Mohamed Elhossainy Mohamed Elmelegy
Ph.D., M.Sc.

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- Birth Date: 3rd September 1988
- Military Status : Exempted
- Google Scholar: https://scholar.google.com/citations?user=UUtUPewAAAAJ&hl=en&oi=sra

CAREER OBJECTIVE

To continue my engineering career in a challenging working environment and a growing multinational educational organization, enhancing my experience, knowledge and skills, and adding value to myself.

EDUCATION AND QUALIFICATIONS

- **Ph.D.** at Faculty of Electronic Engineering, Menoufia University. (**January 2020 - November 2024**)
  - **Thesis Advisor**: Prof. Belal Abozalam, Prof. Tarek Ahmed and Prof. Raafat Shalaby.
  - **Examining Committee:** Prof. Hassen Dorrah and Prof. Hamdi Awad.
  - **Dissertation**: "Development of Machine Learning-Based Fractional Order Controllers for Nonlinear Systems".
- **M.Sc.** at Faculty of Electronic Engineering, Menoufia University. (**September 2014 - October 2019**)
  - **Thesis Advisor:** Prof. Belal Abozalam, Prof. Raafat Shalaby.
  - **Examining Committee:** Prof. Gamal Elden Mohamed Ali and Prof. Mohamed Hamdy.
  - **Dissertation**: "Optimal Control of Inverted Pendulum".
- **B.Sc.** at Faculty of Electronic Engineering, Department of Industrial Electronics and Control Engineering, Menoufia University (**2005-2010**).
  - **Graduation Project:** CNC Milling Machine **−Project Grade:** Excellent **−Overall Grade:** Very Good

POSITIONS HELD AND EXPERIENCE

- **_Lecturer_** at International Academy for Engineering and Media Science (IAEMS), Electrical Power Engineering and Machines Department. (**September 2025 – Present**)
- **_Lecturer_** (Part-Time) at Nile University (NU), School of Engineering and Applied Science, Program of Mechanical Engineering. (**Spring 2025-2026**)
- **_Director_** at Valor Company for engineering training courses. (**January 2023 – July 2025**)
- **_Assistant Lecturer_** at New Cairo Technological University (NCTU), Faculty of Industry and Energy Technology, New and Renewable Energy department. (**February 2022 – December 2022**)
- **_Assistant Lecturer_** at Thebes Higher Institute for Engineering, Electronics and Communications department. (**February 2020 – August 2021**)
- **_Instructor_** at Valor Company for engineering training courses. (**September 2017 – December 2019**)
- **_Teaching Assistant_** at Elgazira Higher Institute for Engineering and Technology (EGI), Electronics and Communications department. (**August 2016 - August 2017**)

- ***Teaching Assistant*** at Cairo Higher Institute for Engineering, Computer Science and Management (CHI), Electronics and Computer Engineering department. **(September 2012 - July 2016)**

- ***Maintenance Engineer*** at 01Electronics Company which is a sole agent for ASTRID, EFFEKTA, BORRI UPS, stabilizers, soft starters and inverters. **(September 2010 - August 2012)**

COURSES TAUGHT AND TEACHING DUTIES

- Electric Circuits
- Electronics
- Instrumentation and Measurements
- Electric Machines
- Digital Logic
- Signals and Systems
- Automatic Control
- Electric Power Systems
- Power Electronics
- Fuzzy and Artificial Neural Network
- Installation, Testing and Commissioning of on grid and off grid PV System

- Electrical Materials
- Programmable Logic Controllers (PLC)
- Embedded Systems
- Renewable Energy
- Modeling and Simulation
- Microprocessor and Interfacing
- Computer Programming
- STM32, Arduino, AVR and PIC Microcontroller
- PCB Design
- Advanced Programming using MATLAB

AREA OF RESEARCH

- Machine Learning
- Intelligent Control Systems
- Observers and Kalman filter
- Renewable Energy and Mechatronics Systems

- Meta-heuristic Optimization
- Robust Nonlinear Control
- Model Predictive Control
- Fractional-order Modeling and Control

I like multidisciplinary research tasks and I am also very interested in experimental works.

