

IRFAN KHAN

Ph.D., P.E. and SMIEEE

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✉ P MEC 165, P MEC, Texas A&M University at Galveston, Galveston TX 77553-1675 USA
🌐 engineering.tamug.edu/electrical/profiles/khan-irfan.html; https://www.tamug.edu/marr/Faculty/IrfanKhan.html
🌐 tamug.edu/cares/ 🌐 scholar.google.com/citations?user=6UAI1OYAAAAAJandhl=en
🌐 publons.com/researcher/1439018/irfan-khan/ 🌐 orcid.org/0000-0003-2484-6169
🌐 energy.tamug.edu/faculty-experts/irfan-ahmad-khan/ 🌐 smartgridcenter.tamug.edu/index.php/tamu-galveston/

EXPERIENCE

Assistant Professor

Texas A&M University College Station, Electrical and Computer Engineering

📅 March 2019 – Present 📍 Galveston, USA

- Member of Graduate Faculty-Electrical and Computer Engineering department
- Advised graduate students
- Organized conferences

Assistant Professor

Texas A&M University at Galveston, Marine Engineering Technology

📅 September 2018 – Present 📍 Galveston, USA

- Perform research on cyber security of marine energy systems
- perform research on applications of artificial intelligence in smart grids
- perform research on applications of integration of renewable energy resources
- Perform research to design and control power electronics converters
- Teach ECEN 215: Principles of Electrical Engineering
- Teach MARE 306: Electrical Power II
- Teach MARE 207: Electrical Power I
- Offer certificates in marine cyber security and propulsion systems

Graduate Researcher/PhD Student

Carnegie Mellon University

📅 August 2014 – August 2018 📍 Galveston, USA

- Performed research on novel control algorithms for hierarchical control of power systems
- Worked on battery storage for the application of microgrids

MOST PROUD OF

🏆 Gulf Research Program's Early-Career Research Fellowship: Offshore Energy Safety (Track 3). National Academies, National Academy of Sciences Building, Washington, USA
January 2022

🏆 2021 Jim Leonard Outstanding Member Award from IEEE Region 5
April 2022

🏆 2022 Data Science Career Initiation Fellow Program award by Texas A&M University Institute of Data Science
April 2022

🏆 IEEE Region 5 Director's Award Technical Conference Co-Chair 2021
April 2022

🏆 IEEE Houston Section Volunteer Appreciation Award, in recognizing volunteers who have given a generous commitment of Time, Talent, and Treasures to the success of the 2022 IEEE Green Technologies Conference
April 2022

🏆 My article, titled, "Forecasting of COVID-19 cases using deep learning models: Is it reliable and practically significant?" was one of the Most Downloaded Article in Results in Physics journal, Elsevier in 2021
July 2021

🏆 Won first prize at Texas A&M University Engineering Experiment (TEES) Annual Conference 2021
April 2021

🏆 Top 1% of reviewers in Cross-Field by Publons
for last two years 2019-2022

RESEARCH CENTERS AFFILIATED WITH

Texas A&M University

- Clean and Resilient Energy Systems (CARES) Lab at Texas A&M University at Galveston since 09/01/2018
<https://tamug.edu/cares/>
- Affiliate faculty with Texas A&M Energy Institute at Texas A&M University since 11/01/2018
<https://energy.tamu.edu/faculty-experts/irfan-ahmad-khan/>
- Affiliate faculty with Smart Grid Center at Texas A&M Engineering Experiment Station since 02/25/2020
<https://smartgridcenter.tamu.edu/index.php/tamu-galveston/>


VOLUNTEERING SERVICES

IEEE Committees Membership


- Member of Power and Energy Education Committee, Research Subcommittee since 2018
- Member of Power and Energy Education Committee, Education Subcommittee since 2018

