preface to "Wind Turbines"**

**Blaabjerg, Frede; Liivik, Elizaveta** Wind turbines 2019 / p. ix-xi <https://doi.org/10.3390/books978-3-03897-361-4>

#### **Reliability analysis and energy yield of string-inverter considering monofacial and bifacial photovoltaic panels**

Bouguerra, Sara; Yaiche, Mohamed Redha; Sangwongwanich, Ariya; Blaabjerg, Frede; **Liivik, Elizaveta** 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 28 Sept.-1 Oct. 2020, Dubrovnik, Croatia 2020 / p. 199-204 <https://doi.org/10.1109/PEDG48541.2020.9244425>

#### **Reliability analysis of micro-inverters considering PV module variations and degradation rates**

**Liivik, Elizaveta;** Sangwongwanich, Ariya; Blaabjerg, Frede 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 2018 / p. 1475-1482 : ill <https://ieeexplore.ieee.org/document/8515325>

#### **Reliability evaluation of an impedance-source PV microconverter**

Shen, Yanfeng; **Liivik, Elizaveta;** Blaabjerg, Frede; **Vinnikov, Dmitri;** Wang, Huai; **Chub, Andrii** 2018 IEEE Applied Power Electronics Conference and Exposition (APEC 2018), San Antonio, Texas, USA, 4-8 March 2018 2018 / p. 1104–1108 : ill <https://doi.org/10.1109/APEC.2018.8341154> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **Reliability evaluation of an impedance-source PV microconverter**

Shen, Yanfeng; **Liivik, Elizaveta;** Blaabjerg, Frede; **Vinnikov, Dmitri;** Wang, Huai; **Chub, Andrii** 17th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral school of energy and geotechnology. III : Kuressaare, Estonia, January 15-20, 2018 2018 / p. 108-110 : ill [http://ise.elnet.ee/record=b2950026~S2\\*est](http://ise.elnet.ee/record=b2950026~S2*est)

#### **Reliability of DC-link capacitors in two-stage micro-inverters under different PV module sizes**

Sangwongwanich, Ariya; Shen, Yanfeng; **Chub, Andrii; Liivik, Elizaveta; Vinnikov, Dmitri;** Wang, Huai; Blaabjerg, Frede ICPE 2019 - ECCE Asia : 10th International Conference on Power Electronics - ECCE Asia : "Green World with Power Electronics" : May 27-30, 2019 BEXCO, Busan, Korea 2019 / p. 1867-1872 : ill <https://ieeexplore.ieee.org/xpl/conhome/8786807/proceeding>

#### **Reliability study of input side capacitors in impedance-source PV microconverters**

**Liivik, Elizaveta; Vinnikov, Dmitri; Chub, Andrii;** Shen, Yanfeng IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 5026–5032 : ill <https://doi.org/10.1109/IECON.2019.8927173> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

#### **Reverse power flow control possibilities of galvanically isolated impedance-source DC-DC converters**

**Chub, Andrii; Vinnikov, Dmitri; Liivik, Elizaveta** 2017 11th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2017) : Cadiz, Spain, 4-6 April 2017 2017 / p. 522-527 : ill <https://doi.org/10.1109/CPE.2017.7915226>

#### **17th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral school of energy and geotechnology. III : Kuressaare, Estonia, January 15-20, 2018**

**Vinnikov, Dmitri; Liivik, Elizaveta** 2018 [http://www.ester.ee/record=b4763182\\*est](http://www.ester.ee/record=b4763182*est)

#### **Shade-tolerant photovoltaic microinverter with time adaptive seamless P-V curve sweep MPPT [Electronic resource]**

**Vinnikov, Dmitri; Kosenko, Roman; Chub, Andrii; Liivik, Elizaveta** 19th European Conference on Power Electronics and Application : EPE'17 ECCE Europe : September 11-14, 2017, Warsaw, Poland 2017 / p. P1-P7 : ill. [USB] <https://doi.org/10.23919/EPE17ECCEEurope.2017.8099366>

#### **Single-switch galvanically isolated step-up DC-DC converter for residential photovoltaic applications [Online resource]**

**Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta** Proceedings of the IECON2016 - 42nd Annual Conference of the Industrial Electronics Society : Florence (Italy), October 24-27, 2016 2016 / p. 6578-6582 : ill <https://doi.org/10.1109/IECON.2016.7793776>

**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 (RTU CON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTU CON.2018.8659851>

**The transport system with AC linear drive**

**Jansikene, Raik; Soonpuu, Jelizaveta** 44. Internationales Wissenschaftliches Kolloquium : Technische Universität Ilmenau : 20.-23.09.1999 1999

**Using the MathCAD in electrical engineering calculations**

**Soonpuu, Jelizaveta; Jansikene, Raik** CAx Techniques : proceedings of the 4th International Scientific Colloquium : Bielefeld, Germany, September 13-15, 1999 1999 / p. 133-139 : ill

**Using the MathCAD in the teaching process of electrical engineers**

**Soonpuu, Jelizaveta; Jansikene, Raik** Actual Problems of Electrical Drives and Industry Automation : the research symposium of young scientists : Tallinn, Estonia, May 31 - June 5, 1999 1999 / p. 82-83: ill

**Wear-out failure analysis of an impedance-source PV microinverter based on system-level electrothermal modeling**

Shen, Yanfeng; **Chub, Andrii;** Wang, Huai; **Vinnikov, Dmitri; Liivik, Elizaveta;** Blaabjerg, Frede IEEE transactions on industrial electronics 2019 / p. 3914-3927 <https://doi.org/10.1109/TIE.2018.2831643> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Versatile power electronic building block for residential DC microgrids**

**Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman; Liivik, Elizaveta** 2018 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM 2018) : Amalfi, Italy, 20-22 June 2018 2018 / p. 735-741 : ill <https://doi.org/10.1109/SPEEDAM.2018.8445317>

**Wide input voltage range photovoltaic microconverter with reconfigurable buck-boost switching stage**

**Chub, Andrii; Vinnikov, Dmitri; Kosenko, Roman; Liivik, Elizaveta** IEEE transactions on industrial electronics 2017 / p. 5974-5983 : ill <https://doi.org/10.1109/TIE.2016.2645891>

**Wind turbines**

2018 <https://doi.org/10.3390/books978-3-03897-361-4>

**Voltage gain extension techniques for high step-up galvanically isolated DC-DC converters**

**Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Liivik, Elizaveta; Blinov, Andrei** 2020 IEEE International Conference on Industrial Technology, Buenos Aires Institute of Technology (ITBA) Buenos Aires, Argentina, 26-28 February, 2020 : proceedings 2020 / p. 1021-1027 : ill <https://doi.org/10.1109/ICIT45562.2020.9067115> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)