

CURRICULUM VITAE

Dr. FARHAD ILAHI BAKHSH, Senior Member, IEEE
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Career Objective:

To secure a challenging position where I can effectively contribute my skills.

Teaching Experience:

S. No.	Name of Institute/ University	Position	Regular/ Contractual	Joining Date	Leaving Date	Nature of Work
1.	Baba Ghulam Shah Badshah University	Assistant Professor	Regular	07/09/2016	31/10/2018	Teaching and Research
2.	National Institute of Technology Srinagar	Assistant Professor	Regular	01/11/2018	Till date	Teaching and Research

Educational Qualifications:

Year	Course	Branch	College/ School	Board	% Marks/ CPI	Division	Distinction/ Position
2017	Ph. D.	Renewable Energy Systems	Indian Institute of Technology Roorkee	IIT Roorkee	-	-	'A' grade in all Subjects and Seminar
2012	M. Tech.	Power System & Drives	Zakir Husain College of Engineering & Technology	A.M.U.	80.86	1 st	First Position
2010	B. Tech.	Electrical	Zakir Husain College of Engineering & Technology	A.M.U.	9.023	1 st	First Division with Hons.
2006	Diploma In Engineering	Electrical	University Polytechnic	A.M.U.	88.11	1 st	First Position with Gold Medal
2002	Tenth	Science	Iqra Public School, Aligarh	C.B.S.E.	65.20	1 st	Science

Domain of Interest:

- Variable Frequency Transformer
- Multilevel Inverters
- Alternate Energy Vehicles
- Renewable Energy Systems (SPV and Wind)
- Application of Power Electronics and Drives
- Power Flow control in Power Systems

Software Skills:

- MATLAB Simulink
- OPAL-RT Simulator
- Typhoon HIL

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Granted Patents:

1. M. S. Jamil Asghar, and **Farhad Ilahi Bakhsh**, “A combined voltage control and rotor power control based flexible asynchronous AC link (FASAL) system,” Patent Application #647/DEL/2012 has been granted on 24/11/2020 (Patent No. 352096).
2. M. Tabrez, **Farhad Ilahi Bakhsh**, M. Aslam, S. P. Singh, A. Iqbal and P. K. Sadhu, "A NOVEL THREE-PHASE TO SEVEN-PHASE TRANSFORMER" Patent Application No. 2021106022 has been granted by Australian Government on 03/11/2021.
3. M. A. Husain, M. Tabrez, A. S. Ansari, R. Kiran, **Farhad Ilahi Bakhsh**, A. U. Khan, A. Khan, “SPIDER MONKEY OPTIMIZATION-BASED GLOBAL MAXIMUM POWER TRACKING FOR PV SYSTEMS” Patent Application No. 2023/02354 has been granted by REPUBLIC OF SOUTH AFRICA on 31/05/2023.

Published Patents:

1. Kushal M. Jagtap, **Farhad Ilahi Bakhsh**, and Arif Iqbal “Design of a Sustainable and Energy Efficient Hybrid Electrical and Thermal Space Heating System,” Patent Application # 202511013678 A, dated 18/02/2025 published in Official Journal of The Patent Office, **Issue No. 11/2025** dated 14/03/2025.
2. Arif Iqbal, and **Farhad Ilahi Bakhsh**, “THREE-TO-SIX PHASE (ASYMMETRICAL STAR OPEN-DELTA) TRANSFORMER WITH FIVE SECONDARY WINDINGS,” Patent Application # 202411067759 A, dated 07/09/2024 published in Official Journal of The Patent Office, **Issue No. 39/2024** dated 27/09/2024.
3. Saira Manzoor, **Farhad Ilahi Bakhsh** and M. D. Mufti “Application of VFT Coordinated with Energy Storage System(s) for Load Frequency Control,” Patent Application #202111012183, dated 22/03/2021 published in Official Journal of The Patent Office, **Issue No. 15/2021** dated 09/04/2021. http://www.ipindia.gov.in/writereaddata/Portal/IPOJournal/1_4967_1/Part-1.pdf
4. **Farhad Ilahi Bakhsh**, and M. S. Jamil Asghar, “A power controller circuit based flexible asynchronous AC link (FASAL) system for induction generator applications,” Patent Application# 2540/DEL/2010 A, dated 25/10/2010 published in Official Journal of The Patent Office, **Issue No. 17/2012** dated 27/04/2012. https://ipindia.gov.in/ipr/patent/journal_archieve/journal_2012/pat_arch_042012/official_journal_27_042012_part_i.pdf
5. Basharat Ahmad, **Farhad Ilahi Bakhsh**, and M. S. Jamil Asghar, “A miss-call based switching system for multiple loads or appliances,” Patent Application# 2742/ DEL/ 2011 A, dated 21/09/2011 published in Official Journal of The Patent Office, **Issue No. 49/2011** dated 09/12/2011. https://www.researchgate.net/profile/Kshitij-Malhotra/publication/266374120_router_strand_for_air_layering/links/542d89570cf29bbc126d3a6c/router-strand-for-air-layering.pdf
6. M. S. Jamil Asghar, and **Farhad Ilahi Bakhsh**, “A rotor power control based flexible asynchronous AC link (FASAL) system,” Patent Application# 1871/DEL/2010 A, dated 10/08/2010 published in Official Journal of The Patent Office, **Issue No. 44/2010** dated 29/10/2010. https://ipindia.gov.in/ipr/patent/journal_archieve/journal_2010/pat_arch_102010/official_journal_29_102010_part_i.pdf

Research & Development Projects:

- **Farhad Ilahi Bakhsh**, “Application of Variable Frequency Transformer for Integration of Solar Photo-voltaic and Wind Energy Systems using Typhoon HIL” QUARBZ INFO SYSTEMS, India and Typhoon HIL GmbH, Switzerland on 06 May, 2020 (**Completed**).
- **Farhad Ilahi Bakhsh**, “Design and Analysis of Combined Solar Photo-voltaic System and Wind Energy System using Variable Frequency Transformer (VFT) for Rural Electrification in J&K” JKST&IC, DST on 23 Jan., 2024 (**Ongoing**).
- S. A. Lone, M. D. Mufti, J. Iqbal, I. Husain, N. Gupta, and **Farhad Ilahi Bakhsh**, “90 Lakh Fund for Improvement of S&T” FIST Program, DST on 20 December, 2024 (**Ongoing**).

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- **Farhad Ilahi Bakhsh**, Co-PI in sanctioned “2.3 Crore Fund for Synergistic Development of Semiconductor and Digital Technologies for Automotive Sector” under PAIR Network, ANRF on 17 July, 2025 (Ongoing).

Editor in International Journals:

- **Associate Editor** in Distributed Generation & Alternative Energy Journal, Denmark.
- **Associate Editor** in e-Prime - Advances in Electrical Engineering, Electronics and Energy, Elsevier.
- **Editor** in Frontiers in Energy Research, Frontiers.
- **Guest Editor** in Special Issue on “Power Electronics for Renewable Energy Applications”, Renewable Energy Focus, Elsevier.
- **Lead Guest Editor** in Special Issue on “Modelling, Control and Application of Reduced Switch Multilevel Converters”, IET Power Electronics, UK.
- **Guest Editor** in Special Issue on “Recent Applications of Power Electronics & Drives in Renewable Power Generation”, IET Renewable Power Generation, UK.
- **Lead Guest Editor** in Special Issue on “Recent Trends of Power Flow Control in Power System Networks”, IET Generation, Transmission & Distribution, UK.
- **Guest Editor** in Special Issue on “Clean Energy Integration in Smart Grids”, Frontiers in Energy Research, Frontiers.
- **Guest Editor** in Special Issue on “Smart Grid: Consumer Installation Challenges, Load Automation & Control”, Recent Advances in Electrical & Electronic Engineering, Bentham Science.
- **Guest Editor** in Special Issue on “Recent Applications of Power Electronics & Drives in Renewable Energy Systems”, Distributed Generation & Alternative Energy Journal, Denmark.

Published Papers:

1. T. H. Parray, **F. I. Bakhsh**. A Novel Reduced Switch Five-Level Common Ground Transformerless Inverter Feeding an Isolated Load. *Int J Circ Theor Appl*. 2026. <https://doi.org/10.1002/cta.70325> (SCI)
2. A. Choudhary, R. Kumar, Shimi S. L., **F. I. Bakhsh**, A. Singh, M. J. Khan: Review of recent trends of advancements in multilevel inverter topologies with reduced power switches and control techniques. *IET Power Electron*. 19, e12564 (2026). <https://doi.org/10.1049/pel2.12564> (SCI)
3. Joshi, Y., Letha, S.S., **Bakhsh, F. I.**, Jaat, G.L., Tilak, S.: Harmonic elimination of a fifteen-level inverter with reduced number of switches using genetic algorithm. *IET Power Electron*. 19, e12622 (2026). <https://doi.org/10.1049/pel2.12622> (SCI)
4. S. Islam, V. Marzang, A. Iqbal, H. Mehrjerdi, H. F. Ahmed, M. Samiullah, and **F. I. Bakhsh**, "An Extendable High Step-Up Quadratic Boost Topology Having Low Voltage Stress on MOSFETs," in *IEEE Transactions on Consumer Electronics*, vol. 71, no. 3, pp. 7947-7958, Aug. 2025, doi: 10.1109/TCE.2025.3567907. (SCI)
5. M. A. Bhat, M. Zaid, A. Sarwar, **F. I. Bakhsh**, M. Tariq, S. Ahmad, M. R. Islam, “A Common Ground Nine-Level Switched Capacitor Inverter Having Quadruple Boosting Capability for Solar Photovoltaic Applications”, *IET Power Electron*. 18, 2025. <https://doi.org/10.1049/pel2.70125> (SCI)
6. *J. Vaish, K. M. Siddiqui, F. I. Bakhsh, S. Shrivastava, A. Kumar and B. K. Pal, "Estimation of State of Charge of Electric Vehicle Battery for Transportation Using Extended Kalman Filter Method," 2025 International Conference on Power Electronics and Energy (ICPEE), Bhubaneswar, India, 2025, pp. 1-6, doi: 10.1109/ICPEE65973.2025.11411347. https://ieeexplore.ieee.org/document/11411347*
7. *A. K. Gautam, K. M. Siddiqui, F. I. Bakhsh, J. P. Pandey, K. S. Verma and N. Chaudhary, "A Maximum Power Point Tracking of Solar PV System via Black Widow Optimization Algorithm," 2025 International Conference on Power Electronics and Energy (ICPEE), Bhubaneswar, India, 2025, pp. 1-5, doi: 10.1109/ICPEE65973.2025.11410811. https://ieeexplore.ieee.org/document/11410811*
8. *S. Rana, M. Sarwar, A. S. Siddiqui and F. I. Bakhsh, "Energy Management of Grid Connected Renewable Energy Sources based Microgrid using Grey Wolf Optimization," 2025 IEEE DELCON - International Conference on Recent Smart Technologies in Engineering for Sustainable Development, New Delhi, India, 2025, pp. 1-6, doi: 10.1109/DELCON68055.2025.11400467. https://ieeexplore.ieee.org/document/11400467*

