

Accuracy analysis of selected time series and machine learning methods for smart cities based on Estonian electricity consumption forecast

Häring, Tobias; Ahmadihangar, Roya; Rosin, Argo; Korõtko, Tarmo; Biechl, Helmuth 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 425-428 : ill <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161690>

Analysis of black start strategies for microgrids with renewable distributed generation

Armstorfer, Andreas; Biechl, Helmuth; **Rosin, Argo** IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 2121-2125 : ill <https://doi.org/10.1109/IECON.2019.8926631> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Case study of ECD model accuracy in estimating the cell output voltage and power dissipation

Rahmoun, Ahmad; Biechl, Helmuth; **Rosin, Argo** Doctoral School of Energy and Geotechnology II : closing conference of the project : Pärnu, Estonia, January 12-17, 2015 2015 / p. 45-48 : ill

Comparison between equivalent circuit diagrams and fractional rational functions in the frequency domain for Lithium-ion battery modeling

Rahmoun, Ahmad; Biechl, Helmuth; **Rosin, Argo** 13th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 14-19, 2013 2013 / p. 55-58 : ill

Comparison of the impact of different household occupancies on load matching algorithms

Häring, Tobias; Ahmadihangar, Roya; Rosin, Argo; Biechl, Helmuth; **Korõtko, Tarmo** 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärda, Estonia, June 12-15, 2019 : proceedings 2019 / 6 p. : ill <https://doi.org/10.1109/PQ.2019.8818270>

Contribution of nano- and microgrids to topological power plants regarding voltage and frequency control = Nano- ja mikrovõrkude mõju topoloogilistele elektriijaamadele pingele ja sageduse juhtimise kontekstis

Helguero Cruz, Jorge Luis 2023 <https://doi.org/10.23658/taltech.60/2023> <https://digikogu.taltech.ee/et/Item/ccf279f0-5c4e-4784-a6d7-a8c310ac489b> https://www.ester.ee/record=b5641245*est

Determination methods for controller parameters of back-to-back converters in electric power grids

Beg, Nauman; **Rahmoun, Ahmad; Armstorfer, Andreas; Rosin, Argo; Biechl, Helmuth** PQ2016 : the 10th International Conference 2016 Electric Power Quality and Supply Reliability Conference (PQ) : August 29-31, 2016, Tallinn, Estonia : proceedings 2016 / p. 157-164 : ill <https://doi.org/10.1109/PQ.2016.7724106>

Energy scheduling of battery storage systems in micro grids

Armstorfer, Andreas; Biechl, Helmuth; **Rosin, Argo** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2017 / p. 27-33 : ill <https://doi.org/10.1515/ecce-2017-0004>

Evaluation of equivalent circuit diagrams and transfer functions for modeling of lithium-ion batteries

Rahmoun, Ahmad; Biechl, Helmuth; **Rosin, Argo** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2013 / p. 34-39 : ill

Hybrid energy storage lifetime-oriented control strategy in islanded microgrids : a real time simulation case study

Häring, Tobias; Link, Luca; **Rosin, Argo; Biechl, Helmuth** 2022 IEEE 7th International Energy Conference (ENERGYCON) 2022 <https://doi.org/10.1109/ENERGYCON53164.2022.9830437>

Impact of load matching algorithms on the battery capacity with different household occupancies

Häring, Tobias; Ahmadihangar, Roya; Rosin, Argo; Biechl, Helmuth IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 2541-2547 <https://doi.org/10.1109/IECON.2019.8927495> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Lifetime-oriented control strategies for hybrid energy storage systems in an islanded microgrid

Cinay, Nazli; Häring, Tobias; Rosin, Argo; Korõtko, Tarmo; Ahmadihangar, Roya; Biechl, Helmuth 2021 22nd IEEE International Conference on Industrial Technology (ICIT) : proceedings 2021 / p. 1-6 <https://doi.org/10.1109/ICIT46573.2021.9453617> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Machine learning approach for flexibility characterisation of residential space heating

Häring, Tobias; Ahmadihangar, Roya; Rosin, Argo; Biechl, Helmuth IECON 2021 - 47th Annual Conference of the IEEE Industrial Electronics Society, Toronto, Canada, Oct. 13-16, 2021 2021 / 6 p. : ill <https://doi.org/10.1109/IECON48115.2021.9589216> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Mathematical modeling and analysis of a battery energy storage system for microgrids = Mikrovõrkude energiasalvestussüsteemi matemaatilise modelleerimise ja analüüs

