




# Rabab Reda Mohammed Ebrahem


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## SUMMARY

Motivated Assistant Professor with 15 years of experience specializing in power and Machine department. Strong background in creating insightful research papers which increased University exposure and helped student's learning development. Swiftly establishing strong relationships with pupils, increasing class engagement and enjoyment. She received her PHD degree from the Department of power and machine Engineering, Mansoura University, Egypt in 2019. She received her M.Sc. from the Department of power and machine Engineering, Mansoura University, Egypt in 2009. and the B.Sc. degree in power and machine engineering from the Faculty of Engineering-Mansoura University-Egypt by 2004. She worked full time as a lecturer at New Damietta Higher Institute of Engineering and Technology – Egypt, part-time, one day per week at Damietta University- Egypt in New Damietta, and part-time, one day per week at Elarish. Her current research interests are in power systems, renewable energy design and optimization of micro grid power system and their applications. She has many published papers in electrical power field.

 New Damietta – Damietta – Egypt.

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## SKILLS

- Lecture research
- Interactive teaching
- Managing and mentoring
- Course material preparation
- Classroom management
- Course preparation
- Grant proposal writing
- Student progress reporting
- Lecture planning

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## EXPERIENCE

### Assistant Professor

- Higher Institute of Engineering and Technology, New Damietta, Egypt, August 2020- current.
- Part-time, some day per week at Damietta University Egypt in New Damietta. September 2023 - 2024.



- Part-time, some day per week at Elarish University. September 2025 - current
- Delivered engaging lectures, seminars and tutorials, increasing class productivity.
- Implemented strategic lesson planning, monitoring progress and performance against set targets.
- Continuously improved subject knowledge by conducting thorough research.
- Assisted in planning and development of teaching materials, workbooks and class projects.
- Recognized students' positive behavior using established rewards system.
- Kept records of student attendance, progress and activities to assess individual mastery of subject matter.

## **EDUCATION**

• Mansoura University, Egypt.  
Doctor of Philosophy, power and  
Machine Department, 2019

**Thesis Topic:** Smart Enhancement  
of Transmission Grids  
Performance

• Mansoura University, Egypt.  
Master degree, power and Machine  
Department, 2009.

**Thesis Topic:** Evolutionary  
Approaches in Power System  
Restoration

• Mansoura University, Egypt.  
Bachelor of Engineering, power  
and machine Department, 2004.

## **Assistant Lecturer**

Higher Institute of Engineering and Technology, New Damietta, Egypt, August 2019- current, February 2009- July 2019, part-time.

- Supported teachers in setting, administering and grading assignments and communicated students' progress to parents.

## **Teaching Assistant**

- Higher Institute of Engineering and Technology, New Damietta, Egypt, September 2004 - January 2009, part-time.
- Mansoura University, Egypt, September 2004 - January 2009, part-time.

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## **CERTIFICATIONS**

- Strategic Planning: Faculties and Institutes of Higher Education
- Teaching Strategies and Effective Learning: Faculties and Institutes of Higher Education
- Program/Course Specifications and Assessment of ILOs: Faculties and Institutes of Higher Education

- Exams and Students' Assessment Systems: Faculties and Institutes of Higher Education.

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## TEACHING EXPERIENCE

### First, the basic science subjects:

- Math 1 and Math 2
- Electronic and Electrical Measurement
- Electrical Circuit 1
- Electrical Circuit 2
- Automatic Control
- Fundamental Electrical Engineering

### Second: Specialization Sciences Subjects (Communications and Electronics)

- Electronic Test 1
- Electrical Circuit 2
- Electronic circuit 1
- Control system
- Automatic Control
- Electronic Circuits using MATLAB
- Artificial Intelligence
- Computer Science
- Electronic Industrial
- Advanced Measurement
- Design circuit aid computer (Matlab/Simulink)
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## SUPERVISING GRADUATION PROJECTS

