

Active and reactive power control of DFIG using optimized fractional order-PI controller

Javed, Umar; Arshad, Muhammad Asad; **Shabbir, Noman**; Kütt, Lauri; Rassõlkin, Anton 2021 IEEE 19th International Power Electronics and Motion Control Conference, The Silesian University of Technology Gliwice, Poland, 25 - 29 April, 2021 (PEMC) : proceedings 2021 / p. 398-404 <https://doi.org/10.1109/PEMC48073.2021.9432608>

Advanced sensors and on-line measurements for power lines in smart grids

Shabbir, Noman 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. 205-206 : ill https://www.ester.ee/record=b5183874*est

Analysis of microgrid configuration effects on energy efficiency

Peterson, Kristjan; Ahmadihangar, Roya; Shabbir, Noman; Vinnal, Toomas 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/>

Battery size optimization with customer PV installations and domestic load profile

Shabbir, Noman; Kütt, Lauri; Astapov, Victor; Jawad, Muhammad; Allik, Alo; Husev, Oleksandr IEEE Access 2022 / p. 13012-13025 : ill <https://doi.org/10.1109/ACCESS.2022.3147977> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bivariate stochastic model of current harmonic analysis in the low voltage distribution grid

Iqbal, Muhammad Naveed; Kütt, Lauri; Daniel, Kamran; Jarkovoi, Marek; Asad, Bilal; Shabbir, Noman Proceedings of the Estonian Academy of Sciences 2021 / p. 190–206 : ill <https://doi.org/10.3176/proc.2021.2.08> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Case study of non-linear PV inverter devices attached to the LV distribution network

Vinnal, Toomas; Puusepp, Hardi; Shabbir, Noman; Kütt, Lauri; Iqbal, Muhammad Naveed Agronomy research 2020 / p. 2639–2652 : ill <https://doi.org/10.15159/AR.20.233> <https://dspace.emu.ee/xmlui/handle/10492/5955> [Journal metrics at Scopus](#) [Article at Scopus](#)

Comparative analysis of machine learning techniques for non-intrusive load monitoring

Shabbir, Noman; Vassiljeva, Kristina; Hokmabad, Hossein Nourollahi; Husev, Oleksandr; Petlenkov, Eduard; Belikov, Juri Electronics 2024 / art. 1420 <https://doi.org/10.3390/electronics13081420>

Comparative analysis of power quality monitoring systems

Hassan, Syed Rizwan; Rehman, Ateeq Ur; **Shabbir, Noman**; Unbreen, Arooj NFC IEFJR journal of engineering and scientific research 2020 / p. 19–23 <http://nijasr.com/ojs/index.php/archive/article/view/249>

Comparative Analysis of ZigBee Based Wireless Sensor Networks (WSNs)

Shabbir, Noman; Hassan, Syed Rizwan; **Iqbal, Muhammad Naveed; Kütt, Lauri** Proceeding of the 4th International Conference on Recent Trends in Computer Science and Electronics 2019 2019 / p. 115 http://www.rtcse.org/RTCSE_2019.pdf

Comparative analysis of zigbee based wireless sensor networks (WSNs)

Shabbir, Noman; Hassan, Syed R.; **Iqbal, Muhammad N.; Kütt, Lauri**; Unbreen, A. International journal of recent technology and engineering 2019 / p. 980-984 : ill <https://www.ijrte.org/wp-content/uploads/papers/v7i6s/F04000376S19.pdf> [Journal metrics at Scopus](#) [Article at Scopus](#)

Comparative Analysis of ZigBee Based Wireless Sensor Networks (WSNs)

Shabbir, Noman; Hassan, Syed Rizwan; **Iqbal, Muhammad Naveed; Kütt, Lauri**; Unbreen, Arooj International journal of recent technology and engineering 2019 / p. 980-984 : ill <https://www.ijrte.org/wp-content/uploads/papers/v7i6s/F04000376S19.pdf>

Comparison of current harmonic emission by different lighting technologies

Iqbal, Muhammad Naveed; Kütt, Lauri; Shabbir, Noman; Asad, Bilal 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 <http://toc.proceedings.com/52742webtoc.pdf>

Comparison of machine learning based methods for residential load forecasting

Shabbir, Noman; Ahmadihangar, Roya; Kütt, Lauri; Rosin, Argo 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.2019.8818267>

Congestion control strategies for increased renewable penetration of photovoltaic in LV distribution networks

Shabbir, Noman; Kütt, Lauri; Astapov, Victor; Husev, Oleksandr; Ahmadihangar, Roya; Wen, Fushuan; Kull, Karl Energy reports 2022 / p. 217-223 <https://doi.org/10.1016/j.egyr.2022.10.184> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A cost-effective electric vehicle intelligent charge scheduling method for commercial smart parking lots using a simplified convex relaxation technique