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9. P. A. R. Shaikh, Z. T. S. Jameel, **F. I. Bakhsh**, D. Husain, S. Faisal, S. Naeem, "Sustainability Analysis of Grid-Connected Rooftop Solar PV System: A Case Study," 2025 IEEE DELCON - International Conference on Recent Smart Technologies in Engineering for Sustainable Development, New Delhi, India, 2025, pp. 1-5, doi: 10.1109/DELCON68055.2025.11400376. <https://ieeexplore.ieee.org/document/11400376>
10. K. M. Jagtap, **F. I. Bakhsh**, R. Kuppusamy, Y. Teekaraman, "Optimal Operation of Electric Vehicle Charging Stations with Solar and Wind Energy Systems in Distribution Network Using JAYA Algorithm", Ain Shams Engineering Journal, Vol. 16, No. 11, November 2025, <https://doi.org/10.1016/j.asej.2025.103712> (SCI)
11. K. U. Haq, and **F. I. Bakhsh**, "Real Time Analysis of Multi-level Dual Active Bridge Charger Using Quintuple Phase Shift Modulation for Battery Energy Storage System", Engineering Research Express, Vol. 7, No. 2, July 2025, <https://doi.org/10.1088/2631-8695/adf418> (SCOPUS, ESCI)
12. M. T. Hussain, A. Sarwar, M. R. Hussain, M. Tariq, S. Ahmad, **F. I. Bakhsh**, M. Zaid, A. S. N. Mohamed and B. Khan, Design and analysis of a single source seven level common ground SC based multilevel inverter topology with high reliability, Scientific Reports, Volume 15, 2025, <https://doi.org/10.1038/s41598-025-95107-6> (SCI)
13. M. Gunjal, L. Mathew, S. S. Letha, **F. I. Bakhsh**, M. R. Islam, Performance Enhancement of Hybrid Energy Storage System for Electric Vehicle Using Intelligent-Based Controller, International Journal of Energy Research, 2025, <https://doi.org/10.1155/er/2892514> (SCI)
14. S. Islam, S.M. Muyeen, A. Iqbal, **F. I. Bakhsh**, L. B-Brahim, Effect of battery storage based electric vehicle chargers on harmonic profile of power system network, current scenario and future scope, Journal of Energy Storage, Volume 131, 2025, <https://doi.org/10.1016/j.est.2025.117563> (SCI)
15. M.A.E. Al-Hitmi, S. Islam, A. Iqbal, **F. I. Bakhsh**, M. Ali, A switched-capacitor-based multilevel inverter with enhanced voltage boosting and self-balancing capabilities, International Journal of Electronics and Communications, vol. 200, 2025, doi: <https://doi.org/10.1016/j.aeue.2025.155882> (SCI)
16. Javid, I., Nawaz, I., & **Bakhsh, F. I.** (2025). Performance Analysis of Variable Frequency Transformer for Power Flow In-between Synchronous Network Under Varying Voltage Conditions. Strategic Planning for Energy and the Environment, 44(02), 437–466. <https://doi.org/10.13052/spee1048-5236.4427> (SCOPUS)
17. Amir, M., Z., Haque, A., Kurukuru, V.S.B., **Bakhsh, F.I.**, Ahmad, A.: Agent based online learning approach for power flow control of electric vehicle fast charging station integrated with smart microgrid. IET Renew. Power Gener., 19, pp. 1–13 (2025). <https://doi.org/10.1049/rpg2.12508> (SCI)
18. Tayyab, M., Sarwar, A., **Bakhsh, F.I.**, Al-Durra, A., Siddiqui, K.M.: A Single-Source Nine-level Inverter with Quadratic Boost Ability for Renewable Energy Applications. IET Renew. Power Gener. 19, pp. 1–10 (2025). <https://doi.org/10.1049/rpg2.12549> (SCI)
19. I. Javid, S. J. Lolu, I. Nawaz, **F. I. Bakhsh**, "Real Time Impact of Voltage Variation on Variable Frequency Transformer during Asynchronous Power Transfer", Engineering Research Express, Vol. 7, No. 2, June 2025. <https://doi.org/10.1088/2631-8695/adde12> (SCOPUS, ESCI)
20. Haq, K. U., **Bakhsh, F. I.**, & Sekhar, O. C. (2025). Improved Performance of Dual Active Bridge Converter using Particle Swarm Optimization based Phase Shift Modulation for EV Application. Distributed Generation & Alternative Energy Journal, 40(02), 361–400. 2025. <https://doi.org/10.13052/dgaej2156-3306.4027> (SCOPUS)
21. S. Bhanja, **F. I. Bakhsh**, M. Tayyab, A. Sarwar and M. Bendaoud, "Design and analysis of a reduced switch nine level inverter topology for grid integration of battery storage system", Engineering Research Express, Vol. 7, No. 2, May 2025. <https://doi.org/10.1088/2631-8695/add5c2> (SCOPUS, ESCI)
22. M. J. Khan, Y. Narayan, Pawan, A. Afthanorhan, **F. I. Bakhsh**, "Modified Adaptive Fuzzy Logic Based Real-Time MPPT Controller for Fuel Cell Framework Management Under Dynamic Conditions", Engineering Research Express, Vol. 7, No. 2, April 2025. <https://doi.org/10.1088/2631-8695/adca86> (SCOPUS, ESCI)
23. S. Islam, A. Iqbal, M. Samiullah, M. Meraj, **F. I. Bakhsh**. Single Input With Triple Output–Based Boost Converter Including Isolated and Nonisolated Outputs With Reduced Ripples in Source Current. *Int J Circ Theor Appl*. Vol. 53, pp. 7105–712, 2025. <https://doi.org/10.1002/cta.4503> (SCI)

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24. Sajid, I., Sarwar, A., Tariq, M., **Bakhsh, F.I.**, Ahmad, S., Mohamed, A.S.N.: An efficient tangent search based power harnessing algorithm for photovoltaic energy generation system, *Computers and Electrical Engineering*, Volume 123, Part B, April 2025. <https://doi.org/10.1016/j.compeleceng.2025.110118> (SCI)
25. S. Ahmad, J. Ahmad and **F. I. Bakhsh**, "Optimized harmonic PWM implementation in a reduced switch count MLI with quadruple boosting using PSO for solar PV applications", *Engineering Research Express*, Vol. 7, No. 1, February 2025. <https://doi.org/10.1088/2631-8695/adb00c> (SCOPUS, ESCI)
26. S. Parveen, O. Rahman, S. Mehfuz, S. A. Khan, and **F. I. Bakhsh**, "Detection of 2-FAL and moisture in transformer oil using an interdigital capacitive sensor for on-site transformer condition monitoring", *Insight - Non-Destructive Testing and Condition Monitoring*, Vol. 67, No. 2, pp. 111-119, February 2025. <https://doi.org/10.1784/insi.2025.67.2.111> (SCI)
27. *M. Tasnim, A. Sarwar and F. I. Bakhsh*, "Implementation of Flyback DC-DC Converter Topology for DC Power Supply Application," *2025 International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI)*, Greater Noida, India, 2025, pp. 681-686, doi: 10.1109/IC3ECSBHI63591.2025.10990990. <https://ieeexplore.ieee.org/document/10990990> (SCOPUS)
28. *N. Ahmad, A. Masood, O. Rahman and F. I. Bakhsh*, "Dissolved Gas Analysis of Mineral Oil - Based ZrO₂ Nanofluids Under Thermal Fault," *2025 International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI)*, Greater Noida, India, 2025, pp. 687-692, doi: 10.1109/IC3ECSBHI63591.2025.10991055. <https://ieeexplore.ieee.org/document/10991055> (SCOPUS)
29. *F. Khan, S. Islam, A. Iqbal, A. Hafeez and F. I. Bakhsh*, "Performance Evaluation of ANN-based MPPT Included in Grid Feeding Inverter," *2025 International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI)*, Greater Noida, India, 2025, pp. 1040-1045, doi: 10.1109/IC3ECSBHI63591.2025.10990880. <https://ieeexplore.ieee.org/document/10990880> (SCOPUS)
30. *M. A. Alam, A. Faiz Minai and F. I. Bakhsh*, "Effect of Voltage Ripple on the output of Dual Active Bridge," *2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES)*, Lucknow, India, 2024, pp. 1-5, doi: 10.1109/IC3TES62412.2024.10877596. (SCOPUS)
31. *S. Pant, M. Asim, M. A. Alam, M. M. Shadab and F. I. Bakhsh*, "Assessment of Robustness through Systematic Testing: A Case Study on GWO-Tuned Fuzzy PID Controller for Hybrid Power Systems," *2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES)*, Lucknow, India, 2024, pp. 1-5, doi: 10.1109/IC3TES62412.2024.10877608. (SCOPUS)
32. *D. Gopal, M. Asim, M. D. A. Alam, F. A. Khan and F. I. Bakhsh*, "Optimal & Cost Effective Solution For Active and Reactive Power Compensation For Solar Plant," *2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES)*, Lucknow, India, 2024, pp. 1-4, doi: 10.1109/IC3TES62412.2024.10877539. (SCOPUS)
33. *P. Makwana, M. Asim, M. A. Alam, A. Siddiqui and F. I. Bakhsh*, "Enhanced Working of Grid-linked PV with Incremental Conductance MPPT and Integrated Battery Storage," *2024 Second International Conference Computational and Characterization Techniques in Engineering & Sciences (IC3TES)*, Lucknow, India, 2024, pp. 1-6, doi: 10.1109/IC3TES62412.2024.10877462. (SCOPUS)
34. *Sheikh AH, Bakhsh FI*. Reactive power management in variable frequency transformer (VFT)-integrated multi-machine power systems: A STATCOM-based approach. *Int J Circ Theor Appl*. 2025;53(2):1072-1100. <http://doi.org/10.1002/cta.4142> (SCI)
35. *Azad, M.A., Sarwar, A., Tariq, M., Bakhsh, F.I.*, Ahmad, S., Mohamed, A.S.N., Islam, M.R.: Global maximum power point tracking for photovoltaic systems under partial and complex shading conditions using a PID based search algorithm (PSA). *IET Renew. Power Gener.* 19, e70005 (2025). <https://doi.org/10.1049/rpg2.70005> (SCI)
36. *K. U. Haq, F. I. Bakhsh* and *O. Chandrasekhar*, "A novel topology with sextuple phase shift modulation (SPSM) based multi-level dual active bridge converter for electric vehicle applications", *Engineering Research Express*, Vol. 7, No. 1, January 2025. <https://doi.org/10.1088/2631-8695/ada483> (SCOPUS, ESCI)

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37. Y. K. Sharma, M. S. Kidwai, M. A. Husain, A. S. Ansari, N. Kumar and **F. I. Bakhsh**, “A Comprehensive Assessment of Various Converter Topologies for Electric Vehicle and Grid Integration”, *Recent Advances in Electrical & Electronic Engineering*, January 2025. DOI: 10.2174/0123520965349544241105031353 (**SCOPUS, ESCI**)
38. Sajid, I., Sarwar, A., Tariq, M., Ahmad, S., **Bakhsh, F.I.**, Mohamed, A.S.N., Islam, M.R.: An MPPT method using phasor particle swarm optimization for PV-based generation system under varying irradiance conditions. *IET Renew. Power Gener.* 18, 4197–4209 (2024). <https://doi.org/10.1049/rpg2.13158> (**SCI**)
39. Rana, R., Saggi, T.S., Letha, S.S, **Bakhsh, F.I.** V2G based bidirectional EV charger topologies and its control techniques: a review. *Discov Appl Sci* 6, 588 (2024). <https://doi.org/10.1007/s42452-024-06297-z> (**SCI**)
40. Azad, M.A., Sarwar, A., Zaid, M., Tariq, M., **Bakhsh, F.I.**, Ahmad, S., Sayed, A.E., Islam, M.R.: A single phase nine level common ground switched capacitor inverter with double boosting capability. *IET Power Electron.* 17, 2900–2916 (2024). <https://doi.org/10.1049/pel2.12804> (**SCI**)
41. Islam, S., Iqbal, A., Hashemzadeh, S.M., Samiullah, M., Abbas, A., Khan, A., Meraj, M., **Bakhsh, F.I.**, Marzband, M. and Khan, I.A. (2024), Multiple-Input and Multiple-Output–Based Cascaded Boost Hybrid Interlink Converter. *Int J Circ Theor Appl.* vol. 53, pp. 3324–3344, 2025. <https://doi.org/10.1002/cta.4279> (**SCI**)
42. S. A. Khan, S. A. Khan, O. Rahman, A. Masood, A. A. Khan, M. U. Zuberi, **F. I. Bakhsh**, M. R. Islam: Impact of silicon carbide, boron nitride, and zirconium dioxide nanoparticles on ester-based dielectric fluids. *IET Nanodielectr.* 7(4), 296–306 (2024). <https://doi.org/10.1049/nde2.12090> (**SCI**).
43. *M. S. Chowdhary, F. I. Bakhsh, M. Amir, A. F. Minai, F. Ahmad and M. Z. Ansari, "Comprehensive Analysis and Comparison of DAB and CLLC Converters for EV Application," 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, 2024, pp. 1-6, doi: 10.1109/SEFET61574.2024.10717946. https://ieeexplore.ieee.org/document/10717946 (SCOPUS)*
44. *M. R. Khalid, A. A. Khan, F. I. Bakhsh and M. S. J. Asghar, "Performance Analysis of 18-Phase AC/DC Converter for Electric Vehicle Charging Station with Degraded Modes," 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, 2024, pp. 01-06, doi: 10.1109/SEFET61574.2024.10717987. https://ieeexplore.ieee.org/document/10717987 (SCOPUS)*
45. *F. Ahmad, P. C. Tapre, F. I. Bakhsh, M. Bilal, A. Iqbal, T. K. Nizami, "Techno-Economic Approach for the Optimal Deployment of Plug-in Electric Vehicle Charging Stations," 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, 2024, pp. 1-6, doi: 10.1109/SEFET61574.2024.10717896. https://ieeexplore.ieee.org/document/10717896 (SCOPUS)*
46. *M. R. Khalid, A. H. Khan, A. Hamdan, F. I. Bakhsh, S. Hameed and M. S. J. Asghar, "Performance Analysis of 12-/15-Phase AC-DC Converter with High Power-Quality for Electric Vehicle Charging Stations," 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, 2024, pp. 1-6, doi: 10.1109/SEFET61574.2024.10718274. https://ieeexplore.ieee.org/document/10718274 (SCOPUS)*
47. A. Iqbal, **F. I. Bakhsh** and G. K. Singh, “Finite-time stability control with hardware-in-the-loop testing of a chaotic permanent magnet synchronous motor”, *Engineering Research Express*, vol. 6, no. 3, 2024. <https://doi.org/10.1088/2631-8695/ad6532> (**SCOPUS, ESCI**)
48. S. F. Mohammad, **F. I. Bakhsh**, M. Ibrahim, N. Mumtaz, S. Hameed, Detailed modelling and performance analysis of power flow topology in a hybrid electric vehicle having series-parallel architecture, *Renewable Energy Focus*, Volume 49, 2024, <https://doi.org/10.1016/j.ref.2024.100579>. (**SCOPUS, ESCI**)
49. M. Amir, A. R. Ansari, M. A. Khan, J. Kaur, **F. I. Bakhsh**, and A. Khosla, “Feasibility Analysis of Solar Energy and Role of Lithium-Ion Battery Reserved in Electric Vehicle Market: A Path Towards Green Transportation”, *SPEE*, vol. 43, no. 03, pp. 545–568, Jun. 2024. <https://doi.org/10.13052/spee1048-5236.4333> (**SCOPUS**)

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50. M. A. Alam, A. F. Minai, **F. I. Bakhsh**, Isolated Bidirectional DC-DC Converter: A Topological Review, e-Prime - Advances in Electrical Engineering, Electronics and Energy, Vol. 8, 2024, <https://doi.org/10.1016/j.prime.2024.100594>. (SCOPUS)
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https://www.researchgate.net/publication/268812493_Design_and_Performance_Analysis_of_an_In_direct_Vector-Controlled_Closed-loop_Drive_System_using_D-partition_Technique/stats (SCOPUS)
139. **F. I. Bakhsh**, M. Irshad, and M. S. J. Asghar, "Modeling and Simulation of Variable Frequency Transformer for Power Transfer in-between Power System Networks," *IEEE India International Conference on Power Electronics (IICPE 2011), Delhi, India, 28-30 Jan., 2011*. doi: 10.1109/IICPE.2011.5728119 (SCOPUS)
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Books:

