MANAR ATTIA SOBH KHALIL

Electrical Engineering Demonstrator, M.Sc. Candidate

Summary

Dynamic and dedicated Electrical Power and Control Engineering Demonstrator experienced in both academic and practical applications of electrical engineering principles. Expert in Solar Systems and Battery Energy Storage, with a proven ability to design, analyze, and implement renewable energy solutions. Adept at conveying complex technical concepts to students through engaging lectures, hands-on laboratory sessions, and interactive learning methods. Skilled in the design, analysis, and troubleshooting of electrical power systems, control systems, and automation technologies. Demonstrates strong problem-solving abilities, a passion for teaching, and a commitment to fostering a collaborative learning environment. Proficient in various engineering software tools and committed to staying updated with the latest industry advancements to ensure the highest quality education.

Personal Information

- **Address**: Banha, Egypt.
- **Date of Birth**: 12th of July 1996
- **Mobile Number**: +201208431187
- **E-Mail**: manar.khalil@bhit.bu.edu.eg
- **Marital Status**: Married.

Education

Sep 2014 - July 2019 — Banha Faculty of Engineering, Banha University

Bachelor of Science: Electrical Engineering – Branch: Electrical Power and Control

Accumulative Grade**:** Excellent with Honor (92.44%)

Graduation Project**:**

- **Title**: Design, Simulation and Implementation of a DC & AC Microgrid (Grade: Excellent)
- **Description:** This project focuses on developing a comprehensive microgrid system integrating both DC and (AC) loads. The DC microgrid utilizes a photovoltaic (PV) system as its power source, while the AC microgrid is powered by a wind turbine. The project encompasses a design phase to determine optimal system configurations, followed by simulations to analyze performance and efficiency across various scenarios. Ultimately, the project concludes with the practical implementation of the microgrid, showcasing its viability and potential for sustainable energy solutions.

Work experience

❖ Electrical Engineering Demonstrator

Banha Faculty of Engineering (Dec 2019 - Present) |Banha University

As an electrical power and control engineering Demonstrator, my role demanded contributing to various tasks.

- ***Teaching and Instruction***:
  - Develop and deliver comprehensive lectures and laboratory sessions on electrical power systems, control engineering, solar systems, and battery energy storage.
  - Create and update course materials, including syllabi, lecture notes, and lab manuals, to ensure alignment with current industry standards and technological advancements.
  - Utilize various teaching methods and technologies to engage students and enhance their learning experience, including interactive simulations, hands-on experiments, and group projects.
- ***Curriculum Development***:
  - Collaborate with faculty to design and update the electrical engineering curriculum, integrating emerging trends and technologies in renewable energy and smart grid systems.
  - Develop new laboratory experiments and projects that provide practical experience in the design, analysis, and troubleshooting of electrical power and control systems.
- ***Student Support and Mentorship***:
  - Provide academic advising and mentorship to students, helping them to understand complex concepts, complete projects, and prepare for exams.
  - Supervise undergraduate and graduate research projects, guiding students through the research process from proposal to presentation.
- ***Research and Professional Development***:
  - Conduct research in areas such as renewable energy systems, power electronics, and energy storage technologies, contributing to the institution's research objectives.
  - Publish research findings in reputable journals and present at conferences to disseminate knowledge and stay current with industry developments.

- ***Laboratory Management***:
  - Maintain and upgrade laboratory equipment and software to ensure a safe and effective learning environment.
  - Implement and enforce safety protocols and procedures in the laboratory, ensuring compliance with institutional and regulatory standards.
- ***Collaboration and Outreach***:
  - Work with industry partners to develop collaborative projects and internships that provide students with real-world experience.
  - Participate in outreach activities to promote the electrical engineering program and inspire future engineers.

Courses and Teaching Responsibilities

- **Power Electronics:** Focuses on the design, implementation, and maintenance of power electronics projects, including Inverters, DC Converter, Rectifier and other critical systems.
- **Renewable Energy:** Covers the principles and technologies involved in harnessing renewable energy sources such as solar, wind, and hydroelectric power, along with their integration into the power grid.
- **Power Systems:** Examines the components and operations of electric power systems, including generation, transmission, distribution, and load management.
- **Power Distribution:** Provides in-depth knowledge of electrical power distribution networks, including the planning, operation, and management of distribution systems.
- **Classic Control:** Introduces the fundamental principles of classical control theory, including the analysis and design of control systems using techniques like PID controllers.

Software and Language Skills

Software:

ETAP, MATLAB, Revit, AutoCAD and Microsoft Office (Excel &Word &PowerPoint).

Language:

Arabic (Native)**, English** (Very Good)

Student Activities

- **Volunteering Graphic Designer** for Microsoft Tech Club Banha University between Jan 2016 - Jan 2017.