IEEE Standards Association Activities


- Voting Member of IEEE P3001.3- "Recommended Practice for the Design of Industrial and Commercial Power Systems: Voltage Considerations" sponsored by Technical Books Coordinating Committee of the IEEE Industry Application Society Society
- Balloting Member of PC57.12.00-"General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers" developed by the Transformers Committee of the IEEE Power and Energy Society
- Balloting Member of P519-"Standard for Harmonic Control in Electric Power Systems" developed by the Transmission and Distribution of the IEEE Power and Energy Society
- Balloting Member of P1184-"Guide for Batteries for Uninterruptible Power Supply Systems" developed by Energy Storage and Stationary Battery Committee of the IEEE Power and Energy Society
- Balloting Member of P1453-"Standard for Measurement and Limits of Voltage Fluctuations and Associated Light flicker on AC Power Systems" developed by the Transmission and Distribution Committee of the IEEE Power and Energy Society

 Won first prize at Texas A&M University Engineering Experiment (TEES) Annual Conference 2021

April 2021

 Awarded "Stepping Stone Award" at Stepping Stone Award Ceremony by IEEE


July 2019

 Won 3rd prize in the "Impact-a-Thon" competition arranged by Carnegie Mellon University.


2018

 Awarded Ph.D. Fellowship from Carnegie Mellon University


2014

 Secured the first position with distinction in M.Sc

2014

 Best Performance award on Master's Degree

2011

 Procured Japanese-HEC need/merit-based scholarship B.Sc.

2005

EDUCATION

Ph.D. Electrical and Comp. Engineering

Carnegie Mellon University, PA USA

 August 2018

- Ph.D. Thesis :Novel Control Algorithms for Hierarchical Control of Power Systems.
- Relevant Courses: Optimization in Energy Networks, Smart Grid and Future Energy networks, Numerical Methods in Engineering Design and Optimization, Nonlinear Optimization, Linear Systems, Non-linear Control.

MS Electrical and Comp. Engineering

Carnegie Mellon University, PA USA

 December 2017

- Master's Thesis: Universal Battery Charger.

- Balloting Member of P2800-"Standard for Interconnection and Interoperability of Inverter-Based Resources Interconnecting with Associated Transmission Systems" developed by the Wind and Solar Plant Interconnection Performance Working Group (WSPI-P) of the Energy Development and Power Generation Committee, the Electric Machinery Committee, and the Power System Relaying Committee of the IEEE Power and Energy Society

JOURNALS EDITOR

- Guest editor of the Special Issue in Sustainable Energy Technologies and Assessments, Elsevier on "Improving Sustainable Energy Efficiency of Intelligent Grid and Micro Grid" from September 20, 2021 to May 30, 2022.
- Associate Editor IEEE Systems Journal since August 2021
- Lead Guest editor of the Special Issue in IEEE Transactions on Industry Applications on " FAST, SUPER FAST and ULTRA SUPER FAST Intelligent and Smart Charging Solutions for Electric Vehicles"" from 02/23/2021 to 08/10/2022
- Guest editor of the Special Issue in Frontiers in Energy Research - section Solar Energy. on"System Level Optimization Techniques for Solar Energy Technologies" from 02/23/2021 to 08/10/2021
- Guest editor of the Special Issue in Frontiers in Energy Research - section Smart Grids on "Smart Grid for Future Electricity Networks" from 02/23/2021 to 08/08/2021
- Guest editor of the Special Issue in Electronics MDPI on"Modeling, Control, and Optimization of Power Electronics" from 02/07/2021 to present
- Member of Editorial Board of the journal Springer Nature (SN) Applied Sciences since 08/31/2020
- Member of Editorial Board, International Journal of Energy and Power Engineering (IJEPE) since 08/11/2019
- Editor of the special issue in Energies on "Applications of Power Electronics Converters in Smart Grids and Renewable Energy Systems" from 08/15/2019- 03/01/2021.

KEYNOTE SPEAKER

- Gave a keynote speech at International Conference on Emerging Power Technologies (ICEPT) which was organized at Ghulam Ishaq Khan Institute, Pakistan. The topic of the speech was "Electric Vehicle's Fast Charging and its Impact on the Grid: Present and Future." The timing of my speech was at 4:30 PM (Pak Time) on Saturday, April 10, 2021.
- Gave keynote speech session on "HVDC Transmission Technologies for Offshore Wind Power Plants (Power Electronics Solutions for Farther and Deeper Waters)"

- Relevant Courses: Optimization in Energy Networks, Smart Grid and Future Energy networks, Numerical Methods in Engineering Design and Optimization, Nonlinear Optimization, Linear Systems, Non-linear Control.