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2. I. Abouddrar, **F. I. Bakhsh**, A. Nayyar, I. Ouachtouk, "Innovative Technologies on Electrical Power Systems for Smart Cities Infrastructure," *Sustainable Civil Infrastructures*, vol. 1, Springer Cham, April 2025, ISBN 978-3-031-86705-7, <https://doi.org/10.1007/978-3-031-86705-7>
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3. S. Ahmad, **F. I. Bakhsh** and S. Padmanaban "MULTILEVEL CONVERTERS," Scrivener Publishing and Wiley, July 2024. ISBN 9781394166329
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Book Chapters:

1. Sheikh, A.H., **Bakhsh, F.I.** (2026). Intelligent Control System for Improved Frequency and Tie-Line Power Oscillations in a Two-Area Hybrid Power System. In: Verma, O.P., Wang, L., Kumar, R., Yadav, A., Rout, R.K. (eds) *Machine Intelligence for Research and Innovations*. MAiTRI 2024. Lecture Notes in Networks and Systems, vol 1358. Springer, Singapore. https://doi.org/10.1007/978-981-96-7614-9_3
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3. Al Shaheer, A., Hammad, S.M., **Bakhsh, F.I.** (2025). Analysis of Speed and Torque of a BLDC Motor Through Field-Oriented Control Using SVPWM Scheme. In: Krishan, R., Pullaguram, D.R., Salkuti, S.R. (eds) Smart Grid Stability and Control. ICSPER 2024. Lecture Notes in Electrical Engineering, vol 1290. Springer, Singapore. https://doi.org/10.1007/978-981-97-8634-3_12
 4. Ansari, A.R., Siddiqui, A.S., Sarwar, A., **Bakhsh, F.I.** (2025). A New Single-Source Single-Phase Bullet-Shaped, Nine-Level Quadruple Boosting Switched Capacitor-Based Multilevel Inverter. In: Krishan, R., Pullaguram, D.R., Salkuti, S.R. (eds) Smart Grid Stability and Control. ICSPER 2024. Lecture Notes in Electrical Engineering, vol 1290. Springer, Singapore. https://doi.org/10.1007/978-981-97-8634-3_48
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 7. S. Ahmad, T. H. Parray, **F. I. Bakhsh** (2024). Packed U-Cell Multilevel Inverter and Applications in Solar Photovoltaic System. In: S. Ahmad, F. I. Bakhsh, P. Sanjeevikumar (eds) Multilevel Converters. Wiley. <https://doi.org/10.1002/9781394167371.ch11> (**SCOPUS**)
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 10. Siddiqui, K.M., **Bakhsh, F.I.**, Khan, F., Singh, A., Husain, F. (2024). Simulation and Analysis of 24-h V2G System. In: Gabbouj, M., Pandey, S.S., Garg, H.K., Hazra, R. (eds) Emerging Electronics and Automation. E2A 2022. Lecture Notes in Electrical Engineering, vol 1088. Springer, Singapore. https://doi.org/10.1007/978-981-99-6855-8_32 (**SCOPUS**)
 11. M. Bendaoud, F. Oufqir, **F. I. Bakhsh**, K. Chikh, A. E. Fathi and A. Lokriti, "Comparison and overview of power converter control methods", In: Intelligent Control of Medium and High Power Converters, IET ENERGY ENGINEERING SERIES 239, UK, 2023, pp. 199-236, ISBN: 978-1-83953-741-7 (**SCOPUS**)
 12. K. M. Siddiqui, **F. I. Bakhsh**, B. K. Chauhan and A. Iqbal, "Simulation and Analysis of Three-Phase and Five-Phase Variable Speed PMSMs under Open Phase Fault Conditions" In: Energy Conversion: Methods, Technology and Future Directions, Nova Science Publishers, 2023, ISSN: 979-8-88697-370-9 (**SCOPUS**)
 13. Wani N.U.I., **Bakhsh F.I.**, Choudekars P., Ruchira (2022) Intelligent Modelling and Analysis of P-Q Control Technique for SPV Plant Supplying Power to Grid. In: Malik H., Ahmad M.W., Kothari D. (eds) Intelligent Data Analytics for Power and Energy Systems. Lecture Notes in Electrical Engineering, vol 802. Springer, Singapore. https://doi.org/10.1007/978-981-16-6081-8_7 (**SCOPUS**)
 14. Imtiyaz T., **Bakhsh F.I.**, Jain A. (2022) Intelligent Modelling and Analysis of Direct Torque Control-Space Vector Modulation of Doubly Fed Induction Generator (DFIG). In: Malik H., Ahmad M.W., Kothari D. (eds) Intelligent Data Analytics for Power and Energy Systems. Lecture Notes in Electrical Engineering, vol 802. Springer, Singapore. https://doi.org/10.1007/978-981-16-6081-8_3 (**SCOPUS**)
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- Intelligent Data Analytics for Power and Energy Systems. Lecture Notes in Electrical Engineering, vol 802. Springer, Singapore. https://doi.org/10.1007/978-981-16-6081-8_12 (SCOPUS)
16. Mohammad S.F., **Bakhsh F.I.**, Mohammad S.S., Hurra A.A. (2022) Intelligent Modeling and Analysis of a Transformerless Inverter System for Renewable Energy System. In: Malik H., Ahmad M.W., Kothari D. (eds) Intelligent Data Analytics for Power and Energy Systems. Lecture Notes in Electrical Engineering, vol 802. Springer, Singapore. https://doi.org/10.1007/978-981-16-6081-8_22 (SCOPUS)
 17. Imtiyaz T., **Bakhsh F.I.**, Jain A. (2022) Modelling and Analysis of Vector Controlled Doubly Fed Induction Generator (DFIG). In: Gupta A.R., Roy N.K., Parida S.K. (eds) Power Electronics and High Voltage in Smart Grid. Lecture Notes in Electrical Engineering, vol 817. Springer, Singapore. https://doi.org/10.1007/978-981-16-7393-1_21 (SCOPUS)
 18. Imtiyaz T., Prakash A., **Bakhsh F.I.**, Jain A. (2022) Modelling and Analysis of Indirect Field-Oriented Vector Control of Induction Motor (IM). In: Gupta A.R., Roy N.K., Parida S.K. (eds) Power Electronics and High Voltage in Smart Grid. Lecture Notes in Electrical Engineering, vol 817. Springer, Singapore. https://doi.org/10.1007/978-981-16-7393-1_18 (SCOPUS)
 19. Alshabibi S., Tabrez M., Kumar K., **Bakhsh F.I.** (2022) Applications of 555 Timer for Development of Low-Cost System. In: Chanda C.K., Szymanski J.R., Sikander A., Mondal P.K., Acharjee D. (eds) Advanced Energy and Control Systems. Lecture Notes in Electrical Engineering, vol 820, January 2022, Springer, Singapore. https://doi.org/10.1007/978-981-16-7274-3_18 (SCOPUS)
 20. Ahmad S., **Bakhsh F.I.**, “Transformer-Based DC-to-AC Grid-Connected Multi-Level Inverter Topology”, In: Iqbal A., Malik H., Riyaz A., Abdellah K., Bayhan S. (eds) Renewable Power for Sustainable Growth. Lecture Notes in Electrical Engineering, vol. 723, April 2021, Springer, Singapore. doi: 10.1007/978-981-33-4080-0_28 (SCOPUS)
 21. **F. I. Bakhsh**, M. Tabrez and S. Hameed, “Input voltage and slip power control schemes based performance optimization of grid-connected induction generator,” Metaheuristic and Evolutionary Computation: Algorithms and Applications, Studies in Computational Intelligence, vol. 916, Springer, Singapore, April 2021. doi: 10.1007/978-981-15-7571-6_27 (SCOPUS)
 22. **F. I. Bakhsh**, D. K. Khatod and H. Malik, “Fault Analysis of Variable Frequency Transformer (VFT) for Power Transfer in-between Synchronous Grids,” Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems, Advances in Intelligent Systems and Computing, pp. 269-286, Springer Nature, Singapore, January 2020. doi: 10.1007/978-981-15-1532-3_12 (SCOPUS)
 23. A. H. Sheikh and **F. I. Bakhsh**, “Maximum Power Extraction from Wind Power Generation System Using Intelligent Controllers,” Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems, Advances in Intelligent Systems and Computing, pp. 345-362, Springer Nature, Singapore, January 2020. doi: 10.1007/978-981-15-1532-3_15 (SCOPUS)
 24. S. Islam, **F. I. Bakhsh** and Q. U. Islam, “Modeling and Analysis of the Photovoltaic Array Feeding a SPWM Inverter,” Advances in Intelligent Systems and Computing, Applications of Artificial Intelligence Techniques in Engineering, vol. 698, pp 449-457, Springer Book, Singapore, September 2018. doi: 10.1007/978-981-13-1819-1_42 (SCOPUS)

Keynote Speaker/ Invited Talk/ Session Chair/ Lectures/ etc.:

1. Served as Session Chair in the 2026 6th International Conference on Multimedia, Signal Processing, and Communication Technologies (IMPACT-2026), held during 14–15 February, 2026 at Aligarh Muslim University (AMU), Aligarh, India.
2. Served as Session Chair in 2nd IEEE International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2026) held from February 12-14, 2026 at Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India.
3. Served as Session Chair in the International Conference on Electrical, Communication, and Computing Technologies (iCONECCT-2025), held during 26–28 December 2025 at Madhav Institute of Technology & Science, Deemed University, Gwalior, India, in collaboration with NIT Uttarakhand and technically sponsored by the IEEE Madhya Pradesh Section.

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4. Served as Session Chair in the of 3rd IEEE International Conference on Power Electronics and Energy (ICPEE 2025) organized by the School of Electrical Engineering, KIIT University, Bhubaneswar, Odisha, India during 14-16 December, 2025.
5. Served as Session Chair in 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control (STPEC 2025), organised by the Department of Electrical and Electronics Engineering, National Institute of Technology Goa, held from 10th –13th December 2025.
6. Served as Session Chair in Fourth IEEE Delhi Section International Conference on Recent Smart Technologies in Engineering for Sustainable Development (DELCON2025) held during 31 Oct-2 Nov., 2025 organized by Department of Electrical Engineering, JMI, New Delhi, India.
7. Delivered an expert lecture on “Application of Variable Frequency Transformer in Two Area System” during the International Conference on Emerging Trends in Engineering, Technology & Management (ICETETM 2025), held on 19–20 September 2025 at S.R. Group of Institutions, Lucknow, India.
8. Served as Session Chair in the International Conference on Electrical, Electronics and Automation (E2ACON2025) held on 8-9 March 2025 organized by department of Instrumentation and Control Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab, India.
9. Served as Session Chair in the 3rd IEEE International Conference on Industrial Electronics: Developments & Applications (ICIDeA 2025), which is a flagship conference of the IEEE Kolkata Section Industrial Electronics Society Chapter – Bhubaneswar, technically sponsored by the IEEE Bhubaneswar Section and organized by the School of Electrical Engineering, KIIT Deemed to be University, Bhubaneswar, India during 21st to 22nd February 2025.
10. Delivered an expert talk in the Online Faculty Development Program (FDP) on the theme "Next-Gen Sensors, Monitoring, and Automation for Energy Systems and Electric Vehicles," held from 17th February to 22nd February 2025, organized by the Electronics & ICT Academy at NIT Patna, in collaboration with the Department of Mechanical Engineering, and is sponsored by the Ministry of Electronics and Information Technology (MeitY), Government of India.
11. Served as Resource Person in the Two Week Short Term Industrial Program on “Recent Advancements in Solar and Wind Energy Systems for Sustainable Development” organized by Department of Electrical Engineering, Aligarh Muslim University, Aligarh, India from 03-15, February 2025.
12. Delivered an expert talk in the Online Faculty Development Program (FDP) on “Electric Vehicles and Energy Storage Systems: Recent Trends and Future Prospects” which is organized by NIT Patna in association with Electronics & ICT Academy from 27th Jan - 31st Jan 2025.
13. Delivered a Keynote Talk in IEEE International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2025) held from January 16-18, 2025 at School of Engineering, Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India.
14. Served as Track Chair in IEEE International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2025) held from January 16-18, 2025 at School of Engineering, Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India.
15. Served as Resource Person in AICTE Training And Learning (ATAL) Academy Faculty Development Program on “SUSTAINABLE ENERGY AND SOCIETY: RECENT ADVANCES & FUTURE PROSPECTS” at Aligarh Muslim University, Aligarh, U.P., India from 09/12/2024 to 14/12/2024.
16. Served as Session Chair in the 6th International Conference on Emerging Technologies: Micro to Nano (ETMN 2024) held at JMI, New Delhi, India during 26-27 Nov., 2024.
17. Delivered an expert lecture in the Online Faculty Development Program (FDP) on “Emerging Technologies for Smart Grids and Green Energy Integration” which is organized by Department of Electrical Engineering in association with Electronics & ICT Academy, NIT Warangal from 25th November 2024 – 6th December 2024.
18. Chaired two sessions in IEEE 4th International Conference on Sustainable Energy and Future Electric transportation (SEFET-2024) held during 31 July - 03 August, 2024, organized by the Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad, Telangana, India.