Jawad, Muhammad; Qureshi, Muhammad Bilal; Ali, Sahibzada Muhammad; **Shabbir, Noman**; Khan, Muhammad Usman; Aloraini, Afnan; Nawaz, Raheel Sensors 2020 / p. 1-19 <https://doi.org/10.3390/s20174842> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Current harmonic aggregation cases for contemporary loads

Daniel, Kamran; Kütt, Lauri; Iqbal, Muhammad Naveed; Shabbir, Noman Energies 2022 / art. 437
<https://doi.org/10.3390/en15020437> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Distributed average integral control based energy management model

Shaukat, Neelofar; Khan, Bilal; Qureshi, Muhammad Bilal; Jawad, Muhammad; **Shabbir, Noman; Daniel, Kamran** 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG) 2023 / 5 p <https://doi.org/10.1109/ETFG55873.2023.10407358>

Economic analysis and impact on national grid by domestic photovoltaic system installations in Pakistan

Shabbir, Noman; Usman, Muhammad; Jawad, Muhammad; Zafar, Muhammad H.; **Iqbal, Muhammad Naveed; Kütt, Lauri** Renewable energy 2020 / p. 509-521 : ill <https://doi.org/10.1016/j.renene.2020.01.114> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Energy storage expansion planning in microgrid

Ahmadihangar, Roya; Baharvandi, Amir; Rosin, Argo; Häring, Tobias; Azizi, Elnaz; Korötko, Tarmo; Shabbir, Noman Proceedings : 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : Online - Setúbal, Portugal, 08 - 10 July, 2020 2020 / p. 433-437 <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161502>

Exploratory data analysis based short-term electrical load forecasting : a comprehensive analysis

Javed, Umar; Ijaz, Khalid; **Shabbir, Noman; Kütt, Lauri; Husev, Oleksandr** Energies 2021 / art. 5510
<https://doi.org/10.3390/en14175510> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Feasibility investigation for residential battery sizing considering EV charging demand

Shabbir, Noman; Kütt, Lauri; Daniel, Kamran; Astapov, Victor; Raja, Hadi Ashraf; Iqbal, Muhammad Naveed; Husev, Oleksandr Sustainability 2022 / art. 1079 <https://doi.org/10.3390/su14031079> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Forecasting of energy consumption and production using recurrent neural networks

Shabbir, Noman; Kütt, Lauri; Jawad, Muhammad; Iqbal, Muhammad Naveed; Ghahfarokhi, Payam Shams Advances in electrical and electronic engineering 2020 / p. 190-197 <https://doi.org/10.15598/aece.v18i3.3597> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Forecasting of wind speed and power through FFNN and CFNN using HPSOBA and MHP SO-BAACs techniques

Ellahi, Manzoor; Usman, Muhammad Rehan; Arif, Waqas; Usman, Hafiz Fuad; Khan, Waheed A.; Satrya, Gandeve Bayu; **Daniel, Kamran; Shabbir, Noman** Electronics 2022 / art. 4193 <https://doi.org/10.3390/electronics11244193> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Forecasting short term wind energy generation using machine learning

Shabbir, Noman; Ahmadihangar, Roya; Kütt, Lauri; Iqbal, Muhammad Naveed; Rosin, Argo 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 4 p <https://doi.org/10.1109/RTUCON48111.2019.8982365>

Impact of cable impedance on the harmonic emission of LED lamps

Iqbal, Muhammad Naveed; Kütt, Lauri; Asad, Bilal; Shabbir, Noman 2020 21st International Scientific Conference on Electric Power Engineering (EPE), October 19-21, 2020, Prague, Czech Republic 2020 / 5 p <https://doi.org/10.1109/EPE51172.2020.9269271>

Impact of LED thermal stability to household lighting harmonic load current modeling

Iqbal, Muhammad Naveed; Jarkovoi, Marek; Kütt, Lauri; Shabbir, Noman 2019 Electric Power Quality and Supply Reliability Conference (PQ) & 2019 Symposium on Electrical Engineering and Mechatronics (SEEM), Kärddla, Estonia, June 12-15, 2019 : proceedings 2019 / 6 p. : ill <https://doi.org/10.1109/PQ.2019.8818226>

The impact of load on global parameters of electrical machines in case of healthy and broken rotor bars

Kudelina, Karolina; Raja, Hadi Ashraf; Autso, Siarhei; Asad, Bilal; Vaimann, Toomas; Rassõlkin, Anton; Kallaste, Ants; Shabbir, Noman 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 5 l. <https://doi.org/10.1109/BEC56180.2022.9935614>