MSc. Electrical Power Engineering

University of Greenwich, Chatham UK

📅 June 2011

- Relevant Courses: Power Electronics, Power Devices, Power Distribution Systems, Mixed Signal Electronics, Strategy and Management, Multiple Technology Integration.

BSc. Electrical Engineering

University of Eng. and Tech., Lahore PK

📅 August 2009

- Relevant Courses: Power System Distribution and Utilization, Control Systems, Power Electronics, Electric Machine-I and II, Electric Machine Design, Power System Analysis, High Voltage Engineering, Power Plants, Power System Protection, Power System Operation and Control

G-SCHOLAR PROFILE

Citations 756

h-index 16

i10-index 25

PUBLONS PROFILE

WOS Researcher ID J-1241-2019

Verified Editor Records 9

Verifeid Reviews 852

MEMBERSHIPS

Texas Board of Professional Engineers and Land Surveyors

Professional Engineer with the State of Texas

📅 2020-Present 📍 Texas, USA

IEEE Membership

📅 2014 - Present

at International Conference on Renewable Power-2020 (ICRP2020) organized by Electrical Engineering Department, SoET, Baba Ghulam Shah Badshah University, Rajouri, J and Electrical Engineering Department, ZHCET, Aligarh Muslim University, Aligarh, India on July 13, 2020, at 11:15 am to 12:00 Noon as per Indian Standard Time (GMT+5:30).

INVITED TALKS and SPEAKS

- Invited talk on HVDC Transmission Technologies for Off-shore Wind Power Plants to the journal Springer Nature Applied Sciences on June 29, 2021.
- Invited talk as an International Webinar on Grid-Connected Solar PV Inverters- Challenges and Solutions to the Department of Electronics and Communication Engineering, SNS College of Technology, Coimbatore on August 8, 2020
- Invited talk on "Renewable integration with conventional power system on marine ships," presented to officials from South Texas Nuclear during their visit to TAMUG
- Invited Speaker at IEEE Professional Forum and Students' Poster session, organized by the IEEE Galveston Bay Section on Saturday, November 16, 2019, at the University of Houston- Clear Lake, where I gave a talk on "Integration of Standalone Solar Home Systems for Off-grid Community Applications."
- Invited talk on "Novel algorithms for control of power systems," delivered at the Electrical and Computer Engineering Department, Texas A&M University, College Station, Texas, on February 6, 2019
- Invited speaker at the University of Lahore Pakistan (2018)
- Invited Speaker: FandR Energy-2020 at Houston, Texas, USA

CONFERENCES ORGANIZED

- Co-Chair at the Fourteenth Annual IEEE Green Technologies (GreenTech) Conference March 30 – April 3, 2022, in Houston, Texas. <https://ieeegreentech.org/>
- Committee member at 2022 International Conference on Energy Storage Technology and Power Systems (ESPS 2022) on February 26, 2022.
- 2022 Technical Program Committee Member of 5th International Conference on Renewable Energy and Power Engineering (REPE), scheduled to take place from 28 to 30, September, 2022 at Beijing, China (<http://www.repe.net/>)
- Technical Program Committee Member of 2022 Asian Conference on Frontiers of Power and Energy (ACFPE 2022), hosted in Chengdu, China from Oct. 21 to 23, 2022, organized by Hong Kong Society of Mechanical Engineers(HKSME). For more information, please refer to official website: <https://www.acfpe.org/>

- Senior Member of the IEEE (2020-present)
- IEEE Standards Association: Balloting Member (2020-Present)
- IEEE Industry Application Society (2018- Present)
- IEEE Power and Energy Society (2018-Present)
- IEEE Industrial Electronics Society (2020-Present)

