DR. ABDELFATAH M. MOHAMED
Emeritus Professor, Automatic Control
Dept. of Electrical Engineering, Assiut University

Permanent Address: **Dept. of Electrical & Electronics Engineering**
FACULTY OF ENGINEERING, ASSIUT UNIVERSITY, EGYPT
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Current Address: **Dept. of Electrical & Electronics Engineering**
FACULTY OF ENGINEERING, ASSIUT UNIVERSITY, EGYPT
Tel: (+20)882080688 (work) (+20)882059421 (home) (+20)164172259 (mobile)
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E-mail: afm@aun.edu.eg, afmm52@yahoo.com

PERSONAL DATA

Place of birth: Akhmeem, Sohag., Egypt
Date of birth: September 20, 1953.

FIELD OF SPECIALIZATION

Robust Control of Magnetic bearing systems, Magnetic levitation systems, Robotics, Industrial drives and Power systems, using modern control techniques: H_∞ / μ synthesis, Q-parameterization theory, H_∞ Loop shaping, Gain scheduled controllers, and Variable Structure Control, Intelligent Control, Application of PLC in industrial process control.

EDUCATION

Ph.D., Electrical Engineering, May 1990. University of Maryland, College Park, Maryland, USA.
***Dissertation title*: "Optimal Control design and Nonlinear Dynamics of Magnetic Bearing Systems."**
***Major*: Controls**
***Minors*: Microelectronics and Computer Engineering.**

M.Sc., Electrical Engineering, June 1981, Assiut University, Assiut, Egypt.

Thesis title: **"Optimal Design of Shaded Pole Motors."**

B.Sc., Electrical Engineering, Electrical Power Section, June 1976, Assiut University, Assiut, Egypt.

PROFESSIONAL CAREER

1/78 - 5/84: Instructor: Electrical Engineering Dept., Assiut University, Assiut, Egypt.

- I taught Control Systems Design, Electrical Machinery Theory and Design, Power Systems Analysis, Circuit Theory, Engineering Electromagnetics, Systems Theory, Electrical machines and power systems laboratory.
- I helped in supervising undergraduate projects in power transformers, induction motors and synchronous machines design.

9/84 - 1/87: Research Assistant: Electrical Engineering Dept, University of Maryland, College Park, Maryland, USA.

- I was doing research in the area of modeling and control of magnetic levitation and magnetic bearing systems.

2/87 - 6/90: Teaching Assistant: Electrical Engineering Dept., The University of Maryland, College Park, Maryland, USA.

- I taught Electrical Machinery and Power Systems Laboratory.

9/90 - 11/95: Lecturer: Electrical Engineering Dept., Assiut University, Assiut, Egypt.

- I taught Control Systems Design, Linear System Theory (graduate course), Advanced Topics in Control Systems Design (graduate course), Signals and Systems Analysis, Instruments and Measurements, Circuit Theory, Electrical machines, power systems laboratory and Control systems laboratory, technical writing in English.
- I supervised undergraduate projects in control system design of magnetic levitation systems, servo systems, the ball and beam system, and applications of Programmable Logic Controllers (PLC) in industrial process control.
- I supervised the theses of graduate students.

9/91 - 8/93: Postdoctoral Fellow: Micro-Automation Laboratory, Dept. of Mechanical Engineering, The University of Texas at Austin, Austin, Texas, USA. Was on leave from the Dept. of Electrical Engineering, Assiut University, Egypt.

- I was conducting research in the area of control of magnetic levitation machines for automation of the manufacturing of semiconductor devices using numerical, theoretical and experimental approaches. Also supervising graduate students in the laboratory (I helped in supervising two theses, one Ph.D and one master).

12/95 - 3/96: Associate Professor: Electrical Engineering Dept., Assiut University, Assiut, Egypt.

- I taught Control systems design, System theory and Signals and Systems Analysis.
- I supervised the theses of graduate students.

4/96 - 3/97: Visiting Professor: Dept. of Electrical and Computer Engineering, Faculty of Technology, Kanazawa University, Japan. Was on leave from the Dept. of Electrical Engineering, Assiut University, Egypt.