- Design of low voltage system using programs (AutoCAD - DIALux - Ecodial - Excel) Mansoura University Faculty of Engineering 2020.
- The economical cost of solar energy and battery problems, 2021.Design of low voltage system on (on line Exam)
- Multi-sensory room for disable kids, Multi-sensory

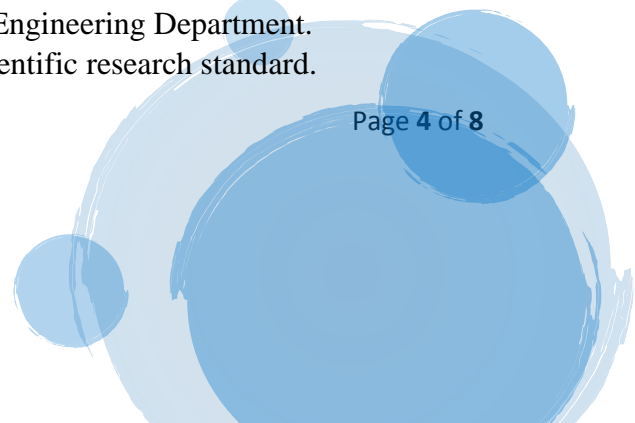



rooms are immersive environments which have been specifically designed to develop the user's senses<sup>2021</sup>

- Smart Meter System<sup>2023</sup>.
- Design and implementation of EVCS powered by photovoltaic cells 2023-2024
- SMART VEHICLE SAFETY: AI-DRIVEN DRIVER ASSISTANCE AND V2X COMMUNICATION<sup>2023-2024</sup>.
- Integrating Digital Twin Technology in Energy Management: A Review of Smart Building Solutions 2025
- Wireless Power Transfer Solutions for Electric Vehicles 2025.
- Enhancing Electric Vehicle Systems through Li-Fi Technology: Secure V2G Communication in Smart City 2026.
- Utilizing Li-Fi technology for transmitting solar panel measurement data (temperature, irradiance, and voltage, current) to an MPPT controller 2026.

#### EXPERIENCE IN QUALITY WORK

- Member of the Academic Advising and Registration Committee.
- Head of financial and material resources standard.
- Member of the Executive Council of the Institute's Quality Assurance Unit.
- Quality Coordinator for the Electronics and Communications Engineering Department.
- Member of the scientific research standard.



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- Preparing course descriptions and reports and analyzing the examination paper.
  - Preparing the decisions file
  - Participation in control work.
  - Participation in making study schedules.

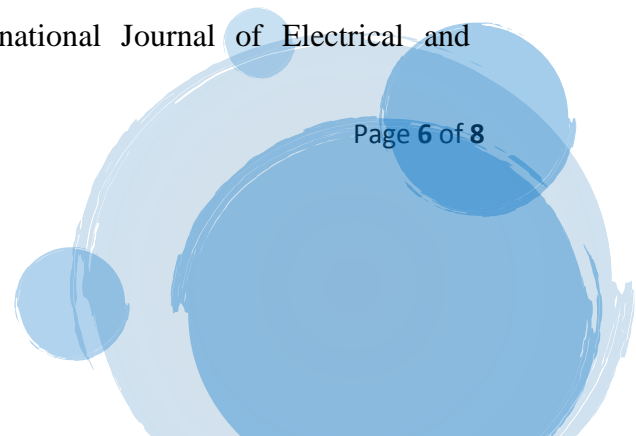
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## PUBLISHED RESEARCH

- Rabab R. M. Eiada<sup>1</sup> and Ebrahim A. Badran<sup>2</sup> "Smart Enhancement of Egyptian Electrical Transmission Network using BPSO" International Journal of Scientific & Engineering Research Volume 12, Issue 11, November-2021 ISSN 2229-5518
- Rabab Reda eiada "Optimal Size and Location of DG in The Distribution System for Power Loss and Voltage Deviation Minimization", Port-Said Engineering Research Journal 12 October 2021.
- Rabab R. M. Eiada<sup>1</sup> and Ebrahim A. Badran<sup>2</sup> "Minimization Losses of Distribution Systems connected with Distributed Generation Units using JFPSO", International Middle East power systems conference (MEPCON) 2022.
- Shima Abdel-Raouf Salem<sup>1</sup>, Rabab Reda Eiada<sup>2</sup>, Ebrahim Abdel-Ghafar Badran<sup>3</sup> "A proposed method for reduction of induced zero-sequence current in cable system", International Journal of Power Electronics and Drive Systems (IJPEDS) Vol. 13, No. 4, December 2022.



