Dr. Zahoor Ahmad Ganie

Assistant Professor (SG)
Department of Electrical Engineering
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PROFILE

Electrical engineering professional with keen problem-solving and analytical skills. Strong interpersonal, planning, and organizational skills as demonstrated at various professional activities. Contribute independently, or as part of a team, to coordinate and manage academics and research activities.

PROFESSIONAL QUALIFICATION

- Doctor of Philosophy (**PhD**) in ***(Power Electronics & Drives)***

Department of Electrical Engineering, National Institute of Technology Srinagar (NIT Srinagar)
Thesis: *Low switching frequency pulse width modulation techniques of voltage source converters for high power applications*

- Master of Technology (**M. Tech**) in (**Electrical Power & Energy Systems)**

Department of Electrical Engineering, National Institute of Technology Srinagar (NIT Srinagar)
Dissertation: *Power quality improvement of grid connected wind energy systems using STATCOM*

- Bachelor of Engineering (**B.E**) in Electrical Engineering ***University of Jammu****, India*

PROFESSIONAL EXPERIENCE

- **Assistant Professor** – Department of Electrical Engineering *01-04-2010 -* ***Till date***
  Islamic University of Science and Technology, Kashmir, J&K, India
- **Lecturer** – Department of Electrical Engineering 08-08-*2007 to 31-03-2010*
  *National Institute of Technology Srinagar (****NIT Srinagar****)*

AREA OF INTEREST

Power Electronics, Electrical Machines and Electrical Drives, Pulse width modulation (**PWM**) control of Power Electronics Converters, Multi-level multi-phase Power converter design and control, Reduced Switch Count Multi-Level Converters

RESEARCH GRANTS/PROJECTS

Co-Principal Investigator, JKSTI&C sponsored research project titled "Generalized mathematical models for decision making problems using fuzzy algorithms" of **12.30 lakhs** issued vide JKSTIC, DST, J&K, JKST&IC/SRE/921-25 **Dated: 29-01-2024**

Project Director. "Impact of PM Ujjwala Yojana in empowering Households: A study on Jammu and Kashmir UT sponsored by ICSSR of **13 Lakhs** issued vide F.No. 144/CRP-2023-1950/PMUY/SCD Dated: **11-09-2023**

Principal Investigator, JKSTI&C sponsored research project titled "Data Gathering Analysis and Protection of Privacy Through Randomized Response Algorithm" of **6.30 lakhs** issued vide JKSTIC, DST, J&K, JKST&IC/SRE/397-400 Dated: **30-11-2021**

Co-Principal Investigator, Research project titled "Design and development of multiport reduced switch count converter and control techniques for renewable energy applications" of **30.00 lakhs** submitted to **SERB-SURE**

Principal Investigator, Research project titled "Social-Cultural Influences on Communicative competence in Multicultural Engineering Education: A case study of women learners" of **25.00 lakhs** submitted to ICSSR

FDPS/WORKSHOPS ORGANISED

[1] Organized **one-week AICTE sponsored ATAL FDP** on "*Grid Decarbonization and Distributed Energy Resources to Mitigate Climate Change*" at Islamic University of Science and Technology, Awantipora, J&K from **18-23 December 2023**

[2] Organized one-week Short Term Course (STC) on "*FPGA programming in Power and Control applications*", in collaboration with Cranes Software International limited at Islamic University of Science and Technology, Awantipora, J&K from **10-14 September 2018**.