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19. Served as Session Chair in 3rd International Conference on Power Electronics, Intelligent Control, and Energy Systems (IEEE-ICPEICES-2024) take place from 26th to 28th of April, 2024, at Delhi Technological University, Delhi, India.
20. Served as Session Chair for Transportation Electrification and Automotive Technologies Track in 3rd International Conference on Renewable Power (ICRP-2024) held at MAIT Delhi, India during 28 – 29 March, 2024.
21. Served as Session Chair in International Conference on Sustainable Power and Energy Research (ICSPER 2024) held at NIT Warangal, Warangal, India during 1 – 3 March, 2024.
22. Resource Person in AICTE Training And Learning (ATAL) Academy Faculty Development Program on “Grid Decarbonisation and Distributed Energy Resources to Mitigate Climate Change” at Islamic University of Science and Technology, J&K, India from 18/12/2023 to 23/12/2023.
23. Served as Session Chair in 2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC) organized by Kalinga Institute of Industrial Technology, Odisha, Bhubaneswar, India on 11/12/2023.
24. Served as Session Chair in 5th International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE-2023) held from 12-13 October, 2023 organized by Amity University, Noida (UP), INDIA.
25. Served as Session Chair for the International Conference on Electrical Systems & Automation (ICESA 2023) from 29 to 30, May 2023 at the faculty of science and technology, Al Hoceïma, Morocco.
26. Chaired a session on 8th April, 2023 in the International Conference on Innovations in Clean Energy Technologies (ICET-2023) organized by Energy Centre, Maulana Azad National Institute of Technology Bhopal, Bhopal from 08-10 April, 2023.
27. Delivered an Expert Talk on “Agent based online learning approach for power flow control of electric vehicle fast charging station integrated with smart microgrid” in the webinar on Typhoon HIL technology & application in the field of E-Mobility & Microgrid on 13th March 2023 organized by Renewable Energy Lab of Prince Sultan University, Saudi Arabia; Quarbz Info Systems, India and Typhoon HIL GmbH, Switzerland.
28. Chaired a session on 12th Feb. 2023 in the International Conference on Power, Instrumentation, Energy, and Control (PIECON-2023) held at AMU, Aligarh, India from 10-12 February, 2023.
29. Chaired a session on 30th Dec. 2022 in the 3rd International Conference on Computational Intelligence held from 29-30 December 2022 organized by Indian Institute of Information Technology Pune, Pune, India.
30. Delivered an Expert Talk on “Hybrid Electric Vehicles” at Energy Centre, Maulana Azad National Institute of Technology Bhopal, Bhopal on 9th December, 2022 in the one-week high-end workshop on “Advance Research Tool Application in Renewable Energy” under the KARYASHALA Scheme as part of a SERB initiative.
31. Chaired a session on 5th Nov. 2022 in the International Conference on Science, Technology and Sustainability (ICSTS – 2022) held from 05-06 November 2022 organized by Maulana Mukhtar Ahmad Nadvi Technical Campus, Malegaon, India.
32. Delivered an Expert Lecture on “Renewable Energy Systems,” at Department of Electrical Engineering, IIMT, Meerut, UP, India on 01 Nov., 2022.
33. Served as resource person for One-Day Webinar on Variable Frequency Transformers for Power Flow Control organized by IETE Aligarh Local Centre held on 28th September 2022.
34. Chaired a session on Intelligent System in the 6th International Joint Conference on Advances in Computational Intelligence (IJCACI 2022) held from Oct. 15-16, 2022 organized by SAU Center for Research and Innovative Learning (SCRIL), South Asian University, India and Jahangirnagar University, Bangladesh.
35. Chaired a session in the 2022 2nd Asian Conference on Innovation in Technology (ASIANCON) held from 26th – 28th August, 2022 organized by PCCOER, Pune, India and sponsored by IEEE Bombay Section.
36. Chaired a session on Power Electronics in 1st IEEE International Conference on Sustainable Technology for Power and Energy Systems (STPES 2022) held from 4-6 July, 2022 organized by National Institute of Technology Srinagar and Indian Institute of Technology Jammu.

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37. Delivered an Expert talk in the FDP entitled ‘Opportunities and challenges in evolving power and energy sector, organized by Department of Electrical & Electronics Engineering, Amity School of Engineering & Technology, Amity University, Uttar Pradesh, Noida, India on 29 June 2022.
38. Chaired a session on Power Electronics in 2nd IEEE International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET 2022) held from 24 – 25 June 2022 organized by National Institute of Technology Patna.
39. Delivered a lecture as Resource Person on 02-03-2022 in the Faculty Development Program on "Renewable Energy for Sustainable Development" Organized by Department of Mechanical and Electrical Engineering, BIGCE scheduled on 1st to 5th March, 2022.
40. Delivered a session on the topic “Novel Variable Frequency Transformer based Wind Energy Conversion System” on 16th Feb., 2022 in the GIAN program on “Advanced Energy Conversion and Storage Systems” being conducted online at National Institute of Technology Warangal from 7th to 18th Feb., 2022.
41. Delivered Expert Lecture on “Hybrid EVs” on 15th February, 2022 during the STC on “Electric Vehicle Technology” organized by the Electrical Engineering Department, NITTTR, Chandigarh during 14-18 February 2022.
42. Chaired a session in the International Conference for Advancement in Technology (ICONAT) 2022, technically Co-sponsored by IEEE Bombay section on 22-01-2022 organized by Rajarambapu Institute of Technology (RIT), Sangli, India.
43. Delivered an Invited Talk on “Modeling and Analysis of Variable Frequency Transformer” during IEEE Day celebration event on 6th October 2021 organized by IEEE SRMGPC Student Branch, Lucknow, India.
44. Served as External Examiner of M. Tech. Electrical Engineering Viva-voce examination on 15th July 2021 at Jamia Millia Islamia, Central University, New Delhi.
45. Chaired two sessions with Prof. Jinming Xu, Nanjing University of Aeronautics and Astronautics, China on 26 May, 2021 and 27 May, 2021 in the 12th International Conference on Electrical and Electromechanical Energy Conversion – ECCE Asia (Energy Conversion Congress and Exposition – Asia, 2021) held at Singapore, from May 24-27, 2021.
46. Chaired a session with Dr. Paul Judge, University of Edinburgh, UK on 25 May, 2021 in the 12th International Conference on Electrical and Electromechanical Energy Conversion – ECCE Asia (Energy Conversion Congress and Exposition – Asia, 2021) held at Singapore, from May 24-27, 2021.
47. Delivered an Expert Lecture on “A Novel Method for Asynchronous Power Transfer in between Power System Network” in the Typhoon HIL Dissertation Awards (THILDA-2021) organized by the Electrical Engineering Department, Abdul Latif Ali Al Shaya Faculty of Engineering & Technology, M. M. A. N. T. C., Maharashtra, India during 10 -12 April, 2021.
48. Delivered a Keynote Talk on 21-01-2021 in Faculty Development Programme on “GREEN TECHNOLOGY & SUSTAINABILITY ENGINEERING” in association with AICTE Training and Learning (ATAL) Academy Cell organized by Electrical Engineering Department, School of Engineering, GBU, UP, INDIA during 19th -23rd January, 2021.
49. Delivered an Expert Talk on 05-11-2020 in online Faculty Development Programme on “Advances in Teaching and Research in the Field of Green Energy and Sustainable Development” organized by Department of EEE, JNTUA College of Engineering, Kalikiri, Chittoor (Dist), AP, INDIA & Directorate of Faculty Development & IQAC, JNTUA, Ananthapuramu, during 2nd Nov – 7th Nov, 2020.
50. Delivered an Expert Lecture on 22-10-2020 in one week Workshop on “Sustainable Energy: Challenges and Opportunities” organized by Department of Electrical Engineering, GWEC, Ajmer, Rajasthan under Technical Education Quality Improvement Program (TEQIP – III), during 19th Oct - 23rd Oct, 2020.
51. Chaired a session in “1st International Conference on Innovations in Clean Energy Technology (ICET-2020)” organized by Energy Centre, Maulana Azad National Institute of Technology, Bhopal, India, 27th-28th August, 2020.
52. Delivered Expert Lecture in one week online Short Term Course on “Emerging Trends in Power and Energy Systems” organized by the Department of Electrical Engineering, Gautam Buddha University, Greater Noida, UP on 27th August, 2020.

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53. Delivered an Invited Talk on topic “An overview of Variable Frequency Transformer” at Saharsa College of Engineering, Saharsa under Department of Science & Technology, Govt. Of Bihar on 21st July, 2020.
54. Delivered Expert Lectures on Smart Grid Applications using Typhoon HIL & Introduction to Variable Frequency Transformer on 20th February, 2020 and on Application of VFT in Smart Grid using Typhoon HIL on 21st February, 2020 during the STC on HIL Simulation for Smart Grid Applications organized by the Electrical Engineering Department, NITTTR, Chandigarh during 17-21 February 2020.
55. Delivered the Keynote Address in the “International Conference on Recent Advances in Engineering & Science” organized by University Polytechnic, AMU, Aligarh during 11-12 January, 2020.
56. Delivered a Talk on “Simulation of Variable Frequency Transformer” in five day workshop on the topic “Typhoon’s HIL Hardware-in-the-Loop Simulation Technology in Electrical Engineering” Organized by Institute of Entrepreneurship Development, UP in Technical Collaboration with Quarbz Info Systems, Kanpur & Typhoon HIL GmbH, Switzerland held on 9-13 Jan., 2020 at IEDUP, Lucknow, India.
57. Delivered Expert Lectures on Basics of Modelling using Typhoon HIL on 12th December 2019 and on Modelling and Analysis of Micro-Grids using Typhoon HIL on 13th December 2019 during the STC on Distributed Generation and Micro-Grid organized by the Electrical Engineering Department, NITTTR, Chandigarh during 9-13 December, 2019.
58. Delivered an Invited Talk during the 5th IEEE International Conference on Signal Processing, Computing and Control (ISPCC 2k19) organized by the Department of ECE, Jaypee University of Information Technology, Solan, H. P., India during October 10-12, 2019.
59. Delivered a Talk during a Two Day’s Workshop on “Next Generation Power System, Power Electronics. Renewable Energy, Micro-grid and Smart Grid” using Typhoon HIL at Electrical Engineering Department, Gautam Buddha University, Greater Noida, UP on 30th September, 2019.
60. Delivered an Expert Lecture in “Typhoon HIL Workshop” at IIT Kanpur which is jointly organized by IEEE PES SBC, IIT Kanpur and Typhoon HIL INC. on 22nd September, 2019.
61. Delivered an Expert Talk on “Application of Variable Frequency Transformer in Wind Energy Conversion System” at Department of Electrical Engineering, REC Ambedkar Nagar, U.P. on 7th September, 2019.
62. Delivered an Expert Talk on “Industrial Electronics Application in WECS” at Department of Electronics and Communication Engineering, GWEC, Ajmer, Rajasthan on 31st August, 2019.
63. Delivered an Expert Lecture in one week workshop on “Applications of AI Techniques in Robotics, Renewable Energy & Smart Grid” from 26th – 30th August, 2019 at GWEC, Ajmer, Rajasthan.
64. Delivered an Invited Talk on Analysis of Multi-level Inverter using Typhoon HIL” at Quarbz Info Systems on 14th August, 2019.
65. Delivered an Invited Talk in one week workshop on “Power Electronics: Applications in Renewable Energy Systems” from 22nd – 26th April, 2019 at NIT Srinagar, Hazratbal, Srinagar.
66. Delivered an Invited Talk in “IEEE International Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES-18)” held at Integral University, Lucknow on 14-15 September, 2018.
67. Chaired a session in “IEEE International Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES-18)” held at Integral University, Lucknow on 14-15 September, 2018.
68. Chaired a session in “International Conference on Manufacturing, Advance Computing, Renewable Energy and Communication (MARC 2018),” held at HMR Institute of Technology & Management, Delhi, India, 19-20 July, 2018.
69. Delivered an Invited Talk in “International conference on New Technological Opportunities in Networking and Sciences,” held at SIT Pithoragarh, India, 8-10 June 2018.
70. Delivered an Expert Lecture in one week Short Term Course on “Recent Advances in Power & Energy Engineering” from 12-16 March 2018 at EREE, SOET, BGSBU.
71. Delivered an Invited Talk in “International conference on Signals, Machines and Automation (SIGMA 2018),” held at NSIT, Delhi, India, 23-25 Feb., 2018.

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72. Chaired a session in “International conference on Signals, Machines and Automation (SIGMA 2018),” held at NSIT, Delhi, India, 23-25 Feb., 2018.
73. Delivered an Expert Lecture on “Analysis of Variable Frequency Transformer,” at IIMT, Meerut, India on 03 Feb., 2018.
74. Keynote speaker in “6th World Conference on Applied Science Engineering and Technology (WCASET - 18)” held at Goa, India on 2-3 January, 2018.
75. Chaired a session in “6th World Conference on Applied Science Engineering and Technology (WCASET - 18)” held at Goa, India on 2-3 January, 2018.
76. Keynote speaker in “National Conference on Future Innovations & Research In Science & Technology,” held at IIMT Engineering College, Meerut, India, 22-23 April, 2017 sponsored by IEEE U.P. Section.
77. Delivered a series of lectures in the workshop on “Basics of MATLAB Programming & Simulink” from 15th – 19th November, 2016 held at School of Engineering & Technology, BGSBU.
78. Delivered an Invited talk on “Grid Integration of Wind Energy System” on 8th Feb., 2016 in Department of Electrical Engineering at Zakir Husain College of Engineering and Technology, AMU, Aligarh.

