

# MOHAMED AHMED ABDELAZIZ HASSANEIN

## Assistant Lecturer

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Experienced Assistant Lecturer and Researcher in Electrical Power Engineering with solid expertise in renewable energy, optimization-based management, and smart grids. Holds an M.Sc. in Electrical Power Engineering with outstanding academic performance. Skilled in modeling, simulation, and analysis of hybrid renewable systems. Seeking a PhD opportunity focused on sustainable energy integration and intelligent control strategies.

### EDUCATION:

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| <b>2022-02 – 2025-07</b> | M.Sc. in Electrical Engineering, Minia University, Minia, EG<br><u>Research Topic:</u> Optimization of Standalone Hybrid Renewable Energy Systems Using Different Metaheuristic Techniques Considering Demand Side Management and Uncertainty.<br><u>Total Grade:</u> Excellent<br><u>Key Achievement:</u> First Class Honors with a Mark of Distinction |
| <b>2016-09 – 2021-08</b> | B.Sc. in Electrical Engineering, Minia University, Minia, EG<br><u>Graduation Project:</u> Smart Design and Implementation of Integrated Cities Considering Tendering and Energy-Saving Constraints.<br><u>Total Grade:</u> Excellent<br><u>Key Achievement:</u> First Class Honors with a Mark of Distinction                                           |

### RESEARCH INTERESTS:

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Research interests include the applications of artificial intelligence, evolutionary, and metaheuristic optimization techniques in power system operation, planning, and control. Additional areas of focus include renewable energy integration, hybrid energy systems, hybrid power plants (HPPs) for large-scale hydrogen production, electric vehicle integration, smart grids, and intelligent solutions for sustainable and resilient power systems.

### ACADEMIC EXPERIENCE:

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| <b>2025-08 – Present</b> | Assistant Lecturer - Faculty of Engineering, Minia Univ., EG - Full Time<br><u>Responsibilities:</u> <ul style="list-style-type: none"><li>▪ Teaching and supervising undergraduate courses and projects in power systems, renewable energy, and electrical machines.</li><li>▪ Supporting research and laboratory activities related to smart grids, energy management, and optimization.</li><li>▪ Assisting in curriculum development and student mentorship within the Electrical Power Program.</li><li>▪ Conducting tutorials and technical sessions focusing on MATLAB, ETAP, and AutoCAD, Revit, and DIALux EVO applications.</li></ul> |
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- 2022-02 – 2025-07      Teaching Assistant - Faculty of Engineering, Minia Univ., EG - Full Time  
Responsibilities:
- Assisting in teaching laboratory sessions for electrical power engineering courses.
  - Supervising undergraduate projects on renewable energy and automation systems.
  - Managing and organizing electrical measurement and high-voltage laboratories in compliance with safety standards.

## **TEACHING EXPERIENCE:**

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- Additional Activities**
- Power System Analysis: Guided students in applying load flow, short-circuit, stability, and contingency studies using ETAP, Python, DigSilent, and MATLAB.
  - Renewable Energy Systems: Supervised student projects involving PV system design and performance analysis using PVsyst, HOMER Pro, and PV\*SOL.
  - Electrical Measurements: Conducted laboratory sessions and practical experiments on measurement techniques and instrumentation.
  - Utilization of Electrical Energy: Trained students in design and implementation of electrical power distribution systems and energy efficiency analysis using AutoCAD, Revit, and DIALux EVO.
  - High Voltage Engineering: Supported students in understanding insulation coordination and high-voltage testing through simulations and case studies.
  - Project Management and Tendering: Led practical exercises simulating real-world tendering and project documentation processes using Microsoft Project.

## **CONFERENCES AND PRESENTATIONS:**

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- 2025-02 – Cairo      ▪ Presented “*Techno-Economic Assessment and Uncertainty Analysis of Hybrid PV/Battery Systems for Smart Energy Applications*” at the **Cairo International Conference on Sustainable Power Systems (CIC-SPS 2025)**, Cairo, EG (Jan. 2025).
- 2024-10 – Hurghada      ▪ Presented “*Optimization of Standalone Hybrid Renewable Energy Systems Using Different Metaheuristic Techniques Considering Demand Side Management*” at the **Minia International Conference on Environment and Engineering (MICEE 2024)**, Minia University, EG (Oct. 2024).