- Shimaab Abdel-Raouf Salem<sup>1</sup>, Rabab Reda Eiada<sup>2</sup>, Ebrahim Abdel-Ghafar Badran<sup>3</sup> "Investigation of Zero-Sequence Current in Medium and High Voltage Cable Systems", 2022 23rd International Middle East Power Systems Conference (MEPCON), Kafrelsheikh University, Egypt 13-15 December 2022
- Shimaab Abdel-Raouf Salem<sup>1</sup>, Rabab Reda Eiada<sup>2</sup>, and Ebrahim Abdel-Ghafar Badran<sup>3</sup> "Zero-Sequence Current in Cable Systems: A Study". Mansoura Engineering Journal 2022.
- Rabab R. M. Eiada<sup>1</sup> and Ebrahim A. Badran<sup>2</sup>, "Improving of Voltage and Losses of Distribution System with DGs using MFO". 24<sup>th</sup> International Middle East Power Systems Conference (MEPCON), Mansoura University, Egypt 19-21 December 2023.
- Rabab R. M. Eiada<sup>1</sup> and Ebrahim A. Badran<sup>2</sup>, "Adaptive Protection Coordination in Microgrid Based on Hybrid Water Cycle Moth-Flame Optimization". 24<sup>th</sup> International Middle East Power Systems Conference (MEPCON), Mansoura University, Egypt 19-21 December 2023.
- Ahmed Y. Hatata, Rabab R. Eiada, and Thabet M. Alzahrani, "Enhancement of Active Distribution Network Performance with Multiple Distributed Generators and DSTATCOMs using Reptile Search Algorithm", International Journal of Electrical and





Computer Engineering Systems 2024.

- Rabab R. M. Eiada<sup>1</sup> and Ebrahim A. Badran<sup>2</sup>, "Design and Simulation of 72kW Stand-alone PV System for a Gas Charge Station", 25<sup>th</sup> International Middle East Power System Conference (MEPCON) 2024.
- Rabab R. M. Eiada<sup>1</sup>, and Ahmed Y. Hatata<sup>2</sup>, "Integration of Electric vehicle charging stations and distributed renewable energy sources in the smart distribution networks", 2026.
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## REVIEW IN INTERNATIONAL JOURNALS

- Reviewer in 24<sup>th</sup> International Middle East Power Systems Conference (MEPCON), Mansoura University, Egypt 19-21 December 2023
- Reviewer in IEEE access

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## COMMUNITY PARTICIPATIONS

- Attending training camp activities for remote sensing and space sciences (titled "Entrepreneurship from the idea to building the future" ) during the period 8,9/11/2022. (online)
- Participation in the community parties meeting at the Higher Institute of Engineering, New Damietta 2022.
- Participation in organizing a lecture entitled transparent antenna by the distinguished scientist Rehan Bector at the Higher Institute of Engineering and Technology in New Damietta 2022.



- Participation in a symposium for WE Company at the headquarters of the Higher Institute of Engineering and Technology in New Damietta 2021.
- Participation in 24th International Middle East Power Systems Conference (MEPCON), Mansoura University, Egypt 19-21 December 2023.
- Participation in 23rd International Middle East Power Systems Conference (MEPCON).
- Participation in 1st INTERNATIONAL ENGINEERING CONFERENCE ON RESEARCH AND INNOVATION, 26-27 November 2022. Delta University for Science and Technology, Egypt.
- Participation in 4th International Conference for Membrane Technology & Its Applications.

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## LANGUAGES

- Arabic
- English (good)