Rahmoun, Ahmad 2017 <https://digi.lib.ttu.ee/i/?9116> https://www.ester.ee/record=b4745144*est

Mathematical modeling and control strategies for islanded microgrids = Saartalitluses mikrovõrkude matemaatilise modelleerimine ja juhtimisstrateegiad

Armstorfer, Andreas 2022 <https://doi.org/10.23658/taltech.71/2022> <https://digikogu.taltech.ee/et/Item/077a5b65-1320-40ac-b105-607deaa9a900> https://www.ester.ee/record=b5528446*est

Mathematical modeling and dynamic behavior of a lithium-ion battery system for microgrid application

Rahmoun, Ahmad; Armstorfer, Andreas; Helguero Cruz, Jorge Luis; Biechl, Helmuth; Rosin, Argo 2016 IEEE International Energy Conference (ENERGYCON) : [Leuven, Belgium, 4-8 April 2016] 2016 / [6] p. : ill
<https://doi.org/10.1109/ENERGYCON.2016.7513977>

Mathematical modeling and evaluation of a microgrid demonstrator in island mode

Armstorfer, Andreas; Beg, Nauman; Rahmoun, Ahmad; Rosin, Argo; Biechl, Helmuth NEIS 2017 Conference on Sustainable Energy Supply and Energy Storage Systems : Hamburg, 21 – 22 September 2017 2018 / p. 39-44 : ill <https://neis-conference.com/wordpress/wp-content/uploads/2018/03/Tagungsband-NEIS-2017.pdf> <https://ieeexplore.ieee.org/document/8421809>

Mathematical modeling and stability analysis of a microgrid in island operation

Beg, Nauman; Armstorfer, Andreas; Rosin, Argo; Biechl, Helmuth 2018 International Conference on Smart Energy Systems and Technologies (SEST), 10-12 September, 2018, Seville, Spain : conference proceedings 2018 / 6 p. : ill
<https://doi.org/10.1109/SEST.2018.8495694>

Mathematical modeling of a battery energy storage system in grid forming mode

Rahmoun, Ahmad; Armstorfer, Andreas; Biechl, Helmuth; Rosin, Argo 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [6] p. : ill
<http://dx.doi.org/10.1109/RTUCON.2017.8125625>

Microgrid oriented modeling of space heating system based on neural networks

Häring, Tobias; Kull, Tuule Mall; Ahmadihangar, Roya; Rosin, Argo; Thalfeldt, Martin; Biechl, Helmuth Journal of building engineering 2021 / art. 103150, 12 p. : ill <https://doi.org/10.1016/j.jobee.2021.103150> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pitfalls of machine learning methods in smart grids : a legal perspective

Antonov, Alexander; Häring, Tobias; Korõtko, Tarmo; Rosin, Argo; Kerikmäe, Tanel; Biechl, Helmuth 2021 International Symposium on Computer Science and Intelligent Controls : (ISCSIC 2021), 12-14 November 2021, Rome, Italy : proceedings 2021 / p. 248-256 <https://doi.org/10.1109/ISCSIC54682.2021.00053>

Provision of ancillary services of a nanogrid in grid connected mode

Helguero Cruz, Jorge Luis; Rosin, Argo; Biechl, Helmuth 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärdla, Estonia, June 12-15, 2019 : proceedings 2019 / 4 p. : ill <https://doi.org/10.1109/PQ.2019.8818255>

Provision of reactive power by nanogrids as part of a topological power plant in a low voltage network

Helguero Cruz, Jorge Luis; Galeano, Santiago; Rosin, Argo; Biechl, Helmuth 3rd International Conference on Smart Energy Systems and Technologies (SEST), Istanbul, Turkey, 7-9 September 2020 2020 / 6 p. : ill
<https://doi.org/10.1109/SEST48500.2020.9203456>

Reactive power sharing and voltage control for islanded microgrids at low voltage level

Helguero Cruz, Jorge Luis; Hutter, T.; Armstorfer, Andreas; Rosin, Argo; Biechl, Helmuth 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. 133-137 : ill http://ise.elnet.ee/record=b2950045~S2*est