[3] Submitted a proposal to organize **one-week AICTE sponsored ATAL FDP** on "Electric Vehicles Integration in the Electric Power System with Intermittent Energy Sources" at Islamic University of Science and Technology, Awantipora, J&K from **23-28 September 2025**. Application number: **1714476105**

RESEARCH PUBLICATIONS

[1] Tanveer Ahmad Tarray, **Zahoor Ahmad Ganie** "AN INVENTIVE METHOD FOR ESTIMATING RARE AND SENSITIVE VARIABLES USING A RANDOMIZED RESPONSE METHODOLOGY" Journal of Applied Mathematics & Informatics Vol. 43 (**2025),** No. 2, pp. 277 – 286, **SCI** Indexed

[2] **Ganie, Zahoor Ahmad,** Zahid Gulzar Khaki, Tanveer Ahmad Tarray, Gazala Salam, and Eid Sadun Alotaibi. "Optimization of transportation efficiency through fuzzy logic and LINGO software." *AIP Advances* 15, no. 2 **(2025). SCI** Indexed

[3] Anees, Ahmed Sharique, Salman Ahmad, Rayes Ahmad Lone, and **Zahoor Ahmad Ganie**. "Innovative solutions for sustainable space heating: Integrating solar air heaters and low-cost retrofitting windows for hilly region of Kashmir." *e-Prime-Advances in Electrical Engineering, Electronics and Energy* 10 **(2024):** 100872. **SCOPUS** Indexed

[4] TA Tarray, ZG Khaki**, ZA Ganie**, A Sultan, F Danish, O Albalawi, Tri-Phase Implementation of an Innovative Fuzzy Logic Approach for Decision-Making, Symmetry Journal **(2024)** 16 (8), 994, **SCI** Indexed

[5] AH Ganie, TA Tarray, **ZA Ganie**, NA Koka, RA Alahmadi, An innovative fuzzy logic for decision making that employs the randomized response technique Pak. Journal of Statistics **(2024)** Vol. 40 (1), pp.5-16

[6] Tanveer Ahmad Tarray, **Zahoor Ahmad Ganie** "AN ADROIT UNRELATED QUESTION RANDOMIZED RESPONSE MODEL WITH SUNDRY STRATEGIES" Journal of Applied Mathematics & Informatics Vol. 41**(2023),** No. 6, pp. 1377 – 1391 **SCI** Indexed

[7] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat and Salman Ahmad, Wide band solution and sensitivity analysis for lower order harmonics control in multilevel converter, International Journal of Power Electronics Vol. 18 (**2023)**, No. 2, Page No. 176-200 https://doi.org/10.1504/IJPELEC.2023.132970, **SCI** Indexed

[8] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat and Salman Ahmad, A novel adaptive invasive weed optimization technique and least square regression for harmonics minimization in standalone PV applications, International Journal of Circuit Theory and Applications Vol. 51 **(2023)**, Issue 4 Page No. 1642-1664 DOI: 10.1002/cta.3483 **SCI** Indexed

[9] **Zahoor Ahmad**, Tanveer A. Tarray and Khalid Ul Islam, A New Data Gathering Exponential Type Ratio Estimator for the Population Mean Journal of Scientific Research & Reports Vol. 28(10): 148-153, (**2022)**; Article no. JSRR.86083 Page No. 148-153

[10] Salman Ahmad, Rahim Uddin, **Zahoor Ahmad Ganie**, Ahmed Sharique Anees, Farhad Ilahi Bakhsh

(2022) "Low frequency operation and dsPIC micro-controller implementation for multilevel quasi Z-source inverter in photovoltaic application", Distributed Generation & Alternative Energy Journal, Vol. 38 N0. 4 (2022) Page No. 929-958, **SCI** Indexed

[11] **Zahoor Ahmad**, Baziga Youssuf and Tanveer A. Tarra, A Proficient Optional Randomized Response Model for Estimating a Rare Sensitive Attribute Using Poisson Distribution. World Applied Sciences Journal, 38(4, **2020),** (pp. 324-328). IDOS

[12] Tanveer A. Tarry **Zahoor Ahmad** and Baziga Youssuf An improved mathematical model applying practicable algorithms Journal of applied science and engineering, technology and education Vol. 1 No.2 **(2019)** Page No. 114-118 ISBN *2685-0591*

[13] **Zahoor Ahmad**, Dr. A. H. Bhat. Power Quality and Transient Stability Improvement of Grid connected Wind Energy System using STATCOM. International Journal of Research in Electronics and Computer Engineering, **(2018)** 6(3), (pp. 397-401). I2OR

[14] **Zahoor Ahmad Ganie**, & Sharief, S. Design and Performance of Solar Tracking Photo-Voltaic System using Microcontroller. *International Journal of Advanced Research in Computer Science*, **(2017).** *8*(4).

