

IRFAN KHAN

Ph.D., P.E. and SMIEEE

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✉ PMEC 165, PMEC, Texas A&M University at Galveston, TX 77553-1675 USA
🌐 tamug.edu/marr/Faculty/IrfanKhan.html 🌐 tamug.edu/cares/
🌐 scholar.google.com/citations?user=6UAl1OYAAAAJandhl=en 🌐 publons.com/researcher/1439018/irfan-khan/
🌐 orcid.org/0000-0003-2484-6169 🌐 energy.tamu.edu/faculty-experts/irfan-ahmad-khan/
🌐 smartgridcenter.tamu.edu/index.php/tamu-galveston/

EXPERIENCE

Affiliated Assistant Professor

Computer Science and Engineering Department at Texas A&M University

📅 November 2022 – Present 📍 College Station, USA

- Advise graduate students
- Develop and maintain involvement in CS/CE research communities through publications and services

Courtesy Assistant Professor

Electrical and Computer Engineering at Texas A&M University at Texas A&M University

📅 March 2019 – Present 📍 College Station, USA

- Advise graduate students
- Develop and maintain involvement in electrical engineering research communities through publications and services
- perform research on applications of artificial intelligence in smart grids
- perform research on applications of integration of renewable energy resources

Assistant Professor

Marine Engineering Technology

📅 September 2018 – Present 📍 Galveston, USA

- Perform research on cyber security of marine energy systems
- 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

MOST PROUD OF

🏆 William Paul Ricker Distinguished Faculty Award from Texas A&M University at Galveston.
May, 2023

🏆 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

Graduate Researcher/PhD Student

Carnegie Mellon University

📅 August 2014 – August 2018 📍 Pittsburgh, USA

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

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

- Balloting Member of P45.1 "Recommended Practice for Electrical Installations on Shipboard - Design" sponsored by Petroleum & Chemical Industry Committee of the IEEE Industry Applications Society
- 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

🏆 My article, titled, "A state-of-the-art review on topologies and control techniques of solid-state transformers for electric vehicle extreme fast charging" was recognized as a "Top Cited Article 2020-2021" in IET Power Electronics
April 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

🏆 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.

- 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
- 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

- Associate Editor IEEE Transactions on Industry Applications
- 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 3/23/2021 to 08/10/2022
- Guest Editor of the special issue in IET Power Electronics on "SI: Modelling, Control and Application of Reduced Switch Multilevel Converters" from September 2022
- 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.
- Editorial Board Member of the Electronics Journal, MDPI for section Power Electronics
- Guest Editor of the special issue on High Efficient and Reliable Microgrid (DC/AC) with Artificial Intelligence Techniques for the Renewable Energy Journal-Elsevier.
- 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

MS Electrical and Comp. Engineering

Carnegie Mellon University, PA USA

📅 December 2017

- Master's Thesis: Universal Battery Charger.

MSc. Electrical Power Engineering

University of Greenwich, Chatham UK

📅 June 2011

BSc. Electrical Engineering

University of Eng. and Tech., Lahore PK

📅 August 2009

GOOGLE SCHOLAR

Citations 3899

h-index 36

i10-index 78

PUBLONS PROFILE

WOS Researcher ID J-1241-2019

Verified Editor Records

Verifed Reviews 952

MEMBERSHIPS

Texas Board of Professional Engineers and Land Surveyors

Professional Engineer with the State of Texas

📅 2020-Present 📍 Texas, USA

IEEE Membership

📅 2014 - Present

- 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)

- 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

- Dr. Khan will be a Keynote speaker at the 2023 4th International Conference on Computing, Mathematics, and Engineering Technologies (iCoMET 2023) organized by Sukkur IBA University in Sukkur, Pakistan, on 27-28 February 2023.
- Dr. Khan will be a keynote speaker at the 2022 International Conference on Emerging Trends in Electrical, Control, and Telecommunication Engineering (EETECTE'22) (Dec. 02-04, 2022), in Lahore, Pakistan.
- 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)" 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 Guest Speaker at King Fahad University of Petroleum and Minerals, Kingdom of Saudi Arabia (KSA) on the topic of Alternative energy solutions, including energy storage to minimize EV charging impact on Utility Grid on December 16, 2023.
- Keynote speaker at International Conference on Signals, Machines and Automation 2023 (SIGMAA-2023) organized in Delhi, India on December 15-16, 2023
- Guest speaker at Florida International University (FIU) IEEE Student Branch Chapter (SBC), IEEE Young Professional Miami section and Miami section Women In Engineering (WIE) Affinity Group and gave a talk on "A Comprehensive Framework to Optimize the Grid Performance of Harmonic-Polluted Distribution Systems" scheduled to take place on December 8th, 2023, at [12-1pm] CST

- 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

RESEARCH STUDENTS

Ph.D. students:

- Syed Wali
- Yasir Ali Farrukh
- Aiman Siddiqui
- Alonzo Alvarez
- Zach Mckinney
- Bilal Zahid Hussain
- Muhammad Ashar Ayaz
- Ravindranath Reddy
- Ahmed Lakhdar
- Shaykh Siddiquee
- Shorya

B.Sc. students:

- Abhishek More
- Akshat Murali
- Dev Singhania
- Matthew Ray
- Somil Gupta
- Praneeth Boddu
- Bunnarak Theng
- Sam Shams
- Carlos Rodriguez