TPC/ Advisory Committee/ Review Committee/ Reviewer etc.:

1. Served as a reviewer in the 4th IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2026), organized by IEEE MP Section and ABV-IITM Gwalior, India on 12-14 March 2026.
2. Served as a reviewer in 4th IEEE International Conference on Power Electronics & IoT Application in Renewable Energy and its Control (PARC 2026) held at GLA University, Mathura, U.P., India from February 20–21, 2026.
3. Served as a reviewer in 2nd IEEE International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2026) held from February 12–14, 2026 at Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India.
4. Served as a reviewer in the 2026 IEEE Texas Power and Energy Conference (TPEC), organized by Texas A&M University, USA on February 8–10, 2026.
5. Served as Reviewer in the International Conference on Energy Futures (ICEF’26) jointly organized by Prince Mohammad Bin Fahd University (Saudi Arabia) and Al Akhawayn University (Morocco) during February 5–6, 2026.
6. Served as Reviewer in the 3rd IEEE International Conference on Power Electronics and Energy (ICPEE 2025) organized by the School of Electrical Engineering, KIIT University, Bhubaneswar, Odisha, India during 14-16 December, 2025.
7. Served as Reviewer in 2025 International Conference on Signal Processing, Computation, Electronics, Power and Telecommunication (iConSCEPT 2025) held during 06-07 Dec., 2025 organized by NIT Puducherry, India.
8. Served as Reviewer in Fourth IEEE Delhi Section International Conference on Recent Smart Technologies in Engineering for Sustainable Development (DELCON2025) held during 31 Oct-2 Nov., 2025 organized by Department of Electrical Engineering, JMI, New Delhi, India.
9. Served as Technical Program Committee (TPC) member in the IEEE International Conference on Electrical Systems & Automation (ICESA 2025) from 23 to 34, October 2025 in Troyes, France.
10. Served as a reviewer for the 4th IEEE TEMSMET 2025 Conference held during OCTOBER 08-10, 2025, organized by National Institute of Technology Delhi, India.
11. Served as a reviewer in the IEEE 5th International Conference on Sustainable Energy and Future Electric transportation (SEFET-2025) held during 9-12 July, 2025, organized by the Centre for Energy & Environment, MNIT Jaipur, Jaipur, Rajasthan, India.
12. Served as Meta-Reviewer in the International Conference on Electrical, Electronics and Automation (E2ACON2025) held on 8-9 March 2025 organized by Department of Instrumentation and Control Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab, India.
13. Served as Reviewer in the International Conference on Electrical, Electronics and Automation (E2ACON2025) held on 8-9 March 2025 organized by Department of Instrumentation and Control Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab, India.

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14. Served as a reviewer in the IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2025), organized by IEEE MP Section and ABV-IIITM Gwalior, India on 6-8 March 2025.
15. Served as a reviewer in the 9th IEEE Texas Power and Energy Conference (TPEC 2025) held at Texas A&M University, USA on February 10-11th, 2025.
16. Served as a reviewer in IEEE International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2025) held from January 16-18, 2025 at School of Engineering, Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India.
17. Served as a reviewer in the 11th IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2024), organized by the Department of Electrical and Electronics Engineering at National Institute of Technology Karnataka, Surathkal, India from 18th to 21st December 2024.
18. Served as a reviewer in the Second International Conference on Emerging Technologies and Applications in Electrical Engineering (ICETAEE-2024), hosted and organized by the Department of Electrical Engineering, NIT Raipur, India on 18-19 December 2024.
19. Served as a reviewer in the 2024 IEEE 11th Power India International Conference (PIICON 2024), hosted by Malaviya National Institute of Technology Jaipur, Rajasthan, India on December 10th - 12th, 2024.
20. Section and ABV-IIITM Gwalior, India on 6-8 March 2025.
21. Served as a reviewer in the 2nd International Conference on Computational and Characterization Techniques in Engineering and Sciences (CCTES-24), hosted by Integral University, Lucknow, India on 15-16 November 2024.
22. Served as a reviewer in the 3rd International Conference on Signals, Machines and Automation (SIGMA 2024), hosted by Netaji Subhas University of Technology (NSUT), New Delhi on 20th - 22th December 2024.
23. Served as a reviewer in the IEEE Technology and Engineering Management Society Conference: Asia-Pacific (TEMSCON-ASPAC 2024), held at Bali, Indonesia during 25 - 27 September 2024.
24. Served as a reviewer in the 4th International Conference on Electrical and Information Technology, held at Politeknik Negeri Malang, Indonesia during 12th - 13th September 2024.
25. Recognition as Reviewer in IEEE Mysurucon 2024 - 4th Edition of Flagship International Conference of IEEE Mysore Subsection in association with IEEE Bangalore Section hosted by Vidya Vikas Institute of Engineering & Technology, Mysuru on 30th and 31st August 2024.
26. Contributed as a Reviewer in International Conference on Electrical Electronics and Computing Technologies (ICEECT-2024) organized by Sharda University, Greater Noida, U.P., India from 29-31 August 2024.
27. Contributed as Technical Reviewer at the 6th IEEE International Conference on Artificial Intelligence in Engineering and Technology held from 26-28 August 2024 at the Pacific Sutera Hotel, Kota Kinabalu, Sabah, Malaysia.
28. Contributed as the Reviewer in the 5th IEEE India Council International Subsections Conference (INDISCON 2024) organized by IEEE India Council along with IEEE Chandigarh Subsection and hosted by Punjab Engineering College (Deemed to be University), Chandigarh, India from 22-24 August 2024.
29. Recognition of outstanding contribution as a Reviewer in 1st IEEE International Conference on "Smart Power Control and Renewable Energy (ICSPCRE-2024)" organized by Department of Electrical Engineering, National Institute of Technology Rourkela, Rourkela-769008, Odisha, India from 19-21 July 2024.
30. Contributed as a reviewer in the 2nd International Conference on Computer, Electronics and Electrical Engineering and their Applications (IC2E3-2024), held from 6th to 7th June, 2024 at National Institute of Technology Uttarakhand, India.
31. Served as a reviewer for the 2024 International Conference on Signal Processing, Computation, Electronics, Power and Telecommunication (IConSCEPT-2024), organised by the National Institute of Technology Puducherry, Karaikal, in association with IEEE MADRAS SECTION during July 4-5, 2024.

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32. Contributed as a reviewer of papers for 3rd International Conference on Distributed Computing and Electrical Circuits and Electronics (ICDCECE-2024), organized by IEEE SB Ballari Institute of Technology and Management, Ballari, Karnataka, India on 26-27 April 2024.
33. Served as Technical Program Committee (TPC) member and Reviewer in the 2024 International Conference on Power Electronics and Energy System (ICPEES 2024) to be held at Kuala Lumpur, Malaysia from March 1 – 3, 2024.
34. Contributed as a reviewer of papers for 2nd IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2024), organized by IEEE MP Section and ABV-IITM Gwalior, India on 14-16 March 2024.
35. Served as Technical Program Committee (TPC) member and Reviewer in the International Conference on Sustainable Power and Energy Research (ICSPER 2024) held at NIT Warangal, Warangal, India during 1 – 3 March, 2024.
36. Served as Peer Reviewer in the 2023 Sixth International Conference on Computational Intelligence and Communication Technologies (ICACCTech'2023) organized jointly by BM Institute of Engineering and Technology, Sonapat, Haryana and SVIET, Banur, Punjab, India from 23-24 December, 2023, Sonapat (NCR), India.
37. Served as Technical Program Committee (TPC) member and Reviewer in the 2023 5th IEEE International Conference on Electrical, Control and Instrumentation Engineering (ICECIE) held at Kuala Lumpur, Malaysia from 24 – 26 Nov. 2023.
38. Served as Technical reviewer for the First International Conference on Advances in Electrical, Electronics and Computational Intelligence (ICAECCI 2023) held at K.S.R. College of Engineering, Tiruchengode, Tamil Nadu, India during 19 - 20, October 2023.
39. Served as Technical Program Committee (TPC) member and reviewer in 5th International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE-2021) held from 12-13 October, 2023 organized by Amity University, Noida (UP), INDIA.
40. Served as Technical Program Committee (TPC) member and reviewer of 2023 IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAIET2023), co-organized by the Artificial Intelligence Research Unit and Universiti Malaysia Sabah (UMS), which will be held at Kota Kinabalu, Malaysia from 12 to 14 September, 2023.
41. Served as Advisory/ Review Committee member of 2nd International Conference on Edge Computing and Applications (ICECAA 2023) to be held at Gnanamani College of Technology, Namakkal, India from 19-21, July 2023.
42. Served as Reviewer in the IEEE International Conference on Applied Intelligence and Sustainable Computing (ICAISC-2023) organized by SDMCET, Dharwad, Karnataka from 16 – 17 June 2023.
43. Served as Technical Program Committee (TPC) member and reviewer of 5th IEEE International Conference on Electronics Communication Technologies (ICECT 2023) is to be held in Nanning, Guangxi, China, during May 25-28, 2023.
44. Served as Reviewer in the International Conference on Recent Advances in Electrical, Electronics & Digital Healthcare Technologies, 2023 (REEDCON2023) is going to be organized by the Department of Electrical Engineering, Jamia Millia Islamia, New Delhi, India in collaboration with IEEE Delhi Section from 1st – 3rd May 2023 in Hybrid (Online/Physical) mode.
45. Served as reviewer in IEEE 7th International Conference on Emerging Trends in Engineering, Science and Technology (ICETEST 2023) is to be held in GEC Thrissur, India during 19-21 April, 2023.
46. Served as reviewer in Fifth International Conference on Materials Science and Manufacturing Technology (ICMSMT 2023) held at Akshaya College of Engineering and Technology, Coimbatore, Tamil Nadu, India during 13 - 14, April 2023. The conference has been jointly organized by the Akshaya College of Engineering and Technology (Academic Partner), Coimbatore, Tamil Nadu, India and Diligentec Solutions (Industry Partner), Coimbatore, Tamil Nadu, India.
47. Served as Technical Program Committee (TPC) member and reviewer of International Conference on Artificial Intelligence of Things (ICAIoT-2023) to be held at NITTTR, Chandigarh, India from 30th and 31st March 2023.
48. Served as Technical Program Committee (TPC) member and reviewer of IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), scheduled on March 11-12, 2023 at The Maldives National University, Male City (Maldives).

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49. Served as reviewer in IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS-2023) during 24th & 25th February 2023 in association with IEEE Bangalore Section and IEEE North Karnataka Subsection, India.
50. Served as Technical Program Committee (TPC) member of International Conference on Power, Instrumentation, Energy, and Control (PIECON-2023) to be held at AMU, Aligarh, India from 10-12 February, 2023.
51. Served as Technical Program Committee (TPC) member and reviewer of IEEE International Conference on Recent Trends in Electronics and Communication (ICRTEC 2023) scheduled for 10th and 11th February 2023 at NIE, Mysore, India.
52. Contributed as a reviewer of papers for IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2022), organized by IEEE MP Section and ABV-IIITM Gwalior, India on 21-23 December 2022.
53. Served as Technical Program Committee (TPC) member of International Conference on Computational and Characterization Techniques in Engineering and Sciences (IC3TES-22) to be held at Integral University, Lucknow, India from December 12-13, 2022.
54. Served as Technical Program Committee (TPC) member and reviewer of 2nd International Conference On Intelligent Vision and Computing (ICIVC 2022) to be held at National Institute of Technology Agartala, India from Nov. 26-27, 2022.
55. Served as reviewer in IEEE 19th India Council International Conference (2022 INDICON) held from 24th - 26th November 2022 organized by Cochin University of Science and Technology (CUSAT), India.
56. Editorial Board Member of the International Conference on Science, Technology and Sustainability (ICSTS – 2022) held from 05-06 November 2022 organized by Maulana Mukhtar Ahmad Nadvi Technical Campus, Malegaon, India.
57. Served as Reviewer in the 2nd Edition of Mysore Subsection Flagship International Conference, Co-organized and hosted by JSS Science and Technology University (SJCE), Mysuru, India from 16-17 October, 2022.
58. Served as Technical Reviewer in the 2022 IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAJET2022), co-organized by the Artificial Intelligence Research Unit and Universiti Malaysia Sabah (UMS), held at Kota Kinabalu, Malaysia from 13-15 September, 2022.
59. Served as Technical Program Committee (TPC) member of Fifth International Conference on Computational Intelligence and Communication Technologies (CCICT2022) held at BMIET Campus, Sector 10, NCR, Sonapat (HR) INDIA from 8-9 July, 2022.
60. Served as reviewer in 1st IEEE International Conference on Sustainable Technology for Power and Energy Systems (STPES 2022) held from 4-6 July, 2022 organized by National Institute of Technology Srinagar and Indian Institute of Technology Jammu.
61. Served as reviewer in 2nd IEEE International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET 2022) held from 24 – 25 June 2022 organized by National Institute of Technology Patna, India.
62. Served as reviewer in the International Conference for Advancement in Technology (ICONAT) 2022, technically Co-sponsored by IEEE Bombay section organized by Rajarambapu Institute of Technology (RIT), Sangli, India.
63. Served as an esteemed member of the Technical Program Committee (TPC) of 10th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2022) conference and contributed in the peer review process also Organized by Department of Computer Science & Engineering, National Institute of Technology Mizoram, India from June 18 - 19, 2022.
64. Served as Technical Program Committee (TPC) member of 3rd International Conference on Electrical and Electronics Engineering (ICEEE 2022) organized by School of Engineering, The University of Malaya, Kuala Lumpur, Malaysia and Faculty of Engineering, Bharath Institute of Higher Education & Research (Deemed to be University), Chennai, India from January 8-9, 2022.
65. Served as Technical Program Committee (TPC) member and reviewer in 3rd International Conference on Machine Learning, Advances in Computing, Renewable Energy and Communication (MARC-2021) held from Dec 10-11, 2021 organized by Krishna Engineering College, Ghaziabad, UP, INDIA.

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66. Served as reviewer in 3rd IEEE Bombay Section Signature Conference (IBSSC-2021).
67. Served as Technical Program Committee (TPC) member and reviewer in 4th International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE-2021) held from 7-8 October, 2021 organized by Amity University, Noida (UP), INDIA.
68. Served as reviewer in International Conference on Machine Learning, Advances in Computing, Renewable Energy and Communication (MARC-2020) organized by Krishna Engineering College, Ghaziabad, UP, INDIA.
69. Served as reviewer in “1st International Conference on Innovations in Clean Energy Technology (ICET-2020)” organized by Energy Centre, Maulana Azad National Institute of Technology, Bhopal, India, 27th-28th August, 2020.
70. Served as reviewer in International Conference on Computing Applications in Electrical & Electronics Engineering (ICCAEEE 2019) organized by Motilal Nehru National Institute of Technology Allahabad, UP, INDIA.
71. Served as reviewer in 6th IEEE Uttar Pradesh Section International Conference On Electrical, Electronics And Computer Engineering (UPCON-2019) organized by AMU, Aligarh, UP, INDIA.
72. Served as reviewer in Recent Developments in Control, Automation & Power Engineering (RDCAPE 2019) held from 10-11 October, 2019 organized by Amity University, Noida, UP, INDIA.
73. Served as Technical Program Committee (TPC) member in 2019 IEEE International Conference on Computing Power and Communications Technologies (GUCON 2019) Noida, UP, INDIA.
74. Served as Technical Program Committee (TPC) member and reviewer of International Conference on Computational and Characterization Techniques in Engineering and Sciences (CCTES18) held at Integral University, Lucknow, India.

