Dr. Saira Manzoor
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WORK EXPERIENCE

National Institute of Technology, India **September 2024 to December 2024**
Lecturer, Electrical Engineering

- Prepare and deliver lectures: Design and present course content in a clear, engaging, and informative manner.
- Develop course materials: Create syllabi, reading materials, assignments, and exams to align with course objectives.
- Assess student performance: Evaluate assignments, exams, projects, and participation to determine student progress and provide constructive feedback.
- Facilitate discussions: Encourage student participation, engage in debates, and answer questions to deepen understanding.
- Use teaching technology: Incorporate online learning platforms, multimedia, and other digital tools to enhance lessons.
- Provide academic guidance: Offer one-on-one or group mentoring to help students with course content, career advice, and research projects.
- Advising: Guide students on course selection, academic pathways, and career planning.
- Offer office hours: Be available to meet with students to discuss academic concerns, help with assignments, or provide career advices.
- Grade assignments and exams: Grade coursework, provide feedback, and maintain accurate records of student performance.
- Attend meetings: Participate in faculty or department meetings, committees, and university events.
- Contribute to curriculum development: Provide input on the design and improvement of academic programs and courses.
- Maintain academic records: Ensure accurate records of student grades, attendance, and other academic data.
- Stay updated: Keep current with developments in their field through continuous learning, attending conferences, and engaging with new research.
- Foster an inclusive learning environment: Ensure all students feel respected, supported, and motivated to engage in the learning process.
- Encourage critical thinking: Challenge students to think independently, analyze problems critically, and engage with diverse perspectives.
- Contribute to the university's development: Participate in institutional initiatives, accreditation processes, and outreach programs.

National Institute of Technology, India **April 2019 to June 2024**
Research Assistant

- Literature Review**:** Conducting an in-depth literature review to understand the current state of research in the chosen area, identifying gaps in knowledge, and determining the relevance and originality of the proposed research
- Formulating Hypotheses or Objectives: Based on the research questions, formulating the clear hypotheses or objectives to be tested or explored.
- Choosing Research Methods**:** Deciding on the appropriate research methodology methods, and designing a research plan that aligns with the problem being studied.
- Writing Research Papers: Documenting the research process, methodology, findings, and conclusions in academic papers or reports. This includes structuring the paper according to academic standards (e.g., introduction, methodology, results, discussion, conclusion).
- Presenting Findings: Presenting the research at conferences, seminars, or workshops. This involves preparing presentations (e.g., slides, posters) and communicating results to a professional audience.
- Publishing Results: Submitting the research to academic journals. This often includes revising drafts based on peer review feedback.
- Training Others: Being responsible for training new team members, research assistants, or students in research techniques or software tools.

National Institute of Technology, India **April 2019 to June 2024**
Teaching Assistant

- Leading Discussions : Lead discussion sessions which help students deepen their understanding of course material, clarify concepts, and encourage critical thinking.
- Lecturing Support: Assist professors during lectures by helping to manage the classroom, or deliver short segments of the lecture on specific topics.
- Grading Assignments and Exams : This involves evaluating student work based on established criteria and providing constructive feedback.
- Assisting with Course Administration: Help in various administrative tasks, such as tracking attendance, managing course schedules, preparing and proctoring exams, or assisting with registration and other procedural matters.

EDUCATION

Doctor of Philosophy in Electrical Engineering **April 2019 to June 2024**
National Institute of Technology, India

- Thesis Title : Coordinated Control of Variable Frequency Transformer and Energy Storage System(s) for Improved Load Frequency Control of Multi-Source Interconnected Power system

Master of Technology in Electrical Engineering **July 2016 to July 2018**
National Institute of Technology, India

- Grade Point Average : 8.6
- Thesis Title: Improved Frequency Control of a Micro-Grid Using Genetically Tuned Fuzzy Controlled Energy Storage Systems.

Bachelor of Technology in Electrical Engineering **July 2011 to July 2015**
National Institute of Technology, India

- Grade Point Average : 8.329

PATENT PUBLISHED

- Application of Variable Frequency Transformer coordinated with Energy Storage System(s) for Improved Load Frequency Control (Application Number : 202111012183.

JOURNAL PUBLICATIONS

- Manzoor, S., Mufti, M., & Bakhsh, F. I. (2022b). Improved interconnected power system frequency regulation by coordinated control of optimized hy_FO based VFT and type-2 fuzzy-based FES. Sustainable Energy Technologies and Assessments, 53, 102572. https://doi.org/10.1016/j.seta.2022.102572
- Manzoor, S., Mufti, M., Bakhsh, F. I., & Ahmad, A. (2024). Type-2 fuzzy-based adaptively predictive controlled variable frequency transformer coordinated toSMES for improved load frequency control. IET Generation Transmission & Distribution. https://doi.org/10.1049/gtd2.13100
- Manzoor, S., Bakhsh, F. I., & Mufti, M. (2021). Coordinated control of VFT and fuzzy based FESS for frequency stabilization of wind penetrated multi-area power system. Wind Engineering, 46(2), 413–428 https://doi.org/10.1177/0309524x211030846
- Manzoor, S., & Mufti, M. U. D. (2021). Genetically tuned fuzzy controlled flywheel powered micro-grid for improved frequency control. *Wind Engineering*, *45*(3), 710-726.

- Manzoor, S., Mufti, M. U. D & Bakhsh, F. I. (2021). Application of VFT coordinated with fuzzy-based SCESS for load frequency control. International Journal of Power and Energy Systems, 41(4), 222
- Manzoor, S., & Mufti, M. U. D. (2018). Improved frequency control of a micro-grid with a genetically tuned fuzzy controlled super-capacitor system. *International Journal of Industrial Electronics and Drives*, *4*(4), 196-205.

SKILLS

Soft Skills :

- Critical Thinking and Problem Solving
- Time Management
- Active Listening
- Creativity
- Work Ethic
- Communication
- Student Supervision
- Adaptability

Technical Skills :

- Circuit Design and Analysis
- Electronics
- Control Systems
- Power Systems
- Computer Skills
- MATLAB
- Adaptive Predictive Controller
- Fuzzy Controller
- Academic Publishing

COURSES TAUGHT

Courses taught at Master's Level

S. No.	Course
1	Modeling and Analysis of Electric Machines
2	MATLAB Simulation

Courses taught at Bachelor's Level

S. No.	Course
1	Basic Electrical Engineering
2	MATLAB Simulation
3	Electrical Machines
4	Electrical Machines Lab
5	Basic Electrical Engineering Lab
6	Power System Lab

INTERESTS

- Avionics
- Electronics
- Power Generation and Distribution
- Battery Systems
- Backup Systems

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

Dr. Saira Manzoor