

FARHAT AFZAH SAMOON

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Ph.D in Electrical Engineering , National Institute of Technology Srinagar, India

Power and Energy Systems Laboratory, Department of Electrical Engineering, NIT Srinagar J&K

OBJECTIVE

As a highly motivated Electrical Engineer with a post-graduation in Electrical Power and Energy Systems, I am deeply passionate about pursuing challenging opportunities in the field. My robust academic background spans across, Renewable Energy Sources, Microgrids , Solar energy ,Energy Conservation, and Energy Storage.

Driven by a strong work ethic, I am a quick learner who thrives in complex environments and excels at multitasking. My primary objective is to keep learning and continuously grow as a professional. With unwavering determination and diligence, I aspire to carve out a successful career in Electrical Engineering.

EDUCATION

Ph.D in Electrical Engineering

National Institute of Technology, Srinagar
J&K, India, 190006.

Thesis: Performance Improvement of AC-Microgrid using Advanced Control Techniques
(Ph.D defended on 27/09/2024)

Master of Technology in Electrical Engineering

National Institute of Technology Srinagar, India 190006.

Thesis: Power Management of a Standalone Photovoltaic- Fuel Cell- Battery Hybrid System

July 2016 - July 2018

Bachelors of Technology in Electrical Engineering

BGSB University, Rajouri, J&K, India, 185234.

June 2011 - June 2015

TECHNOLOGY SKILLS

Programming Languages MATLAB, HOMER, LateX.

Design Software PCB design, AutoCAD.

Accessories MS Word, MS Power-point, MS Excel, Overleaf etc.

WORK EXPERIENCE/INDUSTRIAL TRAINING'S/INTERNSHIPS

Senior Research Fellow (Full-time)

National Institute of Technology, Srinagar
J&K, India, 190006.

Dec-2020 - Sept-2024

Junior Research Fellow

National Institute of Technology, Srinagar
J&K, India, 190006.

Sept-2018 - Dec-2020

Guest Lecturer

(On Contract)

Government Polytechnic College, Ganderbal
J&K, India, 193101.

Oct 2015 - June 2016

Industrial Training

(Power grid station Amargrah SoporeJ&K)

June 17, 2014 - July 7, 2014

- Operation & maintenance of grid station.

WORKSHOPS/SHORT-TERM COURSES

- **Renewable Energy in Science, Engineering and Technology-2019**, Organized by Department Of Electrical Engineering, National Institute of Engineering and Technology, Srinagar. A one week Short term course on Renewable Energy in Science, Engineering and Technology. Experts gave insights about the recent developments in Renewable Energy Sector.
- **Scientific and Technical Documentation Using LATEX-2019**, Organized by Department Of Electrical Engineering, National Institute of Engineering and Technology, Srinagar. Two days short term course on Introduction to LateX for Researchers-2019. Experts gave introduction about the various software with examples. A separate hands on practice was also done.
- **Power Electronics: Application in Renewable Energy Systems-2019**. organized by Department of Electrical Engineering, National Institute of Technology Srinagar, India, from 22rd - 26th April, 2019. The main objective of this STC was to make aware the participants about the Application in Renewable Energy Systems in power electronics.
- **Robtics workshop Robo-zest-2012**, Organized by Department Of Electrical Engineering, BGSB University, Rajouri, J&K, India,. Two days short term course on Introduction to Robotics. Experts gave introduction about the various software with examples. A separate hands on practice was also done.

AREAS OF INTEREST

- **Renewable Energy Sources**
- **Microgrids**
- **Nature-Inspired Optimization Algorithms**
- **Power quality improvement**

JOURNAL PUBLICATIONS

1. **F. A. Samoon**,; Hussain, I.; Iqbal, S.J. Multi-objective optimal control of renewable energy based autonomous AC microgrid using dandelion optimisation, **Renewable Energy Focus,Elsevier**, Volume 49, 2024, 100563, ISSN 1755-0084, <https://doi.org/10.1016/j.ref.2024.100563>.(I.F=4.8 , Citescore:8.2)
2. **F. A. Samoon**,; Hussain, I.; Iqbal, S.J. ILA Optimisation Based Control for Enhancing DC Link Voltage with Seamless and Adaptive VSC Control in a PV-BES Based AC Microgrid. **Energies** 2023, 16, 7309. <https://doi.org/10.3390/en16217309>(I.F=3)
3. **F. A. Samoon**,I. Hussain and S. J. Iqbal, Optimal control of Standalone Microgrid using ALO optimisation MPPT Control with adaptive VSC Control for Power quality enhancement, **Pollack Periodica** 2023.(SCOPUS)
4. **F. A. Samoon**,I. Hussain and S. J. Iqbal, Improved Synchronization using Optimal Control for Seamless Operation of PV-BS Based AC Microgrid **IETE Technial Review** 2025.(I.F=2.5)(Accepted for publication)
5. **F. A. Samoon**,I. Hussain and S. J. Iqbal,Economic Operation of DG with Seamless Capability Control in Autonomous AC Microgrid **International Journal of Ambient Energy (Under Review)**
6. **F. A. Samoon**,I. Hussain and S. J. Iqbal,Performance Enhancement of PV-grid tied system Under dynamic grid Conditions **(Under Review)**

CONFERENCE PUBLICATIONS

1. **F. A. Samoon**, I. Hussain and S. J. Iqbal, "Improved VSS-LMS based Control for Autonomous AC Microgrid for Rural Areas," 2023 **IEEE** 3rd International Conference on Sustainable Energy and Future Electric Transportation **SEFET**, Bhubaneswar, India, 2023, pp. 1-5, doi: 10.1109/SeFeT57834.2023.10245476.
2. **F. A. Samoon**, I. Hussain and S. J. Iqbal, "Optimal Control of Autonomous PV-BESS-DG based AC Microgrid for Rural Electrification," 2023 **IEEE** IAS Global Conference on Renewable Energy and Hydrogen Technologies **GlobConHT**, Male, Maldives, 2023, pp. 1-6, doi: 10.1109/GlobConHT56829.2023.10087796.

EXTRA-CURRICULAR ACTIVITIES

- *Member of the Counseling Cell at NIT Srinagar.*
- *Organised and carried out five-day and two-day short-term courses and workshops held at NIT Srinagar.*
- *Teaching assistance at NIT Srinagar from September 2018 till PhD defence to assist with teaching and lab work.*

PERSONAL PROFILE

Name : *Dr.Farhat Afzah Samoon*

D.O.B : *13-07-1992*

Marital Status : *Married*

Languages Known : *English, Hindi, Urdu,Shina, Kashmiri*

Hobbies : *Reading, Teaching,Photography,Poetry.*

REFERENCE

Dr. Ikhtlaq Hussain

Assistant Professor

Dept. of Electrical Engineering,

National Institute of Technology

Srinagar, Jammu & Kashmir, India, 190006

Email: ikhlaqiitd2015@gmail.com

Relation: *Co-Supervisor*

Dr. Sheikh Javed Iqbal

Associate Professor

Dept. of Electrical Engineering,

National Institute of Technology

Srinagar, Jammu & Kashmir, India, 190006

Email: jvd@rediffmail.com

Relation: *Supervisor*