Awards and Achievements:

1. Received “**Top Cited Article Award 2025**” from IET Power Electronics, Wiley for the research paper entitled “Review of recent trends of advancements in multilevel inverter topologies with reduced power switches and control techniques” published between 1 January 2024 – 31 December 2024.
2. Contributed as “**IEEE DAY 2025 AMBASSADOR**”.
3. Received “**Best Poster Award**” in the 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control (STPEC 2025), organised by the Department of Electrical and Electronics Engineering, National Institute of Technology Goa, held from 10th –13th December 2025.
4. Won the **3rd Position in ‘Run for Unity’** marathon organized by EBSB and NSS, NIT Srinagar on 31-10-2025 to commemorate Sardar Vallabhbhai Patel’s birth anniversary and to celebrate National Unity Day.
5. Won the **1st Position in ‘Swachhata Run Faculty’** organized under Swachhata Hi Seva (SHS 2025) from 17th Sept. to 2nd Oct., 2025 by NCC, NSS, EBSB and SHS, NIT Srinagar.
6. Received “**Typhoon HIL Best Paper Award Europe 2025**” for our paper entitled “Intelligent energy management scheme-based coordinated control for reducing peak load in grid-connected photovoltaic-powered electric vehicle charging stations” in 23rd International Symposium on Power Electronics Ee2025 held in Novi Sad/Belgrade, Serbia, from October 8-10, 2025. In this award, we have **received a Typhoon HIL 604 Emulator which costs around 50 lakhs** with fully integrated software toolchain with all toolboxes unlocked and unlimited installations for two years.
7. Acknowledged as the “**Highly Valued Associate Editor**” in the Journal of Modern Technology.
8. Nominated as **IEEE Day 2025 Ambassador**.
9. Ranked at **6th Position** in National Institute of Technology Srinagar by Scientific Index 2025.
10. Received “**Top Viewed Article Award**” from IET Generation, Transmission & Distribution, Wiley for the research paper entitled “Intelligent energy management scheme-based coordinated control for reducing peak load in grid-connected photovoltaic-powered electric vehicle charging stations” published between 1 January 2023 – 31 December 2023.
11. Received “**Top Viewed Article Award**” from IET Power Electronics, Wiley for the research paper entitled “Runge–Kutta optimization-based selective harmonic elimination in an H-bridge multilevel inverter” published between 1 January 2023 – 31 December 2023.

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12. Received “**Top Viewed Article Award**” from IET Renewable Power Generation, Wiley for the research paper entitled “Driving training-based optimization (DTBO) for global maximum power point tracking for a photovoltaic system under partial shading condition” published between 1 January 2023 – 31 December 2023.
13. Received “**Top Cited Article Award**” from IET Generation, Transmission & Distribution, Wiley for the research paper entitled “Intelligent energy management scheme-based coordinated control for reducing peak load in grid-connected photovoltaic-powered electric vehicle charging stations” published between 1 January 2023 – 31 December 2023.
14. Recognized as “**Best Teacher**” for Circuit Analysis based on Students Feedback.
15. Received “**Distinguished Researcher Award**” by Scientific Laurels in 2025.
16. Received “**Best Paper Award**” in the IEEE International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2025) held from January 16-18, 2025 at School of Engineering, Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India.
17. Received “**Best Paper Award**” in the 6th International Conference on Emerging Technologies: Micro to Nano (ETMN 2024) held at JMI, New Delhi, India during 26-27 Nov., 2024.
18. Won the **3rd Position in ‘Annual Cross-Country Run 2024’** on 1st June 2024 organized by Students Activity & Sports Center, NIT Srinagar.
19. Received “**Top Cited Articles 2022-2023 Award**” from IET Power Electronics, Wiley for the two research papers entitled “Runge Kutta optimization-based selective harmonic elimination in an H-bridge multilevel inverter” and “Performance analysis and control of a novel 7-level active neutral point clamped (ANPC) topology” published between 1 January 2022 – 31 December 2023.
20. Received “**Top Downloaded Article Award**” from IET Generation, Transmission & Distribution, Wiley for the research paper entitled “Active and reactive power control of grid-connected single-phase asymmetrical eleven-level inverter” published between 1 January 2022 – 31 December 2022.
21. Received “**Best Paper Award**” in the International Conference on Sustainable Power and Energy Research (ICSPER 2024) held at NIT Warangal, Warangal, India during 1 – 3 March, 2024.
22. Received “**Best Paper Award**” in IEEE International Conference on Recent Advances in Electrical, Electronics & Digital Healthcare Technologies (REEDCON) held at JMI, New Delhi, India during 01-03 May, 2023.
23. Won the **1st Position (Teaching Faculty) in ‘Run for Unity’** as a part of “Meri Mati Mera Desh” campaign organized by NSS, NIT Srinagar on 31-10-2023.
24. Nominated as **Executive Committee Member** of IEEE Nanotechnology Council & Magnetics Society on 7th May, 2023.
25. Received “**Award of Excellence in Research**” by VALLWAY International in 2023.
26. The students team headed by me have been ranked **5th Position in Traffic Hackathon - 2022**.
27. Elevated to the grade of **IEEE Senior member** on 24th February 2022. IEEE Senior Membership is an honor bestowed only to those who have made significant contributions to the profession.
28. Served as judge in “**IDEA PITCHING COMPETITION**” held on 3rd December 2020.
29. Served as proctor to guide and oversee competing teams for the **IEEEExtreme 14.0** programming competition that hosted +7,300 participants on 24th October 2020.
30. “**Best Paper Award**” in “International Conference on Renewable Power-2020” jointly organised by the Electrical Engineering Department, BGSB University, Rajouri, J&K & Electrical Engineering Department, ZHCET, AMU, Aligarh during July 13 & 14, 2020.
31. Established **IEEE Student Branch** in NIT Srinagar on 17th July, 2019 and serving as Counselor of it.
32. Won “**10 for 10 Typhoon HIL Award**” from Switzerland, Europe on April 08, 2019. In this award, I have received a **Typhoon HIL 402 Emulator which costs around 25 lakhs**.
33. “**Best Paper Award**” in International Conference on Signals, Machine and Automation (SIGMA’18), February 23-25, 2018, NSIT Delhi, India.
34. Awarded certificate of Appreciation for presenting a project model on “Design of an Automatic Solar Tracking System for Position Control of SPV Panel” during the two-day conference on “Electronics Maker – 2017” from July 1-2, 2017 at Netaji Subhas Institute of Technology, New Delhi.
35. Awarded certificate of appreciation for serving as “Campus Ambassador” for Techkriti’14, the “Annual Technical and Entrepreneurship festival of IIT Kanpur” held from 6th to 9th March 2014.

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36. Awarded certificate of appreciation for serving as “Campus Ambassador” for Techkriti’13, the “Annual Technical and Entrepreneurship festival of IIT Kanpur” held from 14th to 17th March 2013.
37. Qualified GATE 2012 examination.
38. Awarded certificate of appreciation for serving as “Campus Ambassador” for Techkriti’12, the “Annual Technical and Entrepreneurship festival of IIT Kanpur” held from 27th to 30th January 2012.
39. Awarded certificate of Honour for the valuable contribution as Head of Research & Development Cell in IEEE student branch, Z. H. C. E. T, Aligarh Muslim University, Aligarh.
40. Awarded certificate of Honour for judging the State-Level Techfest “BLITKKRIEG” organized by IEEE student branch and IETE Aligarh Centre held at Department of Electrical Engineering, Z.H.C.E.T, A.M.U, Aligarh on 2nd – 3rd April 2011.
41. Qualified GATE 2010 examination with 98.17 percentile.
42. Winner in Football Tournament held during Annual College Fest “ZARF 2K11” in Z.H.C.E.T, A.M.U, Aligarh.
43. Achieved 3rd Position in overall Solar conference during cognizance 2010 in IIT, Roorkee.
44. Achieved 1st Position in SPOTLIGHT during cognizance 2010 in IIT, Roorkee.
45. Achieved University Medal (Gold) for standing first in Diploma In Electrical Engineering.
46. Winner in IInd Inter-School District Football Tournament, Aligarh.

Responsibilities (Administrative/ Academic/ etc.):

1. GeM Coordinator, “To deal all the purchases related to GeM” Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 12-08-2025 to till date.
2. Library Committee Member, “Represent the Electrical Engineering Department in the Library”, NIT Srinagar, Srinagar (J&K) from 24-07-2025 to till date.
3. Deputy O/C of Virtual Instrumentation Laboratory, “To upgrade the Virtual Instrumentation Laboratory”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 23-04-2025 to till date.
4. B. Tech Project Coordinator, “To coordinate all the activities related to B. Tech. project work”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 18-02-2025 to till date.
5. Coordinator of Grand Finale of Smart India Hackathon 2024, held at NIT Srinagar, Srinagar (J&K) on 11-12 December 2024.
6. Organizing Committee Member of “Technical Events, Expert Talks and Technical Workshop Incharge” for Techvaganza 2024 (Technical Fest of NIT Srinagar), NIT Srinagar, Srinagar (J&K) for Session 2024-25 (from 04-09-2024 to 11-10-2024).
7. Member of Departmental Post Graduate Committee (DPGC), “To deal with all the activities related to PG Courses”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 07-05-2024 to till date.
8. Coordinator, 8th Semester, B. Tech. Students “To coordinate all the 8th Semester student’s academic activities” Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 20-03-2024 to till date.
9. Member, OBC Cell, “To enforce the orders of OBC reservations issued by the Government of India from time to time in posts and services of the Institute”, NIT Srinagar, Srinagar (J&K) from 18-08-2023 to till date.
10. Serving as Faculty In-charge of Electric Vehicle Club (EVision), NIT Srinagar, Srinagar (J&K) from 20-03-2023 to till date.
11. Faculty Incharge, Criterion 1 of NBA, “Guiding and verifying the documents related Criterion 1 of the Department”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 15-03-2023 to till date.
12. Coordinator, 3rd Semester, B. Tech. Students “To coordinate all the 3rd Semester student’s academic activities” Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 29-09-2022 to 10-09-2023.
13. Member, SUGC since 26-08-2022 to till date.
14. Member of Screening Committee, “To screen the applications for the post of Junior Assistant”, NIT Srinagar, Srinagar (J&K) on 01-07-2022.
15. PG Coordinator, “To coordinate all the activities related to PG Entrance Examination of Electrical Engineering Department”, NIT Srinagar, Srinagar (J&K) in 2022.

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16. Library Committee Member, “Represent the Electrical Engineering Department in the Library”, NIT Srinagar, Srinagar (J&K) from 30-12-2021 to 09-04-2023.
17. Coordinator, TLR, “For compilation of TLR data related to NIRF of the Institute”, NIT Srinagar, Srinagar (J&K) from 27-09-2021 to till date.
18. Chairman (Faculty Rooms), “To verify the assets available in the Faculty rooms”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) on 09-09-2021.
19. Faculty Incharge (Student Diversity section of India Today), “Preparation of data for India Today-MDRA best University ranking 2021”, NIT Srinagar, Srinagar (J&K) for Session 2020-21 on 07-04-2021.
20. Coordinator, 6th Semester, B. Tech. Students “To coordinate all the student academic activities” Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 01-12-2020 to 09-06-2021.
21. Coordinator and Member, TLR, “For compilation of TLR data related to NIRF”, NIT Srinagar, Srinagar (J&K) from 24-09-2020 to 26-09-2021.
22. Coordinator/SPOC, SWAYAM/NPTEL Local Chapter, “Establishing SWAYAM courses in curricula of different departments of the Institute” NIT Srinagar, Srinagar (J&K) from 17/08/2020 to till date.
23. Member Secretary, SC/ST/PWD/OBC Cell, “To enforce the orders of reservations issued by the Government of India from time to time in posts and services of the Institute”, NIT Srinagar, Srinagar (J&K) from 03-03-2020 to 17-08-2023.
24. Member, Bid Evaluation committee, “To evaluate the bids of Virtual Instrumentation Laboratory and Computation Laboratory”, NIT Srinagar, Srinagar (J&K) on 19-12-2019.
25. Faculty Incharge, Criterion 1 of NBA, “Guiding and verifying the documents related Criterion 1 of the Institute”, NIT Srinagar, Srinagar (J&K) from 23-12-2019 to 08-08-2021.
26. Departmental Coordinator for Equipment Purchase, “Assists Departmental Purchase Committee in purchasing and maintaining the records of the equipments”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 17-12-2019 to 25-03-2021.
27. Member, e-tendering, “To e-tender all the documents related to Electrical Engineering Department”, NIT Srinagar, Srinagar (J&K) on 16-12-2019.
28. Coordinator of NIRF 2020, “To collect all the Departmental data related to NIRF” Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 20-11-2019 to 26-09-2021.
29. Member (Registration & Program Arrangement Committee and Accommodation Committee) in FDP on Outcome Based Education (OBE), NIT Srinagar, Srinagar (J&K) for NBA process (from 15-05-2019 to 22-05-2019).
30. Faculty Incharge/ Counselor, IEEE Student Branch, “To deal with all the activities of IEEE Student Branch” NIT Srinagar, Srinagar (J&K) from 17-07-2019 to 09-06-2021.
31. Incharge Faculty/ Chairman (Discipline, Technical event Management) in Techvaganza’2019 (Fest of NIT Srinagar), NIT Srinagar, Srinagar (J&K) for Session 2018-19 (from 19-04-2019 to 05-05-2019).
32. Incharge Tea Club, “To deal all the activities related to Tea Club”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 26-03-2019 to 09-06-2021.
33. Member of Departmental Admission Committee (DAC), Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from Spring 2019 session.
34. Member (Publicity and Printing Committee) for conduct of STC/ FDP/ Workshops/ Seminars/ Conferences conduct with-in Department, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) on 18-03-2019.
35. Faculty Incharge (Criterion 7 of NBA i.e. Continuous Improvement), “Preparation of NBA related documents of Criterion 7”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 26-02-2019 to 08-08-2021.
36. Faculty Co-Incharge (Criterion 1 of NBA i.e. Vision and Mission of the Programme Educational Objectives), “Preparation of NBA related documents of Criterion 1”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 26-02-2019 to 08-08-2021.
37. GeM Coordinator, “To deal all the purchases related to GeM” Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 18-02-2019 to 13-02-2020.
38. Website Coordinator, “To upgrade the Electrical Engineering Departmental website from time to time” Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 28-11-2018 to 18-02-2020.
39. Coordinator (Peer Learning Groups Students), “To develop Peer Learning Group of 10-12 Students for joint study and joint projects”, NIT Srinagar, Srinagar (J&K) from 05-12-2018 to 30-06-2021.