Vice-Chair of IEEE Galveston Bay Section, Region 5

Galveston section

📅 2021 – Present 📍 Galveston, USA

Vice-Chair of IEEE PES joint chapter

Galveston section

📅 2018 – Present 📍 Galveston, USA

Faculty Advisor SNAME

Galveston Chapter

📅 2018 – Present 📍 Galveston, USA

CURRENT RESEARCH STUDENTS

Ph.D. students:

- Syed Rahman
- Syed Wali
- Yasir Ali Farrukh

B.Sc. students:

- Abhishek More
 - Akshat Murali
 - Dev Singhania
 - Matthew Ray
 - Somil Gupta
 - Praneeth Boddu
 - Bunnarak Theng
 - Sam Shams
 - Carlos Rodriguez
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CURRENT AND FORMER RESEARCH SCHOLARS

Current Research Scholars

- Technical Program Committee member at International Power Electronics Conference 2022 held on May 15-19, 2022 in Himeji City, Hyogo, Japan.
- Program Committee member at 2022 International Conference on Energy Storage Technology and Power Systems (ESPS 2022), held in Guilin, China from February 25th to 27th.
<http://www.icesps.com/committeespeaker>
- Technical Committees Member at 2021 IEEE 4th International Conference on Renewable Energy and Power Engineering (REPE 2021) to be held in Beijing, China during October 9-11, 2021. www.repe.net
- Organizing Committee Member of the IEEE Webinar 2021, International Webinar on Electronics and Electrical Engineering organized on Nov 12-13, 2021. <https://webeve.org/Electronics/>
- International Advisory Board Member of the International Conference On Cyber Technologies and Emerging Systems (ICCTES-2021) Date of Conference: 17-18 December 2021.
<https://bit.ly/ICCTES2021>
- Member of Technical Program Committee of IEEE HONET 2021 (2021 IEEE 18th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET)), held in hybrid mode from Oct 11-13, 2021. IEEE HONET 2021 is organized by NED University, Karachi, Pakistan; UNC Charlotte, Charlotte NC, USA; and co-sponsored by the IEEE North Carolina Council and IEEE Karachi Section.
- Member of Technical Program Committee of the 3rd International Conference on Smart Power and Internet Energy Systems (SPIES 2021) organized on September 25-28, 2021 at Shanghai University of Electrical Power, Shanghai, China
- Committee member at International Conference on Power System and Energy Internet (PoSEI2021) on April 16-18, 2021 in Chengdu, China
- Dr. Khan is a committee member at 2020 2nd International Conference on Smart Power and Internet Energy Systems (SPIES 2020)
- Dr. Khan is an advisory board member of an international conference, "International Conference on Renewable Power-2020" (ICRP-2020)," organized on 17-18 April 2020 at BGSB University, Rajouri, Jammu and Kashmir, India.
- Technical Program Committee member of the IEEE International Symposium on Technology and Society (IEEE ISTAS), 2019
- Registration Chair at International Symposium on Measurement and Control in Robotics, Houston TX, USA (ISMCR 2019)

Former Research Scholars

- Rajvikram Madurai Elavarasan
- Muhammad Faisal Nadeem Khan
- Ms. Xinyue Chen

SESSIONS CHAIRED

- Session Chair to host technical Session 5.4 - Control Applications- Load Management at North Ameri-

