Assistant professor of Mechatronics and Robotics Engineering. Electrical Engineering Department- Benha Faculty of Engineering. Benha University manar.lashin@bhit.bu.edu.eg

Manar Lashin, Ph.D., September 2017 in mechatronics and robotics from Egypt-Japan University of Science and Technology (EJUST), Alexandria, Egypt. And currently, She is working at Benha Faculty of Engineering as an assistant professor. Her research interests include robot kinematics, dynamics, and modeling, robust and optimal control synthesis for robotic manipulators.

Dr. Lashin is vice president of Innovation and Entrepreneurship Center (IEC) at Benha university. She has extensive experience in entrepreneurship, organizing training schedules, seminars, and workshops. She has lead several major initiatives for helping students and young researches in applying for financial aid for research projects. She is currently, a certified TOT at the Egyptian Patent Office (EPO) for Legal and technical procedures for obtaining patent. Also, she is a TOT under accreditation with the International Labor Organization (ILO) to train entrepreneurs for the program Start and Improve Your Business SIYB.

Personal Information :

Date of Birth:1 Dec 1987Marital Status:SingleSex:Female

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ACADEMIC QUALIFICATIONS:

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

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

2005-2010 B.SC. in Industrial Control- Electrical Engineering Department from Benha Faculty of Engineering.

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SELECTED APPOINTMENTS AND SERVICE

- Vice president of Innovation and Entrepreneurship Center at	2018-Till Now
the university	
- Training coordinator at Measurement and Assessment Unit	2018-Till Now
- Quality assurance and accreditation unit	2017-Till Now

WORK EXPERIENCE

- Co-operator (projects coordinator) in Arab Science and Technology Foundation, ASTF coordinator for L'Oréal –UNESCO Arab regional fellowships, and coordinator for an international women Network in Science and Technology in ASTF Foundation (Voluntary work 2010).
- Demonstrator at Benha Faculty of Engineering from (2010-2014).
- 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**.
- Assistant Lecturer at Benha Faculty of Engineering from (2014-2017).
- Former PhD student at Egypt-Japan University of Science and Technology (E-JUST)
- Assistant professor at Benha Faculty of Engineering from 2017-till now.
- Vice president of the Innovation and Entrepreneurship Center (IEC) at Benha Faculty of Engineering 2018-till now.
- TOT for Technical and legal procedures necessary to apply for a patent, Benha university.

SELECTED WORKSHOPS AND TRAININGS

8/2014-9/2014 Open Architecture Summer School 2014, Międzyzdroje- Poland.

10/2016-3/2017 Visiting research fellow at Waseda University, Tokyo, **Japan**.

9 October 2018 Intellectual property (IP) Policies in Universities and Research

institutions in cooperation with the World Intellectual Property Organization (WIPO).

24 July 2019 Technical and legal procedures necessary to apply for a patent **EGPO**, **Egypt**.

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27 July 2019 TOT workshop Start and Improve Your Business- The International Labour Organization- **Cairo** office (**ILO**).

PATENTS

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

INTERNATIONAL CONFERENCES:

- Lashin, M., Fanni, M., Magdy, M., & Mohamed, A. M. (2016, April), "PD type of fuzzy controller for a new 3DOF fully decoupled translational manipulator", In 2016 2nd International Conference on Control, Automation and Robotics ICCAR), (pp. 263-267) IEEE, 2016.
- Abdalla 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.
- 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) Manar Lashin, Abdullah T. Elgammal, Ahmed Ramadan, A. A. Abouelsoud, Samy F. M. Assal and A. Abo-Ismail, "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
- 5) Manar Lashin, Ahmed Ramadan, Hossam S. Abbass and Ahmed Abo-Ismail, "Design of an Optimized Sliding Mode Control for Loaded Double Inverted Pendulum with Mismatched Uncertainties", The 19th International Conference on Methods and Models in Automation and Robotics, Międzyzdroje, Poland, 2- 5 Sept., 2014

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6) **Lashina, Manar**, and Ahmed Ramadan. "Optimal Design of a State Feedback Sliding Mode Controller of a Loaded Double Inverted Pendulum." Conference Paper, Elsevier. 2015.

INTERNATIONAL JOURNALS:

- Manar Lashin, Mohamed Fanni, Abdelfatah M. Mohamed, and Tomoyuki Miyashita. "Dynamic Modeling and Inverse Optimal PID with Feed-forward Control in H∞ Framework for a Novel 3D Pantograph Manipulator." *International Journal of Control, Automation and Systems* 16, no. 1 (2018): 39-54.
- 2) Manar Lashin, 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.

COMPUTER SKILLS:

- CATIA software (Computer Aided Three-dimensional Interactive Application),
- MS ADAMS software,
- MATLAB,
- Latex,
- C/C++ programming.

Teaching courses:

- Experience in teaching for credit hours program Electro-mechanics engineering
- Electric circuits, I-II
- Advanced Mechatronics systems
- Intelligent Control course
- Computer programming C, C++, and Object Oriented Programing course.

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- Power systems course
- Automatic and optimal control courses.
- Electric and electronic measurements course.
- Graduation project supervision.
- Robotics.
- Control of Robotics.
- Engineering Economics.

LINGUISTIC SKILLS:

- Arabic (Tongue Language)
- English International TOEFL 80 IBT.

PERSONAL HOBBIES:

- Organizing trips programs and camps for friends.
- Reading (Historical, biographies and fiction books).
- Fishing trips, camps.
- Cooking, Eastern recipes, and desserts.
- Crochet, craftworks, and decoration skills.

References

- <u>Prof.Ghada Amer</u>, Professor at Faculty of Engineering, Benha ,Department of Electrical Engineering ,Benha University, V.P. the Arab Science and Technology Foundation (<u>ASTF</u>).
- Prof. Abdelfatah Mohamed, Head of MTR Department, EJUST.
- Prof. Mohamed Fanni, Professor of Robotics in MTR Department, EJUST.