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40. Member of Departmental Post Graduate Committee (DPGC), “To deal with all the activities related to PG Courses”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 28-11-2018 to 29-11-2020.
41. Deputy O/C of Virtual Instrumentation Laboratory, “To upgrade the Virtual Instrumentation Laboratory”, Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 01-11-2018 to 29-08-2023.
42. Member of Departmental Faculty Board (DFB), Department of Electrical Engineering, NIT Srinagar, Srinagar (J&K) from 01-11-2018 to till date.
43. Member of Departmental Survey Committee, “To survey the performance of all the new items purchased by the Department” Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 17-03-2018 to 22-10-2018.
44. Developed Electric Drives Laboratory and served as Faculty Incharge of Electric Drives Laboratory, “Managing all the functionalities of Electric Drives Laboratory” Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 15-03-2018 to 22-10-2018.
45. NBA Co-coordinator, “Preparation of NBA related documents of School of Engineering & Technology (SOET)”, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 27-01-2018 to 22-10-2018.
46. Departmental Research Committee (DRC) Member, “To deal all the activities related to research in the Department” Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 18-01-2018 to 22-10-2018.
47. Examination Superintendent of B. Tech, School of Engineering & Technology, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K for Autumn Session, 2017.
48. MOOCs Coordinator, “Establishing Massive Open Online Courses (MOOCs) in curricula of different schools of the University”, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 14-03-2017 to 22-10-2018.
49. NBA Coordinator, “Preparation of NBA related documents of Department of Electrical & Renewable Energy Engineering (EREE)”, Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 02-03-2017 to 26-01-2018.
50. Examination Coordinator of EREE Department, “Smooth conduct of Examination in the Department” Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 05-02-2017 to 22-10-2018.
51. Member of Departmental Purchase Committee, “To purchase the items for the Department” Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 28-10-2016 to 22-10-2018.
52. Time Table Coordinator, Bachelor of Engineering (BE), Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 03-10-2016 to 22-10-2018.
53. Faculty Incharge of Power Electronics Laboratory, “Upgradation of the Power Electronics Laboratory” Department of EREE, SOET, Baba Ghulam Shah Badshah University (BGSBU), Rajouri, J & K from 03-10-2016 to 22-10-2018.

Organized Workshop/ Short Term Course/ Training/ Conference etc.:

1. Organized one day National Seminar on “Integration in Indian Languages” at National Institute of Technology Srinagar, J&K, India on 19 Sept., 2025.
2. Organized the 2nd International Conference on Sustainable Power and Energy Research (ICSPER 2025) at National Institute of Technology Srinagar, J&K, India from July 11-12, 2025 jointly organized by Department of Electrical Engineering, National Institute of Technology Srinagar, J&K, India and National Institute of Technology Warangal, Telangana, India as Organizing Secretary.
3. Organized the Two Days National Conference on Innovations in Science & Technology (IST-2024) from 28-29, November 2024 at National Institute of Technology Srinagar, Srinagar (J&K), India as Organizing Secretary.
4. Organized the 2nd International Conference on Computational and Characterization Techniques in Engineering and Sciences (CCTES-24) from 15-16 November 2024 at Integral University, Lucknow, U.P. India as Organizing Secretary.
5. Organized one-week Short Term Course on “Recent Trends and Applications of Nanotechnology in Engineering” from 22 – 26 July, 2024 at NIT Srinagar, Hazratbal, Srinagar in collaboration with IEEE

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- Nanotechnology Council & Magnetic Society Joint Chapter, IEEE Delhi Section; Indian Nanoelectronics User Program (INUP), IIT Delhi and IEEE Circuits and Systems Society Delhi Chapter.
- Organized the International Conference on Electrical Systems & Automation (ICESA 2023) from 29 to 30, May 2023 at the faculty of science and technology, Al Hoceïma, Morocco as Publication Chair.
 - Organized one week online Workshop on "Patent Filing" from 20th – 24th June, 2022 at Department of Electrical Engineering, NIT Srinagar, Hazratbal, Srinagar.
 - Organized one week online Short Term Course on "Advanced Control of Standalone Energy Systems" from 13th – 17th June, 2022 at Department of Electrical Engineering, NIT Srinagar, Hazratbal, Srinagar.
 - Organized one week online Workshop on "Design and Analysis Tools to Explore and Visualize 2D/3D Concepts" from 04-08 January, 2021 at IEEE Student Branch, NIT Srinagar, Hazratbal, Srinagar.
 - Organized one week online Short Term Course (STC) on "4th Generation Hardware-in-the-Loop Simulation Tool for Industry 4.0 Using Typhoon HIL" from 14-18 October, 2020 at IEEE Student Branch, NIT Srinagar, Hazratbal, Srinagar.
 - Organized one week Short Term Course on "Renewable Energy in Science, Engineering & Technology – 2019 (RESET - 2019)" from 1st – 5th July, 2019 at NIT Srinagar, Hazratbal, Srinagar.
 - Organized one week Short Term Course on "Introduction to MATLAB, PSCAD and LaTeX for Researchers" from 24th – 28th June, 2019 at NIT Srinagar, Hazratbal, Srinagar.
 - Organized one week workshop on "Introduction and Basics of Programming skill using MATLAB and PYTHON" from 27th – 31st May, 2019 at NIT Srinagar, Hazratbal, Srinagar.
 - Organized one week workshop on "Power Electronics: Applications in Renewable Energy Systems" from 22nd – 26th April, 2019 at NIT Srinagar, Hazratbal, Srinagar.
 - Organized two-day workshop on "Outcome based Education (OBE)" held at School of Engineering and Technology, Baba Ghulam Shah Badshah University, Rajouri, J&K on March 19-20, 2018 under TEQIP-III.
 - Organized "Project Model Exhibition" on Founders Day Celebration 2017 at Department of EREE, SoET, BGSBU, Rajouri on 14th Dec., 2017.
 - Organized "3rd Inter State (North Zone) Declamation Contest" at Baba Ghulam Shah Badshah University, Rajouri from November 21-22, 2017.
 - Coordinated one week AICTE recognized Short Term Course on "MATLAB and LABVIEW with its Hardware Interface" through ICT held from 29 Jan., 2018 to 02 Feb., 2018 at Power Electronics Lab, SOET, BGSBU.
 - Organized an Industrial Interaction on "Electrical Systems in Thermal Power Plant" at Department of EREE, SoET, BGSBU, Rajouri on 11th May, 2017.
 - Organized one week workshop on "Basics of MATLAB Programming & Simulink" from 15th – 19th November, 2016 at SoET, BGSBU, Rajouri.
 - Organized an event "ALL INDIA PAPER PRESENTATION COMPETITION 2011 (AIPPC - 2011)" through IEEE student branch and IETE Aligarh Centre held at Department of Electrical Engineering, Z.H.C.E.T, A.M.U, Aligarh from 15-16 October, 2011.
 - Organized a workshop on "Graphic Software and Introduction to Animation" through IEEE student branch held at Department of Electrical Engineering, Z.H.C.E.T, A.M.U, Aligarh on 17th September 2011.
 - Organized an event "SYMBOLA" in IEEE Techfest organized by IEEE student branch and IETE Student Chapter held at Department of Electrical Engineering, Z.H.C.E.T, A.M.U, Aligarh from 2nd – 3rd April 2011.

Ph.D. Supervised:

- Ms. Saira Manzoor, "Coordinated Control of Variable Frequency Transformer and Energy Storage System(s) for Improved Load Frequency Control of Multi-Source Interconnected Power System", July 2024.
- Mr. Aabid Hussain Sheikh, "Comprehensive Analysis of Variable Frequency Transformer and its Application in Interconnection of Power Systems", July 2024.
- Design, Analysis and Implementation of DC-DC Converters for Electric Vehicle On-board Charger, December 2025.

M. Tech. Projects Supervised:

1. Analysis of Bidirectional Interleaved Two Stage Converter Based Electric Vehicle Charger (2024-25)
2. Impact of Renewable Energy Integration on Power System Oscillations and its Counter Measures (2023-24)
3. Modelling and Analysis of an Off-board Charger for Plug-in Electric Vehicles (2023-24)
4. Selective Harmonic Elimination in Reduced Switch Nine Level Inverter Having Quadruple Boosting Ability Using Particle Swarm Optimization Technique (2023-24)
5. A Novel Seven Level Triple Boost Inverter with Least Switch Count (2022-23)
6. A Grid Integrated Reduced Switch Nine Level Inverter for Renewable Energy Application (2022-23)
7. Comprehensive Analyses and Comparison of DAB and CLLC DC-DC Converter (2022-23)
8. Active and Reactive Power Control of SPV Based Microgrid (2021-2022)
9. Integration of Solar PV System with the existing Power System using dq0 transformation (2020-2021)
10. Modeling and Analysis of Standalone Wind-Diesel Energy Systems (2020-2021)
11. Modelling and Analysis of Hybrid PV-Wind-Diesel based Standalone Energy System (2020-2021)
12. Control of a Three-Phase Off-Board Battery Charger For Electric Vehicles With Vehicle To Grid (V2G) Technology (2020-2021)
13. Energy Transfer Between Grid and Vehicle Using Bidirectional Converter (2020-2021)
14. Simultaneous AC-DC Power Transmission System (2020-2021)
15. Effect of Partial Shading on PV Array and Its Mitigation Techniques (2019-20)
16. Hybrid Electric Vehicle Using VFT (2019-20)

B. Tech. Projects Supervised:

1. Design and Analysis of MPPT Using Archimedes Optimization Algorithm (2024-25)
2. MPPT for A Photovoltaic System Using PSO-AWDV Algorithm (2024-25)
3. Design and Analysis of T-type Five Level Dual Active Bridge DC-DC Converter (2023-24)
4. Real Time Analysis of Multilevel Dual Active Bridge Converter (2023-24)
5. Modelling and Analysis of an Off-board Bidirectional Charger for Plug-in Electric Vehicles (2022-23).
6. Implementation of Digital Filters on FPGA (2022-23).
7. Modelling and Analysis of Bidirectional Electric-Drive-Reconstructed Onboard Converter for Electric Vehicles (2020-21).
8. GSM Based Smart Energy Meter Arduino, NIT Srinagar (2018-19).
9. Development and Analysis of Hybrid Electric Vehicle, BGSBU (2017-18).
10. Power Generation Using Footsteps, BGSBU (2017-18).
11. Design of an Automatic Solar Tracking System for Position Control of SPV Panel, BGSBU (2016-17).
12. Design of Analysis of Standalone Single Phase Solar Inverter, BGSBU (2016-17).