TECHNICAL SKILLS AND OTHER ACHIEVEMENTS

- Have a Certificate of Appreciation in recognition as a judge and encouraging talents in Nile University. **(January 2026)**

- Have a Fundamentals of Digital Transformation Certificate (FDTC) accredited by the Supreme Council of Universities in the Arab Republic of Egypt. **(January 2023)**

- Have a Certificate in recognition of the professionalism and enthusiasm for accomplished climate change course for COP27 at National Center for Research. **(March 2022 -June 2022)**

- Have a Certificate of passing the English language test (553/667) at Research, Consultancy and Languages Center, Faculty of Arts, Menoufia University. **(December 2018)**

- Have a Certificate in recognition of the professionalism and enthusiasm for accomplished an advanced level in English courses at Valley of Knowledge Training & Consulting. **(May 2016)**

- Awarded a shield as a technical supervisor in competition related to Ministry of Higher Education for Science and Technology Clubs. **(April 2015)**

- Awarded a Certificate as the best Teaching Assistant at Cairo Higher Institute. **(October 2015)**

- Have a Certificate in a competition Made in Egypt for project "CNC milling machine". **(August 2010)**

- Have International Computer Driving License Certificate (ICDL). **(February 2009)**

- Training in factories and companies of Toshiba Elaraby Group. **(Summer 2008)**

- Team Player with Leadership, Conflict Management, and Problem Solving Capabilities.

INTERNATIONAL SCIENTIFIC ACTIVITIES

• PEER REVIEWER

I have been chosen as a **reviewer** at the following:

– Nonlinear dynamics, *Asian Journal of Control, Measurement and Control Journal, Novel Intelligent and Leading Emerging Sciences (NILES)* Conference in Nile University and *Menoufia Journal of Electronic Engineering Research (MJEER)* and many other journals.

• LIST OF PUBLICATIONS

– Mohammad El-Hossainy, Raafat Shalaby, Belal Abo-Zalam and Tarek A. Mahmoud, "Event-Triggered Fractional-Order Fuzzy Sliding Mode Control Using Online Reinforcement Learning for Uncertain Nonlinear Systems: Practical Validation," *Engineering Application of Artificial Intelligence*, Elsevier, vol. 151, pp. 110653, **2025**.   **Impact Factor: 8   Q1 Journal**

– Mohammad El-Hossainy, Raafat Shalaby, Belal Abo-Zalam and Tarek A. Mahmoud, "Fractional-order fuzzy sliding mode control of uncertain nonlinear MIMO systems using fractional-order reinforcement learning," *Complex & Intelligent Systems*, Springer, vol. 10, pp. 3057- 3085, **2024**.

Impact Factor: 4.6   Q1 Journal

– Mohammad El-Hossainy, Raafat Shalaby, Belal Abo-Zalam and Tarek A. Mahmoud, "Optimal fractional-order PID controller based on fractional-order actor-critic algorithm," *Neural Computing and Applications*, Springer, vol. 35, no. 3, pp. 2347-2380, **2023**. **Impact Factor: 6.52   Q1 Journal**

– Mohammad El-Hossainy, Raafat Shalaby and Belal Abo-Zalam, "Fractional Order Modeling and Control for Under-actuated Inverted Pendulum," *Communications in Nonlinear Science and Numerical Simulation*., Elsevier, vol. 74, pp. 97-121, **2019**.   **Impact Factor: 3.8   Q1 Journal**

– Mohammad El-Hossainy, Raafat Shalaby and Belal Abo-Zalam, "Nonlinear SPKF-Based Time Varying LQG for Inverted Pendulum System," *Arabian Journal of Science and Engineering,* Springer, vol. 44, no. 8, pp. 6783-6793, **2019**.   **Impact Factor: 2.9   Q2 Journal**

– Mohammad El-Hossainy, Raafat Shalaby and Belal Abo-Zalam, "Modified PDOS-based LQG Controller for Inverted Pendulum," *Menoufia Journal of Electronic Engineering Research (MJEER),* vol. 28, no. 1, pp. 19-44, **2019**.   **CiteScore: 1.6   Q3 Journal**

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References are available upon request