Curriculum vitae Assoc. Prof. Dr. Amr Emad

Personal Information



- **Name:** Assoc. Prof. Dr. Amr Emad Eldin Refaat
- **Address:** El Minia, Egypt
- **Tel:** 0862332428
- **Mobile:** 01096353388
- **Email:** engamremad89@mhiet.edu.eg
- **Date of Birth:** 29 July 1989
- **Nationality:** Egyptian
- **Marital Status:** Married
- **Current Position:**
  1- Lecturer, El Minia Higher Institute of Engineering and Technology (MHIET)
  2- Part-time Faculty Member, Computer Science Program, Beni Suef Technological University
- **Other Roles:** Deputy Executive Director of the Quality Assurance Unit at MHIET | Vice Head of Mechanical Engineering Department (Mechatronics Department)
- **H-Index:** 4

Education:

- University Education: El-Minia High Institute for Engineering and Technology, El-Minia, Egypt
- Ph.D. Faculty of Engineering, Minia University, 2020
- M.Sc. Faculty of Engineering, Minia University, 2016
- B.Sc., Mechatronics Engineering, 2011
- Final year Grade: excellent
- Graduation Grade: excellent
- B.Sc. project: CNC wood router, rate: Excellent.

Research Profiles:

• ORCID: https://orcid.org/0000-0002-0676-9393
• Google Scholar: https://scholar.google.com/citations?hl=ar&user=SWkZJQIAAAAJ
• Scopus Author ID: 57667139800

Published papers:

1- Ahmed A. Zaki Diab, Abdulsalam Ezzat, Amr E. Rafaat, et al " Optimal identification of model parameters for PVs using equilibrium, coot bird and artificial ecosystem optimisation algorithms " IET Renewable Power Generation, Volume 16, Issue 10 Pages: 1971-2190 , 27 July 2022.
2- Ahmed A. Zaki Diab,Ameena Al Sumaiti,A. A. Ezzat,Amr E. Rafaat ,et al " New objective function of parameters extraction of photovoltaic modules for plummeting execution time complexity " IET Renewable Power Generation , Volume 16, Issue 10 Pages: 1971-2190 , 07 May 2022.(IJMPERD) ,ISSN (P): 2249-6890; ISSN (E): 2249-8001 Vol. 9, Issue 4, Aug 2019, 363376
3- W. W. Marzouk , Adel A. Elbaset, A.I.A. Galal, Amr Emad " An Improved Approach of Inverse Kinematics Solution for Robotics Arm with Five Degree of Freedom Using ANFIS" International Journal of Academic Engineering Research (IJAER),Vol. 2 Issue 11, November – 2018, Pages: 28-33.
4- A. A. M. Hassan ,Adel A. Elbaset,A. T. Hasouna,Amr Emad " Design of a Solar Tracking System for Improving Solar Photovoltaic Efficiency " 17th International

Middle East Power System Conference MEPCON'15 Mansoura University, December 15-17, 2015.

5- A. A. M. Hassan ,Adel A. Elbaset,A. T. Hasouna,Amr Emad " Design of a Solar Tracking System for Improving Solar Photovoltaic Efficiency " Minia Journal of Engineering and Technology, (MJET) , Vol. 34, No 1, January 2015.

6- A. A. M. Hassan ,Adel A. Elbaset,A. T. Hasouna, Amr Emad , "Analytical Modelling Simulation and Implementation of Solar Tracker" International Journal of Academic Engineering Research (IJAER) ISSN: 2000-001X Vol. 3 Issue 2, February – 2019, Pages: 1-14

7- W. W. Marzouk , Adel A. Elbaset, A.I.A. Galal, Amr Emad "MODELLING, ANALYSIS AND SIMULATION FOR A 6 AXIS ARM ROBOT BY PID CONTROLLER" International Journal of Mechanical and Production Engineering Research and Development.

8- Rafaat, Amr E., A. A. M. Hassan, Denis A. Kotin, and Ahmed A. Zaki Diab. "Novel Models on Packed Bed Solar Air Collectors." In 2022 Conference of Russian Young Researchers in Electrical and Electronic Engineering (ElConRus), pp. 853-857. IEEE, 2022.

9- Ezzat, A., Diab, A., Emad, A., & Emad, A. (2024). An Embedded System Approach for Enhancing Customer Service and Operational Efficiency through Smart Assistant Robotics. Journal of Advanced Engineering Trends, 43(2), 341-346. doi: 10.21608/jaet.2023.218130.1252

10- Ezzat, A., Diab, A., & Emad, A. (2024). A Novel Robotic Assistant in the Education Using Embedded Systems. Journal of Advanced Engineering Trends, 43(2), 385-390. doi: 10.21608/jaet.2024.237453.1257.

