Dr. Mubashar Yaqoob Zargar

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PROFILE

Dedicated Electrical Engineering professional with a solid foundation in analytical thinking and technical problem-solving. Skilled at building positive working relationships, managing tasks efficiently, and organizing academic and research activities. Capable of working both independently and collaboratively to achieve goals, while demonstrating adaptability, effective communication, and a commitment to delivering high-quality results.

PROFESSIONAL QUALIFICATION

- Doctor of Philosophy (**PhD**) in ***(Power System Control)***

Department of Electrical Engineering, *National Institute of Technology Srinagar (**NIT Srinagar**)*
Thesis: *Adaptive Predictive Control of Superconducting Magnetic Energy Storage System for Power Quality Improvement of a Standalone Wind-Diesel Power System*

- Master of Technology (**M. Tech**) in (**Electrical Power System and Management)**

Department of Electrical Engineering, *Jamia Millia Islamia, New Delhi*
Dissertation: *Modelling and Simulation of a hybrid wind solar system using energy storage system*

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

PROFESSIONAL EXPERIENCE

- **Assistant Professor** – Department of Electrical Engineering *26-03-2018* - ***Till date***
  Islamic University of Science and Technology, Kashmir, J&K, India
- **Lecturer** – Department of Electrical Engineering Oct.-*2010 to Aug.-2010*
  BGSBU Rajouri

AREA OF INTEREST

Power System Stability, Energy Storage System, Load Frequency Control, Multi Area Power System, Adaptive Predictive Control, Transient Stability Improvement, Wind and SPV system

RESEARCH GRANTS/PROJECTS

Co-Principal Investigator, JKSTI&C sponsored research project titled "Design and Development of Apple Sorter and Grader Based on Color and Size" of **5.00 lakhs** issued vide JKSTIC, DST, J&K, JKST&IC/SRE/921-25 **Dated: 29-01-2024**

RESEARCH PUBLICATIONS

[1] A. W. Kumar, M. U. Din Mufti, and **M. Y. Zargar**, "Utilization of superconducting magnetic energy storage and doubly fed induction generator for enhancing stability of interconnected power system," International Journal of Circuit Theory and Applications, vol. 51, no. 11, pp. 5251–5268, Nov. 2023.

[2] A. W. Kumar, M. U. Din Mufti, and **M. Y. Zargar**, "Fuzzy based virtual inertia emulation in a multi-area wind penetrated power system using adaptive predictive control based flywheel storage," Sustainable Energy Technologies and Assessments, vol. 53, Art. no. 102515, Oct. 2022.

[3] A. W. Kumar, M. U. Din Mufti, and **M. Y. Zargar,** "Adaptive predictive control of flywheel storage for transient stability enhancement of a wind penetrated power system," Int J Energy Res. pp. 6654-6671, Vol, 46, no. 5, 2022

[4] A. W. Kumar, M. U. Din Mufti, and **M. Y. Zargar**, "Dynamic performance enhancement of wind penetrated power system using SMES as virtual synchronous generator," International Journal of Power and Energy System, Actapress, vol.41. no. 2, 2021.

[5] **M. Y. Zargar,** M. U. Din Mufti, and S.A. Lone , "Dynamic performance improvement of isolated power system using intelligently controlled SMES," IET Gener Transm Distrib. Vol. 15pp: 408-419, 2021

[6] A. W. Kumar, M. U. Din Mufti, and **M. Y. Zargar**, "Distributed virtual synchronous generator approach versus singular virtual synchronous generator approach: A dynamic stability evaluation," Wind Engineering, SAGE, vol. 45, no. 5, pp.1327-1339, 2021.

[7] **M. Y. Zargar**, M. U. Din Mufti, and S. A. Lone, "Modelling and performance assessment of a standalone hybrid wind-diesel-superconducting magnetic energy storage system using four-quadrant operation of superconducting magnetic energy storage system," Wind Engineering, SAGE, vol. 42, no. 5, pp.496-509, 2018.

[8] **M. Y. Zargar**, M. U. Din Mufti, and S. A. Lone, "MATLAB/Simulink-based modelling and performance assessment of wind–diesel energy storage system," Wind Engineering, SAGE, vol. 42, no. 3, pp.194-208, 2018.

[9] **M. Y. Zargar**, M. U. Din Mufti, and S. A. Lone, "Adaptive predictive control of a small capacity SMES unit for improved frequency control of a wind-diesel power system," IET Renewable Power Generation, vol. 11, no. 14, pp. 1832–1840, Oct. 2017.