Paper Presented in Conferences/ Symposia/ etc.:

1. Presented a paper in 3rd International Conference on Sustainability: Developments and Innovations (ICSIDI 2026) organized by the College of Engineering at Prince Sultan University, and supported by strategic partners such as ASCE, ASEE, Bechtel, IEEE Smart Cities, AHK, USGBC, Deltares, and others during 8-12 February, 2026.
2. Presented a paper in 3rd IEEE International Conference on Power Electronics and Energy (ICPEE 2025) organized by the School of Electrical Engineering, KIIT University, Bhubaneswar, Odisha, India during 14-16 December, 2025.
3. Presented three papers in 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control (STPEC 2025), organised by the Department of Electrical and Electronics Engineering, National Institute of Technology Goa, held from 10th –13th December 2025.
4. Presented two papers in Fourth IEEE Delhi Section International Conference on Recent Smart Technologies in Engineering for Sustainable Development (DELCON2025) held during 31 Oct-2 Nov., 2025 organized by Department of Electrical Engineering, JMI, New Delhi, India.
5. Presented three papers in IEEE International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2025) held from January

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- 16-18, 2025 at School of Engineering, Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India.
6. Presented two papers in the 11th IEEE International Conference on Power Electronics Drives and Energy Systems (PEDES 2024) held from 18 - 21 December 2024 at National Institute of Technology Karnataka, Surathkal, India.
 7. Presented two papers in the International Conference on Computational and Characterization Techniques in Engineering and Sciences (IC3TES-22) to be held at Integral University, Lucknow, India from December 12-13, 2022.
 8. Presented a paper in the 6th International Conference on Emerging Technologies: Micro to Nano (ETMN 2024) held at JMI, New Delhi, India during 26-27 Nov., 2024.
 9. Presented two papers in the 2nd International Conference on Computational and Characterization Techniques in Engineering and Sciences (CCTES-24) from 15-16 November 2024 at Integral University, Lucknow, U.P. India.
 10. Presented three papers in IEEE 4th International Conference on Sustainable Energy and Future Electric transportation (SEFET-2024) held during 31 July - 03 August, 2024, organized by the Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad, Telangana, India.
 11. Presented a paper in 2nd International Conference on Machine Intelligence for Research & Innovations (MAiTRI-2024) take place from 21 to 23 of June, 2024, at NIT Srinagar, India.
 12. Presented a paper in 3rd International Conference on Power Electronics, Intelligent Control, and Energy Systems (IEEE-ICPEICES-2024) take place from 26th to 28th of April, 2024, at Delhi Technological University, Delhi, India.
 13. Presented two papers in the International Conference on Sustainable Power and Energy Research (ICSPER 2024) held at NIT Warangal, Warangal, India during 1 – 3 March, 2024.
 14. Presented a paper in the 20th IEEE INDIA COUNCIL CONFERENCE (INDICON) 2023 held at CMR Institute of Technology, Hyderabad (Telangana), India from 14th to 17th December, 2023 in association with IEEE Hyderabad Section.
 15. Presented two papers in 2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC) organized by Kalinga Institute of Industrial Technology, Odisha, Bhubaneswar, India from 10/12/2023 to 13/12/2023.
 16. Presented a paper in the 2023 International Conference on Technology and Policy in Energy and Electric Power (ICT-PEP 2023) that was held in Jakarta, Indonesia, 2-3 October, 2023.
 17. Presented two papers in the IEEE 3rd International Conference on “Sustainable Energy and Future Electric Transportation” (SEFET-2023), organized by Department of Electrical Engineering, Institute of Technical Education & Research, Faculty of Engineering & Technology, Siksha ‘O’ Anusandhan Deemed to be University, Bhubaneswar, Odisha, India during 9th – 12th August, 2023.
 18. Presented a paper in the International Conference on Recent Advances in Electrical, Electronics & Digital Healthcare Technologies, 2023 (REEDCON 2023) during 01st – 03rd May, 2023 at Jamia Millia Islamia, New Delhi.
 19. Presented a paper in 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), organized on March 11-12, 2023 at The Maldives National University, Male City, Maldives.
 20. Presented two papers in International Conference on Power, Instrumentation, Energy, and Control (PIECON-2023) to be held at AMU, Aligarh, India from 10-12 February, 2023.
 21. Presented a paper in the 2022 2nd Asian Conference on Innovation in Technology (ASIANCON) held from 26th – 28th August, 2022 organized by PCCOER, Pune, India.
 22. Presented a paper in the 1st IEEE International Conference on Sustainable Technology for Power and Energy Systems (STPES 2022) held from 4-6 July, 2022 organized by National Institute of Technology Srinagar and Indian Institute of Technology Jammu.
 23. Presented a paper in the 2nd IEEE International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET 2022) held at NIT Patna, India during 24 – 25 June, 2022.
 24. Presented a paper in the 2021 IEEE Sponsored International Conference on Emerging Trends in Industry 4.0 (ETI 4.0) held at OP Jindal University, Raigarh, Chhattisgarh, India during 19 - 21, May 2021.

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25. Presented two papers in International Conference on Computational Intelligence and Energy Advancements (ICCIEA-2020), Vaagdevi College of Engineering, India and Department of Information Technology, Faculty of Computing and Information Technology, Rabigh, King Abdulaziz University, Saudi Arabia, December 12-13, 2020.
26. Presented a paper in 9th International Conference on Computing, Communication and Sensor Networks, Kolkata, West Bengal, India, October 17-18, 2020.
27. Presented a paper in 8th International Symposium on Fusion of Science & Technology (ISFT-2020), YMCA, Faridabad (NCR), India, January 06-10, 2020.
28. Presented a paper in 2nd International Conference on Energy System, Drives & Automations (ESDA-2019), December, 28th- 29th, 2019, Kolkata, West Bengal, India.
29. Presented a paper in International Conference on “Power Electronics, Control and Automation” at Jamia Millia Islamia, New Delhi, 16-17 November, 2019.
30. Presented two papers in “National Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES-19)”, REC Ambedkar Nagar, U.P., India, 6-7 September, 2019.
31. Presented a paper in “International Conference on Automation Science and Engineering (ICASE-19)”, National Institute of Engineering and Research (NIER), Ghaziabad, U.P., India, 2nd March 2019.
32. Presented a paper in “IEEE International Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES-18)” held at Integral University, Lucknow on 14-15 September, 2018.
33. Presented two papers in “International conference on New Technological Opportunities in Networking and Sciences,” held at Pithoragarh, India, 8-10 June 2018.
34. Presented a paper in National Conference on “Recent Advances in Computer Science and IT (NCRACIT)” held at SoET, BGSBU, J&K on 24-25 April, 2018.
35. Presented two papers in “International conference on Signals, Machines and Automation (SIGMA 2018),” held at NSIT, Delhi, India, 23-25 Feb., 2018.
36. Presented four papers in “6th World Conference on Applied Science, Engineering & Technology,” Goa, India, January 2-3, 2018.
37. Presented paper in “International Conference on Intelligent Sustainable Systems (ICISS 2017),” held at SCAD Institute of Technology, Palladam, Tirupur, India, 7-8 Dec. 2017.
38. Presented a paper in “IEEE 2017 International Conference on Computing Methodologies and Communication (ICCMC),” held at Erode, India, 18-19 July, 2017.
39. Presented a paper in “National Conference on Future Innovations & Research In Science & Technology,” held at IIMT Engineering College, Meerut, India, 22-23 April, 2017.
40. Presented a paper in “IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES),” held at IIT Bombay, India, 16-19 Dec., 2014.
41. Presented a paper in “IEEE Students' Conference on Electrical, Electronics and Computer Sciences,” held at MANIT, Bhopal, India, 1-2 March, 2014.
42. Presented a paper in “Fourth International Joint Conference on Advances in Engineering and Technology,” held at NCR, India, 13-14 Dec., 2013.
43. Presented a paper in “IEEE International Conference on Energy Efficient Technologies for Sustainability (ICEETS’13),” held at Nagercoil, Tamilnadu, India, 10-12 April, 2013.
44. Presented a paper in “3rd International Conference on Advanced Computing & Communication Technologies (ACCT 2013),” held at Rohtak, Haryana, India, 6-7 April, 2013.
45. Presented a paper in “IEEE Fifth POWER INDIA Conference (PICONF 2012),” held at Murthal, Haryana, India, 19-22 Dec., 2012.
46. Presented a paper in “IEEE Fifth India International Conference on Power Electronics (IICPE 2012),” held at DTU, Delhi, India, 6-8 Dec., 2012.
47. Presented a paper in “International Conference on Emerging Trends in Engineering and Technology,” held at TMU, Moradabad, India, 6-7 April, 2012.
48. Presented a paper in “IEEE - International Conference on Advances in Engineering, Science and Management (ICAESM),” held at Tamilnadu, India, 30-31 March, 2012.
49. Presented two papers in "Second International Joint Conference on Advances in Engineering and Technology (AET 2011)" held at Noida, U.P., India, 20-21 Dec., 2011.

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50. Presented a paper in National conference on “Emerging Trends in electrical and Electronics Engineering” held at KNIT, Sultanpur, India on 26-27 Nov., 2011.
51. Presented a paper in "National conference on Sustainable Development in Energy Sector" held at University of Petroleum & Energy Studies, Dehradun on 8th & 9th April, 2011.
52. Presented a paper in "Power, Instrumentation & Energy Conference" held at Dept. of Electrical Engg., AMU, Aligarh, India, 12-13 Feb., 2011.
53. Presented a paper in "IEEE Indian International Conference on Power Electronics (IICPE)" held at Delhi, India, 28-30 Jan., 2011.
54. Presented a paper in "International Joint Conference on Advances in Engineering and Technology (AET 2010)" held at Trivandrum, Kerala, India, 22-23 Dec., 2010.

Abroad Attended Conferences:

- Attended “First Taibah University International Conference on Computing and Information Technology,” Madinah, Kingdom of Saudi Arabia, in 19-21/4/1433 Hijri (12-14 March, 2012).

Attended Workshop/ Short Term Course/ Training/ etc.:

1. Participated in the SWAYAM NPTEL SPOC FELICITATION WORKSHOP, NORTH ZONE organized by Indian Institute of Technology Kanpur on 17th January, 2026.
2. Participated in the One Week Workshop & Exhibition on “Solar Energy Technologies and Applications (SETA-2025)” organized by NIT Srinagar and sponsored by BIS which held from 10th to 14th November, 2025.
3. Participated in the Painting Competition organized under Swachhata Hi Seva (SHS 2025) from 17th Sept. to 2nd Oct., 2025 by NCC, NSS, EBSB and SHS, NIT Srinagar.
4. Attended the 7-Days Online Faculty Development Program on “Emerging Trends in Engineering for Sustainable Development (ETESD'22)” which was organized during 06-04-2022 to 14-04-2022 by School of Engineering & Technology, IIMT University, Meerut.
5. Attended the “Half-Day Workshop on Electric Vehicle Integration - Impact and Challenges” which was held on March 1st, 2022, at Qatar University, Qatar.
6. Participated in one week online international short term course on “Microgrid Opportunity: Renewable Energy Resources and Buildings” organised by Department of Electrical Engineering, Faculty of Engineering, Dayalbagh Educational Institute, Dayalbagh, Agra, India, from June 16-20, 2020.
7. Participated in one week Short Term Training programme on “Electric Vehicle Technology” through ICT from 26-08-2019 to 30-08-2019.
8. Attended the IEEE Authorship Workshop - India on topic “How to publish a Technical Paper with IEEE” on 12th September, 2019 at Amity University, Noida.
9. Attended one week Short Term Course on “Advanced Materials Processing and Characterization” from 22nd – 26th July, 2019 at NIT Srinagar, Hazratbal, Srinagar.
10. Attended one week Short Term Course on “Emerging Electron Devices for Integrated Circuit Applications” from 15th – 19th July, 2019 at NIT Srinagar, Hazratbal, Srinagar.
11. Attended one week Short Term Course on “Introduction to MATLAB, PSCAD and LaTeX for Researchers” from 24th – 28th June, 2019 at NIT Srinagar, Hazratbal, Srinagar.
12. Attended one week Faculty Development Programme on “Outcome based Education” from 18th – 22nd May, 2019 at NIT Srinagar, Hazratbal, Srinagar (J & K).
13. Attended one week Faculty Development Programme on “PEDAGOGY” from 1-5 April, 2019 at NIT Srinagar, Hazratbal, Srinagar (J & K).
14. Attended four weeks “Orientation Program” from 18th July 2018 to 14th August 2018 held at UGC HRDC, AMU, Aligarh.
15. Attended MHRD-TEQIP-KITE one week TEQIP-III “Summer Training Program on Active Learning Workshop” at IIT Bombay from 04-06-2018 to 08-06-2018.
16. Attended two-day workshop on “Outcome based Education (OBE)” held at School of Engineering and Technology, Baba Ghulam Shah Badshah University, Rajouri, J&K on March 19-20, 2018 under TEQIP-III.
17. Attended one week Short Term Course on “Recent Advances in Power & Energy Engineering” from 12-16 March 2018 at EREE, SOET, BGSBU.

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18. Attended in one week AICTE recognized Short Term Course on “MATLAB and LABVIEW with its Hardware Interface” through ICT held from 29 Jan., 2018 to 02 Feb., 2018 at Power Electronics Lab, SOET, BGSBU.
19. Attended in one week AICTE recognized Short Term Course on “Power Electronics and its Applications” through ICT from 27-11-2017 to 01-12-2017.
20. Attended in one week AICTE recognized Short Term Course on “Power Quality monitoring and Analysis” through ICT held from 30 Oct., 2017 to 03 Nov., 2017 at Power Electronics Lab, SOET, BGSBU.
21. Attended in one week AICTE recognized Short Term Course on “Silab Programming” through ICT from 21-08-2017 to 25-08-2017.
22. Attended one week workshop on “Basics of MATLAB Programming & Simulink” from 15th – 19th November, 2016 at SoET, BGSBU, Rajouri.
23. Done four days RT-LAB BERTA Training from 04-04-2016 to 07-04-2016.
24. Successfully completed six weeks Technology Based Entrepreneurship Development Programme (TEDP) from 01-11-2011 to 09-12-2011 under DST-NIMAT Project 2011-12.
25. Attended “Disaster Management Workshop” organized in “TAMEER ‘09”, The Annual Techfest of Department of Civil Engineering, ZHCET, AMU, Aligarh held from 9th – 11th Oct., 2009.

Professional Membership:

- Senior Member of **Institute of Electrical and Electronics Engineering (IEEE)**, USA (91272267).
- Member of **The Institution of Engineers (IEI)**, India since March 2022 (M-1753864).

Languages Known:

- English: Read, Write & Speak
- Hindi: Read, Write & Speak
- Urdu: Read, Write & Speak
- Arabic: Read & Understand

Scholarship Received:

- MHRD Scholarship during Ph.D. from July 2012 to June 2016.
- GATE Scholarship during M. Tech. during sessions 2010 - 2012.
- Three times awarded Central Minority - Merit cum Means Scholarship during session 2007 - 2010 by central government of India.
- One time awarded U.P. Minority Scholarship during session 2006 - 2007 by state government of U.P.
- Three times awarded University Merit Scholarship during session 2003 - 2006.

Personal Traits:

Self motivated, hard working, firm determined and enthusiastic.

Personal Profile:

Name : Farhad Ilahi Bakhsh
Father's Name : Mr. Ilahi Bakhsh
Mother's Name : Mrs. Umran Nisha
Sex : Male
Marital Status : **Married**
Nationality : Indian
Hobbies : Loving nature and playing football.

Declaration:

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

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Place: Srinagar, J & K

(Dr. Farhad Ilahi Bakhsh)