

# Abdalla Elgammal

## CURRICULUM VITA



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### CAREER OBJECTIVE

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- *To pursue a teaching and a research career at a reputable and growing educational institution. I am seeking for the opportunity to expand and deepen my research in the field of mechatronics and robotics.*
- *My research interests are: Artificial intelligence, Robotic and mechatronics system design, synthesis, modeling and control.*

### ACADEMIC QUALIFICATIONS

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**9/2014 - 9/2017**      **Ph.D.** in Mechatronics and Robotics Engineering Department, Egypt-Japan University of Science and Technology (EJUST), EGYPT.

**9/2012 - 9/2014**      **M.SC.** in Mechatronics and Robotics Engineering Department, Egypt-Japan University of Science and Technology (EJUST), EGYPT.

**2004 - 2009**          **B.SC.** in Automatic Control and Measurements- Electrical Engineering Department, Benha Faculty of Engineering, EGYPT.

### WORK EXPERIENCE

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- Assistant professor at Electrical Engineering Dep., Benha Faculty of Engineering (2018 – Present).

#### *Key Responsibilities:*

- Delivering a weekly lectures within the department of electrical engineering for undergraduate and postgraduate students (Signal and Systems, Random Processes, Electric circuits (I, II), Computer programming C++, Object-Oriented Programming, Robotics Modelling and Control).

- Supervising undergraduate student's projects.
  - Supervising graduate students research work.
  - Commissioning work related to quality assurance and accreditation unit and administrative duties.
- Former Ph.D. student at Egypt-Japan University of Science and Technology (**E-JUST**) (2014 - 2017).
  - Visiting research fellow at **Waseda University**, Tokyo, Japan (2016 - 2017).
  - Assistant Lecturer at **Benha Faculty of Engineering** from (2014 - 2017).
  - Former M.SC. student at Egypt-Japan University of Science and Technology (**E-JUST**) (2012 - 2014)
  - Volunteering work in the first Egypt-Japan workshop on practical education for mechatronics and robotics, March 22-26, 2014, organized by Mechatronics and Robotics Engineering Department, Egypt-Japan University of Science and Technology, **E-JUST**, supported by STDF and JSPS.
  - Demonstrator at **Benha Faculty of Engineering** from (2010 - 2014).
  - Instructor at "**Tech Planet center**", Cairo, Egypt, (2010).
  - Operations and Maintenance Engineer at **Arab Contractors** (2010).
  - Operations and Maintenance Engineer at Alex-Converta company "**HANDY**", Alexandria, EGYPT, (2010).

## TRAINING EXPERIENCE

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<b>2006</b>	Egyptian Petrochemicals Company, <b>Egypt</b> .
<b>2008</b>	Jelecom Egypt, <b>Egypt</b> .
<b>2007 - 2008</b>	Sidi Krir Petrochemicals Company, <b>Egypt</b>

## Funded Research Grants

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**Project 1:** Remote center of motion (RCM) Manipulator for Vitreoretinal Surgery (STDF).

**Project 2:** Design of a 3U Cubesat Structure and its Deploying Mechanism (ASRT).

**Project 3:** A Novel Hybrid Aerial and Ground Hoverbike: Dynamics and Control (IEC – Benha University).

**Project 4:** Solar Powered Vending Machine (ITIDA).

## PATENTS

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- "Hoverbike has Two Systems Aerial and Ground" by Dr. Abdullah Elgammal and Dr. Manar Lashin, filling no 1007/2020, Date:12/07/2020 Place: Egypt.

- "Novel 3D Translational Pantograph Manipulator" by Mohamed Fanni, Eng. Mahmoud Magdy, **Abdalla Elgammal** and Manar Lashin Filling number: 518/2016 , Date:27/03/2016 Place: EGYPT.

## INTERNATIONAL JOURNALS

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- 1) **Elgammal, A. T.**, Fanni, M., & Mohamed, A. M. (2017). Design and Analysis of a Novel 3D Decoupled Manipulator Based on Compliant Pantograph for Micromanipulation. *Journal of Intelligent & Robotic Systems*, 87(1), 43-57.
- 2) Lashin, M., **Elgammal, A.T.**, Fanni, M., Mohamed, A.M. and Miyashita, T., 2018. *Optimal controller design for fully decoupled 3D transnational pantograph manipulator for high-speed pick and place*. International Journal of Mechatronics and Automation, 6(4), pp.160-172.

## INTERNATIONAL CONFERENCES

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- 1) M. Gaafar, M. Magdy, **A. T. Elgammal**, A. El-Betar and A. M. Saeed, "Development of a New Compliant Remote Center of Motion (RCM) Mechanism for Vitreoretinal Surgery," 2020 6th International Conference on Control, Automation and Robotics (ICCAR), Singapore, Singapore, 2020, pp. 183-187, doi: 10.1109/ICCAR49639.2020.9108005.
- 2) **Abdullah.T Elgammal**, Mohamed Fanni, Manar Lashin, Mahmoud Magdy and Abdelfatah Mohamed, "Parametric Design and Analysis of a New 3D Compliant Manipulator for Micromanipulation", 2017 IEEE International Conference on Advanced Intelligent Mechatronics.
- 3) **Elgammal, A. T.**, Fanni, M., Lashin, M., Mohamed, A. M. (2016, April), "Dynamic modeling and robust motion control of a 2D compliant pantograph for micromanipulation", in 2016 2nd International Conference on Control, Automation and Robotics (ICCAR), (pp. 159-164) IEEE, 2016.
- 4) Magdy, M., Fanni, M., **Elgammal, A. T.**, & Mohamed, A. M. (2016, April). New fully decoupled manipulator with three translational motion for pick and place applications. In Control, Automation and Robotics (ICCAR), 2016 2nd International Conference on (pp. 258-262). IEEE.
- 5) **Elgammal, A.** A.Abouelsoud, and S. Assal, "Fuzzy logic-based gain scheduling of exact feedforward linearization controller for magnetic ball levitation system," in '10th International Conference on Control' United Kingdom Automatic Control Council (UKACC)
- 6) Manar Lashin, **Abdullah T. Elgammal**, Ahmed Ramadan, A. A. Abouelsoud, Samy F. M. Assal and A. Abo-Ismael, "Fuzzy-based Gain Scheduling of Exact Feed Forward Linearization Control and Sliding Mode Control for Magnetic Ball Levitation System: A Comparative Study", 2014 IEEE International Conference on Automation, Quality and Testing, Robotics AQTR 2014- THETA 19th edition , Cluj-Napoca, Romania, May 22-24 2014

## COMPUTER SKILLS

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- CATIA software (Computer Aided Three-dimensional Interactive Application),
- MS ADAMS software,

- MATLAB,
- C++, Python,
- Latex

### **LINGUISTIC SKILLS:**

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- Arabic (Native language)
- English International TOEFL 82 IBT.

### **References:**

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- [Prof. Abdelfatah Mohamed](#), Professor of Robotics in Mecatronics and Robotics Engineering Department, [EJUST](#).  
(abdefatah.mohamed@ejust.edu.eg)
- [Prof. Mohamed Fanni](#), Professor of Robotics in Mecatronics and Robotics Engineering Department, [EJUST](#).  
(mohamed.fanni@ejust.edu.eg)
- [Prof. Ghada Amer](#), Professor at Electrical Engineering Dep. Faculty of Engineering, Benha University.  
(ghada.amer@astf.net)