- I taught technical writing in English.
- I was doing research at Magnetic Bearings Laboratory in the area of robust control of magnetic bearing systems. Also supervising graduate and undergraduate students in the laboratory (I helped in supervising one Ph.D thesis).

4/97 – 12/00: Associate Professor: Electrical Engineering Dept., Assiut University, Assiut, Egypt.

- I taught Control systems design, Linear Systems theory (graduate course), Advanced topics in Control system design (graduate course), Digital Control, and Signals and Systems Analysis, Process control.
- I supervise the theses of graduate students.

•I taught the following courses at the Faculty of Engineering, South Valley University: Properties of Material, Control Systems Design, and Digital Control, technical writing in English.
•I also taught a course at the High Institute of Energy in Aswan named "Control using Computers".
•I supervised undergraduate projects in digital servo control systems, digital control of magnetic levitation systems, and application of PLC in industrial process control.
•I supervised a project entitled as "Control of The Cane Feeding System Using PLC" for the engineers of the "Sugar Technology Research Institute" of Assiut University.

12/00 – 8/2003: Professor: Electrical Engineering Dept., Assiut University, Assiut, Egypt
•I taught Control systems design, Linear Systems theory (graduate course), Advanced topics in Control system design (graduate course), Digital Control, and Signals and Systems Analysis, Process control, Programmable Logic Controllers.
•I supervised the theses of graduate students.

9/2003 to 8/2010: I join the Dept. of Electrical & Computer Engineering, Applied Science University, Amman, Jordan, on leave from Assiut University, Egypt. I taught automatic Control, Signal Analysis and Processing, Automatic Control Laboratory, and Electrical Machines Laboratory.

2/19 – 3/4/2006: Visiting professor: Dept. of Electrical Engineering, Faculty of Technology, the University of Technology, Malaysia.

9/2010 to 3/2012: Head, Dept. of Electrical & Electronics Engineering, Assiut University, Egypt. I teach automatic Control, and Advanced topics in Control system design (graduate course). Supervise graduate students.

3/2012 to 9/2013: Dean of Faculty of Engineering, Assiut University, Egypt.

9/2013 to 11/2013: Emeritus Professor, Dept. of Electrical & Electronics Engineering, Assiut University, Egypt. I supervise graduate students.

11/2013 to 9/2018: Head, Dept. of Mechatronics & Robotics Engineering, School of Innovative Design Engineering, Egypt-Japan University of Science and Technology (EJUST) on leave from Assiut University, Egypt. Supervise graduate students. I taught Graduate level courses: Optimal Control, and Advanced Control systems. UG level courses: Automatic Control I, Automatic Control II, Graduation Project

10/2018 to 8/2022: Emeritus Professor, Dept. of Mechatronics & Robotics Engineering, School of Innovative Design Engineering, Egypt-Japan University of Science and Technology (EJUST) on leave from Assiut University, Egypt. Supervise graduate students. Teach Graduate level courses: Optimal Control, and Advanced Control systems.
UG level courses: Automatic Control I, Automatic Control II, Graduation Project

9/2022 to Now: Emeritus Professor, Dept. of Electrical Engineering, Assiut University, Egypt. I supervise theses of graduate students. Teach Graduate level courses: Optimal Control, and Advanced Control systems.
UG level courses: Automatic Control I, Automatic Control II, Graduation Project

LANGUAGES

•*Arabic* (proficiency: excellent)
•*English* (proficiency: excellent)

SOCIETY MEMBERSHIP:

IEEE Member, since 1990 (membership #08118127).
IEEE Senior Member, since 1999 (membership #08118127).
IEEE Life Senior Member, since 2021 (membership #08118127).
IEEE Control System Society Member, since 1990 (membership #08118127).
IEEE Education Society Member, Active: 18 years (membership #08118127).
IEEE Industrial Applications Society Member, Active: 3 years (membership #08118127).
Egyptian Engineers society member, since 1976 (membership # 9/7379)

Member of the Egyptian Engineering Sector committee 2012-2013.
Member of the national promotion committee of faculty members (Systems and Computer committee) of Egyptian universities 2019-now