## **AWARDS AND HONORS:**

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- 2023-04      ▪ Academic Contribution Award, Electrical Engineering Department, Minia University for assisting in teaching and supervising graduation projects related to renewable energy and power systems (March, 2023).
- 2021-10      ▪ Certificate of Appreciation, Advansys for Trading & Contracting for contributions to BMS and renewable energy projects (Oct, 2021).
- 2021-08      ▪ Excellence Award, Faculty of Engineering, Minia University for outstanding academic performance during the B.Sc. program (Aug, 2021).

## PUBLICATIONS:

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- Research Articles**
- Mohamed A. Hassanein, Mohamed A. Mohamed, Ahmed A. Hassan. "Optimization-Based Metaheuristic Techniques for Sizing and Managing Uncertainty in Hybrid Renewable Energy Systems Considering Demand-Side Challenges." *SVU-International Journal of Engineering Sciences and Applications* 6, no. 2 (2025): 104-129. <https://doi.org/10.21608/svusrc.2025.385645.1286>.
  - Mohamed A. Hassanein, Mohamed A. Mohamed, Ahmed A. Hassan. "Optimization of Standalone Hybrid Renewable Energy Systems Using Different Metaheuristic Techniques Considering Demand Side Management." *Journal of Advanced Engineering Trends* 44, no. 1 (2025): 159-186, <https://doi.org/10.21608/jaet.2024.317653.1326>.

## NON - ACADEMIC EXPERIENCE:

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- 2025-10 – Present**      Electrical Consultant Eng. – Medical Warehouses Project (Ministry of Defense)  
(Contractors: ORASCOM & WEITS) - Part Time
- Responsibilities:
- Supervising on-site electrical works execution and ensuring compliance with project specifications and quality standards.
  - Inspecting and approving delivered materials in accordance with technical requirements and project specifications.
  - Monitoring and following up the implementation of electrical installations to ensure adherence to design drawings and timelines.
  - Preparing and reviewing interim payment certificates (invoices) for executed works.
  - Reviewing quantities, BOQs, and ensuring accuracy of measurements and cost estimations.
  - Tracking and reviewing project schedules to ensure progress aligns with planned timelines.
- 2023-07 – 2025-08**      Technical Office & Site Eng. - OCEAN Const. Company, EG - Part Time
- Responsibilities:
- Supervising on-site electrical installations for infrastructure and renewable energy projects.
  - Preparing load calculations, cable sizing, and shop drawings in compliance with project standards.
  - Coordinating with multidisciplinary teams to ensure project quality, safety, and timely delivery.
- 2022-11 – 2023-05**      Site Engineer - ELDAWLEYA for Trading & Contr., EG - Part Time
- Responsibilities:
- Conducting technical evaluations and cost estimations for electrical distribution and lighting systems.
  - Developing tender documents and design packages for medium- and low-voltage electrical networks.
  - Supporting tests and commissioning activities to ensure compliance with client specifications.
- 2021-09 – 2022-11**      BMS and Control Eng. - Advansys (ATC), Cairo, EG - Full Time
- Responsibilities:
- Supervising Conducting Designed and implemented Building Management and Control Systems (BMS) for commercial facilities.
  - Integrating automation solutions to improve energy efficiency and operational reliability.

- 2021-01 – 2021-09**      **Renewable Energy & Smart Grid Eng. – Solar Star UK - Full-time, Cairo, EG - Full Time**
- Responsibilities:
- Participating in the design and technical studies of a 7 MW solar PV power plant, one of the major renewable energy projects in the Middle East.
  - Conducting load flow and system sizing calculations to ensure optimal plant performance.
  - Supporting the preparation of single-line diagrams, layout drawings, and technical documentation.
  - Coordinating with multidisciplinary teams to integrate the PV system with the existing factory infrastructure.
  - Contributing to achieving high system efficiency and compliance with Egyptian and international standards.
  - Integrating automation solutions to improve energy efficiency and operational reliability.

## **LANGUAGE PROFICIENCY:**

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- Fluency**
- Arabic: Native language.
  - English: Proficient.

## **ONLINE CONTACTS:**

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- Research Gate**      ▪ <https://www.researchgate.net/Mohamed A. Hassanein>
- Google Scholar**      ▪ <https://www.scholar.google.com.eg/Mohamed A. Hassanein>
- LinkedIn**      ▪ <http://www.linkedin.com/Mohamed A. Hassanein>
- Google E-mail**      ▪ [e.mohamedahmed22@gmail.com](mailto:e.mohamedahmed22@gmail.com)

## **REFERENCES:**

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