can Power Symposium (NAPS) 2021 at Texas AM University, College Station, TX, USA

- Session Chair to host Technical Session 2: Smart Grid Applications at 2021 IEEE Green Technologies Conference on April 7, 2021, at 3:30 PM to 5: 30 PM MDT
- Session Chair to host a paper session 3 in Paper block 3 on "Design and Control of DC-DC Converters" on February 3, 2021, at 8:35-9:35 am
- Session Chair to host the paper session 4 in Paper block 4 on "Control and Forecasting Methods of Power System Apparatus" on February 3, 2021, 2:35-3:35 pm
- Session chair to host a session on "Novel Power Electronic Circuits for Applications in Smart Grids" at Asilomar Conference on Signals, Systems, and Computers (Nov. 1-4, 2020)
- Session chair to host the session 19 ("SS1-Smart Grid Energy Informatics, Management, and Optimisation", at 8:30–10:00 am, September 18, 2020, GMT+7) at 2020 2nd International Conference on Smart Power and Internet Energy Systems (SPIES 2020)
- Session Chair to host a paper session on "Power Systems (Paper Block 3)" on February 6, 2020, at 1:15-2:15 pm in MSC building, Room 2405 at Texas Power and Energy Conference (TPEC 2020)
- Session Chair to host a paper session on "Power Systems (Paper Block 5)" on February 7, 2020, at 10:50-11:50 am in MSC building, Room 2404 at Texas Power and Energy Conference (TPEC 2020)
- Session Chair to host a paper session on "Renewable Energy and Smart Grid (Paper Block 1)" on February 6, 2020, at 9:45-10:45 am in MSC building, Room 2406-B at Texas Power and Energy Conference (TPEC 2020)
- Session chair to host two sessions at International Symposium on Measurement and Control in Robotics, Houston TX, USA (ISMCR 2019)

TALKS ORGANIZED

- Talk presented by Dr. Hasmat Malik, from National University Singapore, on the topic "Data Analytics for Renewable Energy Resources" on Friday, July 30, 2021, 11:00 AM-12:00 PM
- Talk presented by Dr. Hassan Abbas Khan, Associate Professor at LUMS University, Lahore, Pakistan, on the topic "How do we electrify 1 billion offgrid people worldwide? Status, Trends and Opportunities" on Monday, July 26, 2021, 10:30 AM-11:30 AM
- Talk presented by Prof. Sanjeevikumar Padmanaban, Professor at Aarhus University, Denmark, on the topic "A State-of-The-Art: Electric Vehicles – Role of Power Electronics, Trend, Challenges and Future" on Friday, April 2, 2021, 11:00 AM-12:00 PM
- Talk presented by Dr. Won Jang, Lecturer from Electrical and Computer Engineering Department at Texas A&M University on the topic "Considerations in the Automatic Development of Electric Grid Restoration Plans" on Friday, February 12, 2021, 11:00 AM-12:00 PM
- Talk presented by Dr. Harish Krishnamoorthy, an Assistant Professor in the Electrical and Computer Engineering department at the University of Houston on the topic "Solid State Transformers and Their Applications in Marine Energy Systems" on Friday, April 24, 2020, 11:30 am-12:30 pm at D136 Delta Building University of Houston-Clear Lake
- Talk presented by Chief Engineer Milton Korn, a Professor of Practice and Chief Engineer in the Marine Engineering Technology department at Texas A&M University at Galveston on the topic "a brief history of the history of Electrification aboard ships and some notes on the present state of the Art" on Friday, May 1, 2020, 11:30 am-12:30 pm at D136 Delta Building University of Houston-Clear Lake
- Talk presented by Dr. Jian Shi, an Assistant Professor in the Department of Engineering Technology at the University of Houston on the topic "Enabling Smart Ports through the Integration of Microgrids" on Thursday, September 26, 2019, 11:30 am- 1:00 pm at D136 Delta Building University of Houston-Clear Lake

FUNDED RESEARCH AND DEVELOPED PROJECTS

Gulf Research Program's Early-Career Research Fellowship: Offshore Energy Safety (Track 3)

. National Academies, National Academy of Sciences Building, Washington, USA

📅 2 years- January, 2022 to December 2023

- was funded \$75,000

2022 Data Science Career Initiation Fellow Program award

Texas A&M University Institute of Data Science

📅 April 2022 to August 2023

- was funded \$10,000

Data Science Course Development Grant: "Data Science for Marine Cybersecurity" Course

Texas AM University Institute of Data Science

📅 1 year- 2022

- was funded \$15,000

Optimization of Marine Propulsion System

Texas A&M University Engineering Systems Annual Conference (TARC 2021)

📅 2 years- April, 2021 to March 2023

- was funded \$10000

Integrated Power Electronic Building Block (iPEBB) based High-Frequency Isolated Power System Architecture for Development of Light-Weight Marine Propulsion Vessels