Increasing PV hosting capacity in LV distribution networks using congestion control techniques

Shabbir, Noman 21st International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Pärnu, Estonia, June 15-18, 2022 2022 / p. 87-88 https://www.ester.ee/record=b5504019*est

Integrating smart energy management system with internet of things and cloud computing for efficient demand side management in smart grids

Saleem, M. Usman; Shakir, Mustafa; Usman, M. Rehan; Bajwa, M. Hamza Tahir; **Shabbir, Noman**; Shams Ghahfarokhi, Payam; Daniel, Kamran Energies 2023 / art. 4835 : ill <https://doi.org/10.3390/en16124835>

Load current harmonic model complexity reduction through empirical pattern analysis

Kamran, Daniel; Kütt, Lauri; Iqbal, Muhammad Naveed; Shabbir, Noman; Jarkovoi, Marek; Parker, Martin 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227474>

Machine learning and deep learning techniques for residential load forecasting : a comparative analysis

Shabbir, Noman; Kütt, Lauri; Raja, Hadi Ashraf; Ahmadiahangar, Roya; Rosin, Argo; Husev, Oleksandr 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2021 / p. 1-5 <https://doi.org/10.1109/RTUCON53541.2021.9711741>

Machine learning and deep learning techniques for wind energy forecasting

Shabbir, Noman 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. 95-96 : ill https://www.ester.ee/record=b5291755*est

Modeling of lighting load in residential buildings

Iqbal, Muhammad Naveed; Kütt, Lauri; Shabbir, Noman International journal of engineering and advanced technology 2018 / p. 233–236 <https://www.scopus.com/record/display.uri?eid=2-s2.0-85064435587&origin=resultslist>

Modeling of lighting load in residential buildings

Iqbal, Muhammad Naveed; Kütt, Lauri; Shabbir, Noman Proceeding of the 4th International Conference on Recent Trends in Computer Science and Electronics 2019 2019 / p. 111 http://www.rtcse.org/RTCSE_2019.pdf

Non orthogonal multiple access: basic concepts and misconceptions

Hassan, Syed Rizwan; **Shabbir, Noman**; Unbreen, Arooj; Rehman, Ateeq Ur; Iqbal, Ahmad NFC IEFR journal of engineering and scientific research 2020 / 4 p <http://doi.org/10.24081/njesr.2019.1.0001>

A novel renewable powered stand-alone electric vehicle parking-lot model

Jawad, Muhammad; Asghar, Hira; Arshad, Jehangir; Javed, Abbas; Qureshi, Muhammad Bilal; Ali, Sahibzada Muhammad; **Shabbir, Noman; Rassölkin, Anton** Sustainable Energy, Grids and Networks 2023 / art. 100992, 14 p. : ill <https://doi.org/10.1016/j.segan.2022.100992>

A novel short receptive field based dilated causal convolutional network integrated with Bidirectional LSTM for short-term load forecasting

Javed, Umar; Ijaz, Khalid; Jawad, Muhammad; Khosa, Ikramullah; Ansari, Ejaz Ahmad; Zaidi, Khurram Shabih; Rafiq, Muhammad Nadeem; **Shabbir, Noman** Expert systems with applications 2022 / art. 117689 <https://doi.org/10.1016/j.eswa.2022.117689> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Optimal fractional order PI controller for field oriented current control of switched reluctance motor

Mughees, Neelam; Ashfaq, Hira; **Shabbir, Noman; Rassölkin, Anton; Kütt, Lauri** 2021 IEEE 19th International Power Electronics and Motion Control Conference, The Silesian University of Technology Gliwice, Poland, 25 - 29 April, 2021 (PEMC) : proceedings 2021 / p. 479-485 <https://doi.org/10.1109/PEMC48073.2021.9432616>

An overview of measurement standards for power quality

Shabbir, Noman; Kütt, Lauri; Jarkovoi, Marek; Iqbal, Muhammad Naveed; Rassölkin, Anton; Daniel, Kamran Agronomy research 2021 / p. 944–960 <https://doi.org/10.15159/ar.21.074> [Journal metrics at Scopus](#) [Article at Scopus](#)

Requirements to data acquisition and signal analysis for electrical grid condition monitoring

Anijärv, Toomas Erik; Shabbir, Noman; Kütt, Lauri; Iqbal, Muhammad Naveed 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 <https://doi.org/10.1109/RTUCON51174.2020.9316487>

Residential DC load forecasting using long short-term memory network (LSTM)

