



## SUMMARY

A PhD holder with 15+ years' experience as a Mechanical Engineering Teaching Assistant with knowledge on Scientific Research, Mechatronics, Robotics, Mechanical Design and Production Engineering. Looking to explore challenges and technologies related to the educational process of Mechanical and Mechatronics Engineering. A participant at 2 Tempus Projects for joint international master degree and lifelong learning frame work in mechatronics. A supervisor of most robotics competitions and student activities.

## PERSONAL INFORMATION

- Married
- Age: 40 (08/12/1984)
- Number of dependents: 3
- Interests: Reading, Traveling and languages

## WORK HISTORY

### **Assistant Professor, Mechanical and Mechatronics Engineering, (Supervisor of Mechatronics section from March 2021, till March 2022)**

- *Higher Technological Institute, Tenth of Ramadan city, Egypt* • September 2020 to Current
  - Supervision of Mechatronics Section from March 2021, till March 2022.
  - A supervisor of Production technology and workshop subjects.
  - Used many online learning environments in handling sessions and content.
  - Implemented exercises in CNC, CAD/CAM, AutoCAD and Assembly Drawing.
  - Retained interest and maximized receptive learning by educating students using direct instructional techniques.
  - Encouraged dynamic and pleasant educational environment by promoting both gentle discipline and Mechatronics.
  - Supervised students in common areas such as Robotics, Advanced manufacturing solutions, Welding workshops, CAD/CAM and 3D design laboratories.
  - Supervision of student graduation projects.
  - Judge, Team leader and mentor participant in worldwide competitions; Robocon, IRC, ROV and FLL, Minesweepers.

### **Teaching Assistant, Mechatronics Eng.** • *Higher Technological Institute, Tenth of Ramadan city, Egypt* • February 2008 to August 2020

- Supported lecturers and professors with test administration, curriculum development and assignment grading.
- Supported staff and students in problems related to research and in bachelor projects.
- Conducted research in Mechatronics with team of eleven graduates and faculty.
- Checked assignments, proctored tests, and provided grades according to university standards.
- Assisted faculty with tasks such as collecting assignments and preparing materials for upcoming classes.
- Prepared lessons according to course outline to convey all required material and deepen student understanding of subject matter.

### **Consultant Engineer** • *Engineering Factory for Material Work, Giza, Egypt* • February 2010 to Current

- Reviewed specifications and technical manuals for compliance with ongoing operational goals and conformity to applicable regulations.

- Monitored project activities and verified team members adhered to installing production lines within the factory.
- Analyzed ongoing research and development (R&D) strategies to determine optimal prioritization based on historical completion rates and market data.
- Supported project planning and execution efforts relating to technical documentation and process development.

Education and publications    **PhD** - Mechanical Design and Production Engineering • *Benha University*, Shoubra Faculty of Engineering, Cairo, Egypt • April 2020  
Thesis title "Creation of Curved Holes Drilling Method by Electrical Discharge Machining Process"

**MSc** - Mechanical Design and Production Engineering • *Benha University*, Shoubra Faculty of Engineering, Cairo, Egypt • February 2015  
Thesis title "Effect of Tool Pin Profile on Friction Stir Welding(FSW) of Aluminium Alloys"

**BSc** - Mechatronics Engineering • *Higher Technological Institute* Tenth of Ramadan, Egypt • January 2007  
Senior project title "Handling Material Robot with Mobile Control"

### **Publications**

- 1. Hossameldin Hussein**, S. HAbib, Sayed A. Abdallah and S.S. Mohamed, "A Stable Curved Hole Creation by Electrical Discharge Machining and a New Curved Mechanical Mechanism", Life Science Journal, (2018); 15(8).
- 2. Hossameldin Hussein**, S. HAbib, Sayed A. Abdallah and S.S. Mohamed, " A Curved Hole Creation with A Square Curved Copper Electrode by Electrical Discharge Machining and a New Mechanism Technique", New York Science Journal, (2018); 11(8).
- 3. H M Ramadan**, Samah Samir Mohamed, Fouad H Mahmoud and T. S. Mahmoud, "Influence of Pin Profile and Welding Speed on the Microstructure and Impact Resistance of Friction Stir Welded AA6061–T6 Aluminum Joints", (2018).
- Emad Ismat Ghandourah, Essam B. Moustafa, **Hossameldin Hussein**, and Ahmed O. Mosleh, "The Effect of Incorporating Ceramic Particles with Different Morphologies on the Microstructure, Mechanical and Tribological Behavior of Hybrid TaC<sub>3</sub>BN/AA2024 Nanocomposites", Coatings (2021), 11, 1560.
- Essam B. Moustafa, Khalid H. Almitani, and **Hossameldin Hussein**, "Effect of Crack Orientation on Laminated CFRP Composites Using Vibration and Numerical Analysis", Materials Evaluation (2021), 79 (11): 1081-1093.

### **SKILLS AND HIGHLIGHTS**

- Scientific Research
- Online Teaching using Blackboard Collaborate
- Certified ICDL user, syllabus 5.0
- Hydraulics/Pneumatics
- Electro-Hydraulics/Electro-Pneumatics
- FESTO fluid sim software
- CNC Milling (3-5 axis) and CNC lathe (2-3.5 axis)
- Autonomous robots design and control using Arduino
- Proficient in 2D drafting with AutoCAD
- AutoCAD 3D assembly
- Laser cutting
- Oxy-Acetylene Gas Welding
- 3D design and simulation with SolidWorks
- Assembly Drawing

- Design and implementation of PCBs
- Eagle software for PCB design
- Measurement and Instrumentation
- Sensors and Transducers
- CAD/CAM using Fusion 360, SolidWorks and HSMXpress
- Classical control implementation
- PLC Programming for Omron, LG and Siemens

## LANGUAGES

- **Arabic** (Native)
- **English** (Perfect)
- **German** (Very Good)
- **Hungarian** (Very Good)

## CONFERENCES

- **2024** International Conference on Intelligent Robots and Systems (IROS 2024), Abu Dhabi
- **2019** International Conference on Intelligent Robots and Systems (IROS 2019), China
- **2018** International Conference on Intelligent Robots and Systems (IROS 2018), Spain
- **2014** Research and Education in Mechatronics (REM 2014), Egypt

## REFERENCES

### **Prof. Moustafa Gouda**

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### **Assoc. Prof. Ahmed Omar Mosleh**

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### **Dr. Anwar Magdy**

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### **Eng. Mohamed Ramadan**

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