[15] **Mr Zahoor Ahmad Ganie** and Mr Rayees Ahmad Lone**.** Performance of Single Phase Transformer with Different Supplies using SIMULATION. International Journal of Electrical Engineering & Technology, 4 **(2014)**, (pp. 41-49). IRPH

[16] **Zahoor Ahmad Ganie** and Mr Rayees Ahmad Lone. Reduction of Iron Losses in a Transformer using Embeded Core. International Journal of Electronic and Electrical Engineering, 7 **(2014),** (pp. 83-92). IRPH

[17] Lone, R. A., & **Zahoor Ahmad.** Modeling and Fault Analysis of Canal Type Small Hydro Power Plant. *International Journal of Computational Engineering Research*, **(2013)** *3*(6), 60.

RESEARCH PUBLICATIONS UNDER REVIEW

[1] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat and Salman Ahmad, "Harmonic Minimization in Power Converters Using Bio-Inspired Computational Techniques: A Comprehensive Review" submitted in the Swarm and Evolutionary Computation Elsevier Manuscript ID SWEV-C-23- 11235 **IF = 10.0**

[2] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat and Salman Ahmad, "Harmonic Torque Minimization in Three-phase Reduced Switch Count Multilevel Inverter Fed Induction Motor Drive for Application in Heavy Duty Electric Propulsion" submitted in IEEE transactions on industrial electronics Manuscript ID 23-TIE-0187 **IF = 7.7**

[3] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat and Salman Ahmad, "Improved Power Quality Operation of Multilevel Converters Using Novel HOA Algorithm and On-line Implementation Technique with Practical Investigations" submitted in the Journal of Electrical Engineering and Technology Springer Manuscript ID EETE-D-23- 02043 **IF = 2.8**

[4] Salman Ahmad**, Zahoor Ahmad Ganie,** Ahmed Sharique Anees, Javeed Bashir, "Power Quality Improvement through ACO Optimization and RSCMLI in Solar PV Applications" Journal Advanced Control for Applications, Wiley, Manuscript ID: ADC2-24-0071.

BOOK CHAPTERS

[1] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat and Salman Ahmad, Multilevel Inverter Topologies, Modulation and Applications in Motor Drives" in the Edited Book: Multilevel Converters: Advances and Applications published in Scrivener Publishing WILEY indexed in SCOPUS and Web of Sciences. **2024.** Electronic ISBN: 978-1-394-16632-9.

[2] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat, Salman Ahmad, "Low switching frequency operation of multilevel converters for high-power applications using intelligent techniques" in the Edited Book: Intelligent Control of Medium and High Power Converters published in Institution of Engineering and Technology (IET) indexed in SCOPUS and Web of Sciences **2023** ISBN-13: 978-1-83953-740-0

[3] Ahmed Sharique, Salman Ahmad, **Zahoor Ahmad Ganie**, "Space Heating for Kashmir Valley: Issues, Challenges and Remedies", Renewable power and sustainable growth, Springer Nature, Singapore, **2021**. Electronic ISBN: 978-981-334-080-0. doi.org/10.1007/978-981-33-4080-0_31

INTERNATIONAL CONFERENCES

[1] Tanveer A. Tarray, **Zahoor Ahmad Ganie**, An optimization model using soft computing with the randomized response technique, IEEE International Conference on Power, Instrumentation, Energy and Control (PIECON) **2023**

[2] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat, Salman Ahmad, Harmonics Minimization in Wide Modulation Range Using Improved Differential Evolution Optimization Technique and Hardware Validation, 2nd IEEE Asian Conference on Innovation in Technology (ASIANCON) **2022**