Shabbir, Noman; Ahmadiahangar, Roya; Rosin, Argo; Husev, Oleksandr; Jalakas, Tanel; Martins, Joao 2023 IEEE 11th International Conference on Smart Energy Grid Engineering (SEGE) 2023 / p. 131-136 <https://doi.org/10.1109/SEGE59172.2023.10274596>

Residential energy management system to support increased renewable penetration = Taastuvenergiaallikate kasutustihedust toetav energiahaldussüsteem

Shabbir, Noman 2022 <https://doi.org/10.23658/taltech.37/2022> <https://digikogu.taltech.ee/et/Item/2c178a6b-f918-4932-bd1b-48fefb7fc7aa> https://www.ester.ee/record=b5503996*est

Residential load forecasting using machine learning techniques : a comparative analysis

Shabbir, Noman 20th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Tallinn, Estonia, September 8-10, 2021 2021 / p. 73-74 : ill https://www.ester.ee/record=b5457278*est

Residential load forecasting using recurrent neural networks

Shabbir, Noman; Ahmadiyahangar, Roya; Raja, Hadi Ashraf; Kütt, Lauri; Rosin, Argo 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 478-481 : ill <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161565>

Short-term PV energy generation forecasting using deep learning

Shabbir, Noman; Ahmadiyahangar, Roya; Rosin, Argo; Astapov, Victor; Kilter, Jako Telematique 2022 <https://www.provinciajournal.com/index.php/telematique/article/view/813>

Short-term wind energy forecasting using deep learning-based predictive analytics

Shabbir, Noman; Kütt, Lauri; Jawad, Muhammad; Husev, Oleksandr CMC-Computers, Materials & Continua 2022 / p. 1017-1033 <https://doi.org/10.32604/cmc.2022.024576> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Spectrum analysis for condition monitoring and fault diagnosis of ventilation motor : a case study

Shabbir, Noman; Kütt, Lauri; Asad, Bilal; Jawad, Muhammad; Iqbal, Muhammad Naveed; Daniel, Kamran Energies 2021 / art. 2001 <https://doi.org/10.3390/en14072001> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Techno-economic analysis and energy forecasting study of domestic and commercial photovoltaic system installations in Estonia

Shabbir, Noman; Kütt, Lauri; Raja, Hadi Ashraf; Jawad, Muhammad; Allik, Alo; Husev, Oleksandr Energy 2022 / art. 124156 <https://doi.org/10.1016/j.energy.2022.124156> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Time-dependent variations in current harmonic emission by LED lamps in the low-voltage network

Iqbal, Muhammad Naveed; Kütt, Lauri; Asad, Bilal; Shabbir, Noman; Rasheed, Iftikhar Electrical Engineering 2021 / p. 1525-1539 : ill <https://doi.org/10.1007/s00202-020-01175-4> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Waveform Variation Defined Model for Harmonic Current Emissions Including Cross-Order Supply Voltage Harmonics Influence

Daniel, Kamran; Kütt, Lauri; Iqbal, Muhammad Naveed; Shabbir, Noman; Jarkovoi, Marek; Parker, Martin IEEE Access 2023 <https://doi.org/10.1109/ACCESS.2023.3270805>

Wind energy forecasting using recurrent neural networks

Shabbir, Noman; Kütt, Lauri; Jawad, Muhammad; Ahmadiyahangar, Roya; Iqbal, Muhammad Naveed; Rosin, Argo 2019 Big Data, Knowledge and Control Systems Engineering (BdKCSE) 2019 / 5 p. : ill <https://doi.org/10.1109/BdKCSE48644.2019.9010593>

Vision towards 5G : comparison of radio propagation models for licensed and unlicensed indoor femtocell sensor networks

Shabbir, Noman; Kütt, Lauri; Alam, Muhammad Mahtab; Roosipuu, Priit Physical communication 2021 / art. 101371 <https://doi.org/10.1016/j.phycom.2021.101371> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Voltage main harmonic level influence on harmonic current emission modeling

Daniel, Kamran; Kütt, Lauri; Iqbal, Muhammad Naveed; Shabbir, Noman; Jarkovoi, Marek; Parker, Martin 2023 International Conference on Future Energy Solutions (FES) 2023 / p. 1-6 <https://doi.org/10.1109/FES57669.2023.10183302>

XgBoost based short-term electrical load forecasting considering trends & periodicity in historical data

Shabbir, Noman; Ahmadiyahangar, Roya; Rosin, Argo; Jawad, Muhammad; Kilter, Jako; Martins, Joao 2023 IEEE International Conference on Energy Technologies for Future Grids (ETFG) 2023 / 6 p <https://doi.org/10.1109/ETFG55873.2023.10407926>