Research and development of energy storage control strategies for residential area microgrids = Energiasalvestite juhtimisstrateegiate uurimine ja arendamine elamupiirkondade mikrovõrkudele

Häring, Tobias 2022 <https://doi.org/10.23658/taltech.21/2022> <https://digikogu.taltech.ee/et/Item/f8a267fc-bc0b-43be-80d0-b10d151d4174> https://www.ester.ee/record=b5499801*est

SOC estimation for Li-Ion batteries based on equivalent circuit diagrams and the application of a Kalman filter

Rahmoun, Ahmad; Biechl, Helmuth; Rosin, Argo PQ2012 : 8th International Conference : 2012 Electric Power Quality and Supply Reliability : June 11-13, 2012, Tartu, Estonia : conference proceedings 2012 / p. 273-276 : ill
https://www.researchgate.net/publication/261507418_SOC_estimation_for_Li-Ion_batteries_based_on_equivalent_circuit_diagrams_and_the_application_of_a_Kalman_filter

Stability analysis of a nanogrid considering communication delay time

Helguero Cruz, Jorge Luis; Rosin, Argo; Biechl, Helmuth Stability Analysis of a Nanogrid Considering Communication Delay Time : 10th International Conference on Electrical and Electronics Engineering (ICEEE), Istanbul, Türkiye, 08-10 May 2023 2023 / p. 139-143 : ill <https://doi.org/10.1109/ICEEE59925.2023.00033>

Stability and eigenvalue sensitivity analysis of a BESS model in a microgrid

Rahmoun, Ahmad; Beg, Nauman; Rosin, Argo; Biechl, Helmuth 2018 IEEE International Energy Conference (ENERGYCON 2018) : Limassol, Cyprus 3-7 June 2018 2018 / p. 342-347 : ill <http://dx.doi.org/10.1109/ENERGYCON.2018.8398792>

Stability and eigenvalue sensitivity analysis of a BESS model in a microgrid 4 Author(s)

Rahmoun, Ahmad; Beg, Nauman; Rosin, Argo; Biechl, Helmuth 2018 5th IEEE International Energy Conference (ENERGYCON), Limassol, Cyprus, June 3-7, 2018 : proceedings 2018 / 6 p.: ill <https://doi.org/10.1109/ENERGYCON.2018.8398792>

Stability issues with inverter loads and their control in low inertia islanded microgrids

Beg, Nauman; Biechl, Helmuth; Rosin, Argo 2020 2nd Global Power, Energy and Communication Conference (GPECOM) 2020 IEEE 2nd Global Power, Energy and Communication Conference (GPECOM) :Online Conference, 20-23 October, 2020 : proceedings 2020 / p. 196-201 : ill <https://doi.org/10.1109/GPECOM49333.2020.9247913>

Stability issues with network impedances and its mitigation in islanded microgrids

Beg, Nauman; Biechl, Helmuth; Rosin, Argo NEIS 2019 : Conference on Sustainable Energy Supply and Energy Storage Systems Hamburg, 19-20 September, 2019 2019 / p. 189-194 <https://10times.com/neis-germany> <https://www.vde-verlag.de/buecher/565152/neis-2019.html>

State of charge estimation for Li-ion batteries based on equivalent circuit diagrams and the application of a Kalman filter

Rahmoun, Ahmad; Biechl, Helmuth; Rosin, Argo 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. 125-128 : ill

A study of different aspects for building a thermal model for lithium-ion cells

Rahmoun, Ahmad; Biechl, Helmuth; Rosin, Argo 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 / p. 47-52 : ill

Thermal modelling of a control center for flexibility analysis in nZEB nanogrids

Häring, Tobias; Rosin, Argo; Kull, Tuule Mall; Helguero Cruz, Jorge Luis; Biechl, Helmuth 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/RTUCON51174.2020.9316568>

Using common household thermal storages to support the PV- and battery system in nearly zero energy buildings in off-grid mode

Häring, Tobias; Rosin, Argo; Biechl, Helmuth Sustainable energy technologies and assessments 2019 / p. 12-24 : ill <https://doi.org/10.1016/j.seta.2019.05.014> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Voltage and reactive power control in islanded microgrids without communication link

Armstorfer, Andreas; Biechl, Helmuth; Rosin, Argo 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 6 p. : ill <https://doi.org/10.1109/BEC49624.2020.9277219>