[3] **Zahoor Ahmad Ganie**, Abdul Hamid Bhat, Salman Ahmad, Low Switching Frequency Operation of a Two-Level Voltage Source Inverter Using Imperialist Competitive Algorithm and Hardware Realization, 1st IEEE International Conference on Sustainable Technology for Power and Energy Systems (STPES) **2022**

[4] S Ahmad, A Iqbal, I Ashraf, **Zahoor Ahmad Ganie**, Harmonics minimization in multilevel inverter by continuous mode aco technique, Innovations in Electrical and Electronic Engineering: Proceedings of ICEEE **2021**

[5] Ahmed Sharique Anees, Salman Ahmad, **Zahoor A Ganie** Space Heating for Kashmir Valley: Issues, Challenges and Remedies, Renewable Power for Sustainable Growth: Proceedings of International Conference on Renewal Power (ICRP **2020**)

[6] Tanveer A. Tarry **Zahoor Ahmad** and Baziga Youssuf, A Stratified Optional Mathematical Model, Renewable Power for Sustainable Growth: Proceedings of International Conference on Renewal Power (ICRP **2020**)

[7] Salman Ahmad, R Uddin, **Zahoor Ahmad Ganie**, A Tasneem, Close Loop Control of quasi Z-Source Inverter in Grid Connected PV System, International Conference on Electrical, Electronics and Computer Engineering (UPCON) **2019**

[8] A stratified RR model using the polya's URN process, Third International Conference on Advanced Informatics for Computing Research Shimla HP **2019**

[9] Salman Ahmad, **Zahoor Ahmad Ganie** I Ashraf, A Iqbal, Harmonics minimization in 3-level inverter waveform and its FPGA realization, 3rd IEEE International Innovative Applications of Computational Intelligence on Power, Energy and Controls with their Impact on Humanity (CIPECH) **2018.**

ADMINISTRATIVE RESPONSIBILITIES

[1] I/C Head DoEE (2012-2014, 2018-2020)
[2] Head, Centre for carrier counselling and placements (3CP)
[3] Chief Coordinator, Central Time Table Committee
[4] Chief Coordinator, Academic Calendar University level
[5] Chief Coordinator, Examination SOE&T
[6] Chief Coordinator, FYUGP
[7] Member, Implementation, Planning, Execution and Integration of ICT Network in the University
[8] Member, NEP Cell
[9] Member, Sub-committee Infrastructure development plan
[10] Member, IDP, Outreach enablers committee
[11] Member, IDP, Entrepreneurship/Skill/Innovation/Technology committee
[12] Member, Convocation 2024 audio visual committee
[13] Member, BoS 2023, department of Electrical Engineering
[14] Project Coordinator TEQIP-III
[15] Member Procurement/service/civil works committee under TEQIP-III
[16] Member selection Committee for contractual Assistant Professor EE
[17] Chairman verification committee TEQIP-III
[18] Member BoS 2024 for polytechnic college IUST
[19] Chairman departmental purchase committee
[20] Chairperson Departmental DIQAU Committee

[21] Member selection Committee for contractual Lecturer EE polytechnic college IUST
[22] Member selection committee for the post of Laboratory Assistant EE
[23] Member committee for framing & proposing statutes regarding transfer of credits for B. Tech LE
[24] Convener: BOS 2019
[25] Member Quality audit of environment and energy
[26] Coordinator Electrical Machines Lab
[27] Chairman unfair-means committees
[28] Member selection committee for Lecturer at Govt. polytechnic IUST
[29] Member Screening Committee Assistant Professor EE
[30] Coordinator Shikshit Bharat and Ek Bharat Shreshtaha Bharat
[31] Member internal screening committee CAS applications
[32] Chairman departmental purchase committee
[33] Coordinator Electrical Machines Lab
[34] Examination Coordinator
[35] Member, Departmental Monitoring Committee
[36] Member departmental verification committee
[37] Member DIQAU
[38] Chairperson Annual Tech fest committee
[39] Timetable In-charge
[40] Coordinator departmental placement
[41] Coordinator Alumni connect
[42] Member B. Tech Honours/ Minor specialization
[43] Member: PMKVY workshop technologies
[44] Faculty mentor for teaching UHV
[45] Member Centralized Time Table