Texas Comprehensive Research Fund (TCRF)

📅 5 months- March, 2021 to August 2021

- was funded \$14728

Impact Assessment of EV Charging Stations and Regulation policies for upcoming Active Distribution Network of Qatar Utility Grid

National Priorities Research Program (NPRP) by Qatar National Research Fund (QNRF)

📅 3 Years- May, 2021 to April 2024

- was funded \$102,259

TAMUG Sustainable Campus Initiative

Presidential Transformational Teaching Grants by Texas A&M University

📅 2 Years- January, 2021 to December 2022

- was funded \$60,000

Performance Evaluation of Two Similar 100MW Solar PV Plants Located in Environmentally Homogeneous Conditions

By Oakfund from TAMU

📅 2 Years

- Research article with manuscript DOI: 10.1109/ACCESS.2019.2951688, was funded a generous amount of \$1800

Grid Reduction through Optimized PV Power Utilization in Intermittent Grids using a Low-cost Hardware Platform

By Oakfund from TAMU

📅 1 year

- was funded a generous amount of \$1794.47

sponsored Work on Power electronics based power systems

NSF Chicago

📅 1 year

- was funded a generous amount of \$1794.47
-

SERVED AS JUDGE

Served as PES HPSBCP (High Performing Student Branch Chapter Program) evaluator and scored 11 HPSBCP reports

November 10, 2021

Served as a judge at 2021 IEEE-PES GM Student Poster Competition July 23, 2021 Served as a judge at Student Research Symposium at Texas A&M University at Galveston

session title: Engineering- Undergraduate

📅 April 19, 2021

Served as a judge at Undergraduate and Graduate Student Research Week at Texas A&M University

session title: Engineering(1)- Undergraduate and Graduate

📅 March 2021

Served as a judge at Regional Future City Competition at Gilruth Center in Nasa, Houston

📅 2018

Served as Science and Engineering Judge at Galveston County Science and Engineering Fair.

📅 2019

Served as a Houston Region Essay judge

Future City Competition, Houston

📅 2021

PH.D. THESIS EVALUATIONS

Following Ph.D. students' theses from the University of Engineering and Technology, Lahore, Pakistan were evaluated by me as an external evaluator:

- Mr. Nasir Mehmood from Lahore University of Management and Sciences, Lahore, Title: Towards Developing a Large Energy Store using Small Scale Distributed Batteries for Energy Arbitrage
- Ms. Kiran Siraj from Lahore University of Management and Sciences, Lahore, Pakistan, Title: Towards DC Distribution based Residential Power Systems
- Mr. Muhammad Raihan Abbas from University of Engineering and Technology, Lahore, Pakistan (Registration No. 2014-Ph.D-CS-07)
- Hassan Erteza Gelani from University of Engineering and Technology, Lahore, Pakistan (Registration No. 2014-PhD-Elect-07)
- Mr. Muhammad Junaid Alvi from University of Engineering and Technology, Lahore, Pakistan (Registration No: 2014-Ph.D.-Elect-17)

- Mr. Hafiz Shafqat Abbas from University of Engineering and Technology, Lahore, Pakistan (Registration No: 2014-Ph.D-Elect-15)
-