Postdoctoral Researcher:

- Dr. Jueming Hu

Former Graduate Students

- Syed Rahman
- Ravindranath KV

- Dr. Khan was the Keynote Speaker at the 2023 International Conference on Emerging Trends in IEEE Electrical, Control, and Telecommunication Engineering (EETECTE'23), Lahore, Pakistan (Nov. 27-29, 2023)
- He delivered an invited lecture to the IEEE Canadian Atlantic Section, Canada on Autonomous Security: A Solution for the Changing Threat Landscape, on November 16, 2023. He delivered an invited lecture to the Computer Science and Engineering (CSCE) Department, TAMU, College Station on "Towards Autonomous Security: A Solution for the Evolving Threat Landscape", on November 15, 2023
- Dr. Khan has been invited to deliver an Expert Keynote Lecture at the IEEE International Conference On Power, Instrumentation, Energy and Control (PIECON- 2023), during February 10-12, 2023.
- Dr. Khan will be a panelist at the Future Ports Conference 2023 in a panel on "Convergence-Physical Security and Cybersecurity" at 2:00 pm Wednesday, April 05, 2023
- 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

RESEARCH SCHOLARS

Former Research Scholars

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

- Organized a special session at the Annual International Symposium on Industrial Electronics (ISIE) 2024 on "Electric Vehicle Integration Impact on LV/MV Power Network".
- Committee Member of the International Conference on Power, Grid and Energy Storage 2023 (PGES 2023) held in Hangzhou, China on 16-18 June 2023.

- Advisory Committee member of the 2023 International Conference for Power, Instrumentation, Energy, and Control (PIECON-2023), PIECON-2023 held in Aligarh Muslim University, Aligarh, India in Hybrid Mode, during 10-12 February 2023.
- Organizing Committee of 2022 Asian Conference on Frontiers of Power and Energy (ACFPE) held during October 21-23 in Chengdu, China
- Advisory Committee member at International Conference on Smart and Sustainable Technologies in Energy and Power Systems (SSTEPS) held during 07th-09th November 2022.
- 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 the official website: <https://www.acfpe.org/>
- Technical Program Committee member at the 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 Univer-

sity, 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)

SESSIONS CHAIRED

- Session Chair at the Annual International Symposium on Industrial Electronics (ISIE) 2024 on "Electric Vehicle Integration Impact on LV/MV Power Network".
- Session Chair at the 4th International Conference on Smart Grid and Renewable Energy (SGRE 2024), held in Doha, Qatar on 8-10 January 2024.
- Special Sessions, Tutorials Workshops Chair at the 2023 IEEE GreenTech conference in Denver on April 18-20, 2023 (<https://ieeegreentech.org/committee/>).
- Session Chair at the 2023 IEEE Texas Power and Energy Conference, held on February 13th - 14th at Texas AM University, College Station, Texas.
- Session Chair to host technical Session 5.4 - Control Applications- Load Management at North American 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 on the topic of "Data driven intelligent approach for condition monitoring of HVAC/ACMV system" on October 21, 11 AM-12:00 PM
- 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

Research Proposals Reviewed

- Served on the NSF Electrical, Communications, and Cyber Systems (ECCS) EPCN Power Electronics Panel 1. Name of Panel: Power Electronics 2. Panel ID: P240346
- Reviewed two TAMU research proposals under the program of "Competitions: Targeted Proposal Teams (TPT) 2023"
- Reviewed four Department of Energy (DOE) research proposals under the 2023 FOA titled Energy Improvements at Public K-12 School Facilities BIL Renew America's School
- Reviewed one research proposal of Oak Ridge Associated Universities (ORAU) for the Nazarbayev University Research Council in Astana, Kazakhstan, in August 2023.
- Reviewed six NASA proposals under program "EONS-2023: MUREP Space Technology Artemis Research (M-STAR) opportunity"
- Reviewed three NSF proposals under the 2023 program "NSF ASCENT panels on power systems "

FUNDED RESEARCH AND DEVELOPED PROJECTS

Programmable Logic Controller Static Application Security Testing System for detecting code vulnerabilities

Office of Naval Research

📅 June 1, 2023 to September 2024

- was funded \$268,000

ISDS: An Intelligent Self-Sustaining Network Intrusion Detection System (NIDS) For Modern warfare

DoD-US Army

📅 June 1 to September 2024

- was funded \$321,820

A postdoc funded by Qatar University and co-advised by me

Qatar University

📅 July 1, 2023 to June 2025

- was funded \$200,000

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)
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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

SELECTED PUBLICATIONS

Here is a list of selected publications. For a full list, please visit the Google Scholar page at scholar.google.com/citations?user=6UAI1OYAAAAJ&hl=en

PEER-REVIEWED JOURNALS ARTICLES

1. Farrukh, Y.A., Wali, S., Khan, I., Bastian, N.D. (2024). AIS-NIDS: An intelligent and self-sustaining network intrusion detection system. *Computers & Security*, 144, 103982.
2. S. Kirmani, A. Mazid, I. A. Khan, and M. Abid, "A Survey on IoT-Enabled Smart Grids: Technologies, Architectures, Applications, and Challenges," *Sustainability*, vol. 15, no. 1, p. 717, 2022.
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