FDPS/WORKSHOPS/SEMINARS/WEIBNARS ATTENDED

Name of the course	Place /Institution	Duration in weeks	Sponsor
Recent Advancements in Solar & Wind Energy Systems for Sustainable Development	Aligarh Muslim University, Aligarh India	Two Week 03-02-2025 to 15-02-2025	**DST**
Green Hydrogen a Sustainable Future Fuel	Sustainable Energy & Environment Laboratory (SEEL) Energy Centre & Maulana Azad National Institute of Technology, Bhopal	One Week 21-10-2024 to 25-10-2024	**SERB-DST**
Grid Decarbonization and Distributed Energy Resources to Mitigate Climate Change	One Week AICTE ATAL FDP organized by Department of Electrical Engineering, IUST Awantipora	One Week 18-12-2023 t0 23-12-2023	**AICTE**
Application of Optimization Techniques in Engineering (AOTE)	One week online national FEDP organized by ZHCET, AMU Aligarh	One Week 28-03-2022 to 01-04-2022	-
Online Elementary FDP on "Power Electronic Systems and its Real Time Control Implementation in DSP	One week ATAL FDP organized by Fr. C.Rodrigues Institute of Technology.	One Week 08-11-2021 to 12-11-2021	**AICTE**
Engineering Next Generation Technology for Humanity (ENGTH-2020)	One week online FDP organized by MCE, Bihar	One week 05-08-2020 to 09-08-2020	**TEQIP-III MCE, Bihar**
Soft Computing Techniques	One week online faculty development programme organized by DoEE, NIT Srinagar	One Week 25-07-2020 to 30-07-2020	**NIT Srinagar, TEQIP-III**
Learning Physics Through Simple Experiments	Centre for continuing education IIT Kanpur	10 Weeks Course 02-04-2020 to 10-06-2020	**MOOCs**
Research Methodology and Intellectual Property Rights	NITTTR, Kolkata	2 weeks 13-04-2020 to 24-04-2020	**NITTTR, Kolkata**
NPTEL online Certification on Electrical Machines-II	SWAYAM IIT Kharagpur	12 Weeks Course 01-01-2020 to 01-04-2020	**MOOCs/NPTEL**
One Week Summer School on Quantum Mechanics	One week summer school organized by department of Physics, IUST Awantipora	One Week 29-07-2019 to 04-08-2019	**IUST, TEQIP-III**
Data Science and Information Security Boot camp	One week workshop organized by department of CSE, ECE IUST Awantipora in collaboration with MAKAUT West Bengal	One Week 11-06-2019 to 15-06-2019	**IUST, TEQIP-III**
Electromagnetic Fields and Waves: Pedagogy and Computation	One week CEP course organized by IIT Bombay	One Week 12-11-2018 to 16-11-2018	**IUST, TEQIP-III**
Research Trends in Information Technology (RTIT-2018)	One week national faculty development programme organized by DOCS & CSE, IUST Awantipora	One Week 25-09-2018 to 29-09-2018	**IUST, TEQIP-III**
FPGA programming in Power and Control applications	One week workshop organized by DoEE, IUST, Awantipora	One week 10-09-2018 to 14-09- 2018	**IUST & Cranes Software**
Electrical Safety Procedures and Accident Prevention	Four day professional development programme at ESCI Hyderabad	Four Days 12-12-2017 to 15-12-2017	**IUST, TEQIP-III**

Declaration: I hereby declare that above information is true to the best of my knowledge.

Place: Awantipora
Dated: April 2025

Dr. *Zahoor Ahmad Ganie*