11- Rafaat, A. E., & A. A., E. (2025). IMPROVING THE CONTROL SYSTEMS FOR DESERT MINERAL EXPLORATION ROVERS AND MODELING OF FRICTION AND SLIP. Journal of the Egyptian Society of Tribology, 22(2), 80-90. doi: 10.21608/jest.2025.376611.1117.

12- emad, A., & A. A., E. (2024). Robotic-Assisted Minimally Invasive Surgery: A Dual-Robot Implementation Strategy. International Journal of Artificial Intelligence and Emerging Technology, 7(1), 20-27. doi: 10.21608/ijaiet.2025.377514.1013

13- emad, A. (2024). Design and Application of Mind Waves Smart Sensor-Enabled Rehabilitation Gloves. International Journal of Artificial Intelligence and Emerging Technology, 7(2), 1-17. doi: 10.21608/ijaiet.2025.346000.1009.

14- emad, A. (2024). Head Gesture Controlled Robotics Wheelchair Design and Implementation. International Journal of Artificial Intelligence and Emerging Technology, 7(2), 18-27. doi: 10.21608/ijaiet.2025.346009.1010

15- Aziz, Ahmed G. Mahmoud A., Saleh Al Dawsari, Amr E. Rafaat, Ayat G. Abo El-Magd, and Ahmed A. Zaki Diab. 2026. "A Smart Four-DOF SCARA Robot: Design, Kinematic Modeling, and Machine Learning-Based Performance Evaluation" *Automation* 7, no. 1: 11. https://doi.org/10.3390/automation7010011

16- Amr E. Rafaat., Rashwan, N. K. (2026). 'Data-Driven Prioritization of Road Traffic Black Spots in Upper Egypt Using GIS, Machine Learning, and Economic Risk Analysis', JES. Journal of Engineering Sciences, 54(6), pp. 536-560. doi: 10.21608/jesaun.2025.417571.1711.

Computer Skills:

- Operating Systems: Windows OS
- Software: AutoCAD (2D/3D), SolidWorks, MATLAB 2022a, Robotics Studio, ICDL, PLC, VHDL, Assembly Language
- Programming Languages: C, C++, Python, Python for Data Science and AI
- AI & Data: Generative AI, Natural Language Processing.

Languages:

- Arabic: Native
- English: Very good (spoken & written)

Professional Experience & Projects:

- 2011: Workshop at Siemens (PLC Step 7, Micro Master Drive)
- 2013: MATLAB, Microcontroller, and Robotics Course
- 2014: Automatic Submarine ROV
- 2020: Machine Learning
- 2021: Certified Generative AI Professional

Academic Experience

- Lecturer, El Minia Higher Institute of Engineering and Technology (MHIET), 2020–Present.
- Part-time Faculty Member, Computer Science Program, Beni Suef Technological University, 2024–Present.
- Deputy Executive Director, Quality Assurance Unit, 2024–Present.
- Coordinator, Strategic Planning Standard, Quality Assurance Unit, 2021–Present.
- Vice Head, Mechanical Engineering Department (Mechatronics), 2024–Present.

Professional Development & Workshops:

year	Awarding Institution	Title of Course/Workshop
2023	NAQAAE	" Strategic Planning: Faculties and Institutes of Higher Education "
2023	NAQAAE	" Program/Course Specifications and Assessment of ILOs: Faculties and Institutes of Higher Education "
2023	NAQAAE	" Teaching Strategies and Effective Learning: Faculties and Institutes of Higher Education "
2023	NAQAAE	" Exams and Students' Assessment Systems: Faculties and Institutes of Higher Education "
2023	NAQAAE	" Self-Evaluation: Faculties and Institutes of Higher Education "
2024	NAQAAE	" External Review: Faculties and Institutes of Higher Education "
2024	Clarivate	Workshop "University Ranking Strategies "
2024	Clarivate	Workshop "Research Grants: Spotting – Positioning – Drafting"
2024	Clarivate	Workshop "From papers to patents - Innovation Roadmap for universities"
2025	NAQAAE	Preparing self-study according to the institutional accreditation standards, 2015 edition

Capabilities:

- Team player and independent worker.
- Highly responsible and target oriented.
- Eager to learn and undergo further training.
- Strong leadership and organizational skill.