INTERNATIONAL CONFERENCES

[1] S. A. Wani, S. Jan, Rabiya, **M. Y. Zargar** and I. Hussain, "Enhancing the Life Expectancy of Storage Device in a Solar Pv Based Microgrid," 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control (STPEC), Goa, India, 2025, pp. 1-6.

[2] M. Y. Zargar, M. -u. -D. Mufti and S. A. Lone, "Voltage and frequency control of a hybrid Wind-Diesel system using SVC and predictively controlled SMES," 2017 6th International Conference on Computer Applications In Electrical Engineering-Recent Advances (CERA), IIT-Roorkee, India, 2017, pp. 25-30.

[3] M. -u. -D. Mufti, **M. Y. Zargar** and S. A. Lone, "Predictive controlled SMES for frequency control of hybrid wind-diesel standalone system," 2017 International Conference on Computing, Communication and Automation (ICCCA*)*, Greater Noida, India, 2017, pp. 1395-1400.

[4] P. Nagwanshi, **M. Y. Zargar** and Mairaj-ud-Din-Mufti, "Fuzzy logic based battery storage system for a standalone wind energy conversion system," *2017* International Conference on Computing, Communication and Automation (ICCCA), Greater Noida, India, 2017, pp. 1512-1517.

[5] **M. Y. Zargar**, M. -u. -D. Mufti and S. A. Lone, "Modelling and control of wind solar hybrid system using energy storage system," 2016 International Conference on Computing, Communication and Automation (ICCCA), Greater Noida, India, 2016, pp. 965-970.

PhD. GUIDANCE

S.no	Name of Scholar	Research Topic	Institute	Role	Status
1	Abdul Waheed Kumar	Adaptive Predictively Controlled Energy Storage Devices Operating in Virtual Synchronous Generator Mode for Power System Stability Studies	NIT Srinagar, Hazratbal	Co-Supervisor	Awarded 18-12-2022
2	Shamika Showkat	Yet to be decided	IUST, Awantipora	Supervisor	pursuing

PG DESSERTATION

S.no	Name of Scholar	Research Topic	Institute	Role	Status
1	Ms Ayna Gulzar	Optimal operation of grid supportive solar PV system with DSTATCOM	IOT, Zakura, Kashmir University	Co-Supervisor	Awarded 17-02-2025

ADMINISTRATIVE RESPONSIBILITIES

[1] Member, Institutional Development Plan Committee
[2] University Proctor
[3] M.Tech Program Coordinator
[4] Member, BoS 2024, department of Electrical Engineering
[5] Member TEQIP-III purchase committee
[6] Member selection Committee for contractual Assistant Professor EE
[7] Member departmental purchase committee
[8] Member Departmental DIQAU Committee
[9] Member: BOS 2019
[10] Coordinator Power System I Lab
[11] Coordinator Power System II Lab
[12] Member Screening Committee Assistant Professor, CREST
[13] Departmental Examination Coordinator, EED
[14] Member departmental SPMC (Student Project Monitoring Committee)
[15] Department Project Coordinator
[16] Skilling Coordinator, EED
[17] Coordinator Industry Connect, EED
[18] Coordinator Alumni Connect, EED
[19] Coordinator Food Committee, University Alumni meet.
[20] Member, Convocation 2024 sitting arrangment committee

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**
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 to 23-12-2023	**AICTE**
UGC Sponsored Online Faculty Induction Programme	HRDC, Aligarh Muslim University	More Than Four Week 12-01-2021 to 16-02-2021	UGC
Induction Programme 2020-2021	IUST Awantipora	Two Week 17-12-2020to 28-12-2020	**IUST,Awantipira**
Recent Innovations in Predictive Control	IIT Bombay	One Week 25-11-2018 to 29-11-2018	**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**

PATIENTS

Application No	Patent Title	Filing Date	Publishing Date	Patent Type	Patent Status
202411056514	Portable Induction-Based Water Heating Element For Efficient and Safe Water Heating Applications	25-07-2024	25-07-2024	Patent	Published
202511003336	Smart Waste Segregation System with Image Recognition For Medical Waste Management	15-01-2025	28-02-2025	Patent	Published

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

Place: Awantipora Dr. *Mubashar Yaqoob Zargar*
Dated: July 2026