SERVED AS REVIEWER

JOURNALS REVIEWED FOR

- Archives of Electrical Engineering, the Journal of Polish Academy of Sciences
- Transactions on Emerging Telecommunications Technologies, Elsevier
- International Transactions on Electrical Energy Systems, Wiley
- Electric Power Components and Systems, Taylor and Francis
- IEEE Transactions on Transportation Electrification
- IEEE Transactions on Industry Application systems
- Renewable and Sustainable Energy Reviews, Elsevier
- Simulation Modelling Practice and Theory, Elsevier
- European Journal of Operational Research, Elsevier
- CSEE Journal of Power and Energy Systems, Springer
- Mathematical Problems in Engineering, Elsevier
- Computers and Electrical Engineering, Elsevier
- IEEE Transactions on Industrial Informatics
- IEEE Transactions on Industrial Electronics
- Indian Journal of Science and Technology
- Journal of Engineering Research (JER)
- Digital Signal Processing, Elsevier
- IEEE Transactions on Power Systems
- Journal of Engineering Technology
- Applied System Innovation, MDPI
- IEEE Transactions on Smart Grids
- IET Renewable Power Generation
- Energy and Environment, Elsevier
- SN Applied Sciences, Springer
- Applied Energy, Elsevier
- Energy Reports, Elsevier
- Applied Sciences, MDPI
- Sustainability, MDPI
- IEEE Systems journal
- Mathematics, MDPI
- Electronics, MDPI
- Processes, MDPI
- Materials, MDPI
- Energies, MDPI
- Symmetry, MDPI
- IET Smart Grids
- IEEE Access

CONFERENCES REVIEWED FOR

IEEE International Conference on Electric Power and Energy Conversion Systems (EPECS)
International Conference on Energy Engineering and Environmental Protection (EEEP)
International Conference on Renewable Energy Research and Applications (ICRERA)
IEEE International Autumn Meeting on Power, Electronics and Computing (ROPEC)
IECON - Annual Conference of the IEEE Industrial Electronics Society (ECON)
International Conference on Smart Power and Internet Energy Systems (SPIES)
International Conference on Smart Energy Systems and Technologies (SEST)
International Conference on Smart Energy Systems and Technologies (SEST)
Proceedings of the IEEE Canada Electrical Power and Energy Conference
IEEE Clemson University Power Systems Conference (PSC)
IEEE Power and Energy Society General Meeting (PES GM)
IEEE Texas Power and Energy Conference (TPEC)
IEEE Conference on Decision and Control

PUBLICATIONS

PEER-REVIEWED JOURNALS ARTICLES

- 1 Y. A. Farrukh, Z. Ahmad, I. Khan, and R. M. Elavarasan, "A Sequential Supervised Machine Learning Approach for Cyber Attack Detection in a Smart Grid System," 2021 North American Power Symposium, NAPS 2021, 2021, doi: 10.1109/NAPS52732.2021.9654767
- 2 Devaraj, Jayanthi, Rajvikram Madurai Elavarasan, G. M. Shafiullah, Taskin Jamal, and Irfan Khan. "A holistic review on energy forecasting using big data and deep learning models." International Journal of Energy Research (2021).
- 3 Devaraj, Jayanthi, Rajvikram Madurai Elavarasan, Rishi Pugazhendhi, G. M. Shafiullah, Sumathi Ganesan, Ajay Kaarthic Jeysree, Irfan Ahmad Khan, and Eklas Hossain. "Forecasting of COVID-19 cases using deep learning models: Is it reliable and practically significant?." Results in Physics 21 (2021): 103817.
- 4 Hassan, Tehzeeb-ul, Rabeh Abbassi, Housseem Jerbi, Kashif Mehmood, Muhammad Faizan Tahir, Khalid Mehmood Cheema, Rajvikram Madurai Elavarasan, Farman Ali, and Irfan Ahmad Khan. "A Novel Algorithm for MPPT of an Isolated PV System Using Push Pull Converter with Fuzzy Logic Controller." Energies 13, no. 15 (2020): 4007.
- 5 S. Rahman, M. Meraj, A. Iqbal, B. Prathap-Reddy and I. Khan, "A Combinational Level Shifted and Phase Shifted PWM Technique for Symmetrical Power Distribution in CHB Inverters," in IEEE Journal of Emerging and Selected Topics in Power Electronics, doi: 10.1109/JESTPE.2021.3103610.
- 6 A. K. Yadav, H. Malik, S. S. Chandel, I. A. Khan, S. A. Otaibi and H. I. Alkhamash, "Novel Approach to Investigate the Influence of Optimum Tilt Angle on Minimum Cost of Energy-Based Maximum Power Generation and Sizing of PV Systems: A Case Study of Diverse Climatic Zones in India," in IEEE Access, vol. 9, pp. 110103-110115, 2021, doi: 10.1109/ACCESS.2021.3102153.
- 7 Rahman, Syed, Irfan Khan, Khaliqur Rahman, Sattam Al Otaibi, Hend I. Alkhamash, and Atif Iqbal. "Scalable Multiport Converter Structure for Easy Grid Integration of Alternate Energy Sources for Generation of Isolated Voltage Sources for MMC." Electronics 10, no. 15 (2021): 1779. [8] S. Rahman, M. Meraj, A. Iqbal, L. Ben-Brahim, H. A. Rub and I. Khan, "Novel Level Shifted PWM Technique for Cascaded Multilevel Quasi Impedance Source Inverter," in IEEE Journal of Emerging and Selected Topics in Power Electronics, doi: 10.1109/JESTPE.2021.3096844.
- 9 Rahman, Syed, Irfan Khan, Hend I. Alkhamash, and Muhammad Faisal Nadeem. "A Comparison Review on Transmission Mode for Onshore Integration of Offshore Wind Farms: HVDC or HVAC." Electronics 10, no. 12 (2021): 1489.
- 10 Imteaj, Ahmed, Irfan Khan, Javad Khazaei, and Mohammad Hadi Amini. "FedResilience: A Federated Learning Application to Improve Resilience of Resource-Constrained Critical Infrastructures." Electronics 10, no. 16 (2021): 1917.
- 11 Alghamdi, Mohammed A., Muhammad Faisal Nadeem Khan, Ahmed Khalil Khan, Irfan Khan, Ali Ahmed, Arooj Tariq Kiani, and Muhammad Adnan Khan. "PV Model Parameter Estimation Using Modified FPA With Dynamic Switch Probability and Step Size Function." IEEE Access 9 (2021): 42027-42044.

- 12 Gilani, Imtiaz H., Mohsin Amjad, Saad S. Khan, Irfan Khan, Stephen Larkin, Brendon Raw, and Zeshan Abbas. "PEMFC application through coal gasification along with cost-benefit analysis: A case study for South Africa." *Energy Exploration and Exploitation* (2021): 0144598721999720.
- 13 Chankaya, Mukul, Ikhtlaq Hussain, Aijaz Ahmad, Irfan Khan, and S. M. Muyeen. "Nyström Minimum Kernel Risk-Sensitive Loss Based Seamless Control of Grid-Tied PV-Hybrid Energy Storage System." *Energies* 14, no. 5 (2021): 1365.
- 14 Tahir, Muhammad U., Muhammad Anees, Hassan A. Khan, Irfan Khan, Nauman Zaffar, and Taha Moaz. "Modeling and evaluation of nickel manganese cobalt based Li-ion storage for stationary applications." *Journal of Energy Storage* 36 (2021): 102346.
- 15 Ashraf, Naveed, Ghulam Abbas, Irfan Khan, Ali Raza, and Nasim Ullah. "A Transformer-Less Multi-converter Having Output Voltage and Frequency Regulation Characteristics, Employed with Simple Switching Algorithms." *Applied Sciences* 11, no. 7 (2021): 3075.
- 16 Gupta, Tripurari Das, Kalpana Chaudhary, Rajvikram Madurai Elavarasan, R. K. Saket, Irfan Khan, and Eklas Hossain. "Design Modification in Single-Tooth Winding Double-Stator Switched Reluctance Motor for Torque Ripple Mitigation." *IEEE Access* 9 (2021): 19078-19096.
- 17 Ahmed, Ali, Muhammad Faisal Nadeem Khan, Irfan Khan, Hani Alquhayz, Muhammad Adnan Khan, and Arooj Tariq Kiani. "A Novel Framework to Determine the Impact of Time Varying Load Models on Wind DG Planning." *IEEE Access* 9 (2021): 11342-11357.
- 18 Arooj Kiani, Muhammad Faisal Nadeem, Irfan Khan, Atif Iqbal, Ali Ahmed, and Intisar Ali, "Probabilistic model-based computationally intelligent novel approach for parameter estimation of solar cell and module," under review in *Energy Reports*, Elsevier.
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