CONFERENCES ATTENDED:

1. SIAM Conference, "CONTROL in the 90's, San Francisco, California USA, May 1989.
2. IEEE Conference on Decision and Control, Tampa, Florida, USA, December 1989.
3. American Society of Mechanical Engineers, Winter Annual Meeting, Atlanta, Georgia, USA, November 1991.
4. American Society of Precision Engineering, 7th Annual Meeting, Orlando Florida, USA, October 1992.
5. IEEE Conference on Aerospace Control Systems, Thousands Oaks, California, USA, May 1993.
6. American Control Conference, San Francisco, California, USA, June 1993.
7. American Control Conference, Baltimore, Maryland, USA, June 1994.
8. The fifth International Symposium on Magnetic Bearings, Kanazawa, Japan, August 1996.
9. IEEE Conference on Decision and Control, Kobe, Japan, December 1996.
10. IEEE Conference on Control Applications, Hartford Connecticut, USA October, 1997.
11. The Fourth IEEE Conference on Electronics, Circuits and Systems, Cairo, Egypt December 1997.
12. American Control Conference, Philadelphia, Pennsylvania, USA, June 1998.
13. American Control Conference, San Diego, California, USA, June 1999.
14. American Control Conference, Arlington, Virginia, USA, June 2001.
15. 7th International Conference on Intelligent Engineering Systems, March 2002, Assiut-Luxor, Egypt.
16. 1st International Conference on Telecomputing & Information Technology, September 2004, Applied Science University, Amman Jordan.
17. 1st International Conference on Innovative Engineering systems, ICIES2012, December 2012, E-JUST, Alexandria, Egypt.
18. 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, August 2-5, 2015, Boston, Massachusetts Boston, USA.

OTHER INFORMATION

1. Served as a member in the International Steering Committee of the 5th International Symposium on Magnetic Bearings, August 28-30, 1996, Kanazawa, Japan.
2. Served as a chairman of a session entitled as "Unbalance Control" in the 5th International Symposium on Magnetic Bearings, August 28-30, 1996, Kanazawa, Japan.
3. Served as a member in the International Steering Committee of the 6th International Symposium on Magnetic Bearings, August 5-7, 1998, Cambridge, Massachusetts, USA.
4. Reviewed a paper for IEEE Transactions on Control Systems Technology in the area of ``Control of Magnetic Bearing Systems" 2002.
5. Reviewed a paper for IEEE Transactions on Control Systems Technology in the area of ``Control of Magnetic Bearing Systems" 2000.
6. Reviewed a paper for IEEE Transactions on Control Systems Technology in the area of ``Control of Magnetic Bearing Systems" 1997.
7. Reviewed a paper for IEEE Transactions on Control Systems Technology in the area of ``Control of Magnetic Bearing Systems" 1995.
8. Reviewed 2 papers for the *5th International Symposium on Magnetic Bearing*, August 1996, Kanazawa, Japan.

9. Reviewed 3 papers for the *6th International Symposium on Magnetic Bearing*, August 1996, Cambridge, Massachusetts, USA.
10. Reviewed 4 papers for the *7th International Conference on intelligent Engineering Systems*, March 2003, Assiut-Luxor, Egypt.
11. Reviewed 4 papers for the *Journal of Engineering Sciences, Faculty of Engineering, Assiut university*, Egypt.
12. Served as a member in the Organizing Committee *of the 1996 Middle East Power Systems Conference (MEPCON 96)*, January, 3-5, 1996, Luxur, Egypt.
13. Participated in the development of the Automatic Control Laboratory in the department of Electrical Engineering, Assiut University.
14. Participated in the project "Development of Engineering Education (P/AST 203,205)" for the department of Electrical Engineering, Assiut University.
15. Reviewed a paper for the 2000 *American Control conference*, June-28-30, 2000, Chicago, IL, USA, in the area of "Robot control".
19. Best paper award in the area of the Electrical Engineering, Faculty of Engineering, Assiut University 1998.
20. Best paper award in the area of the Electrical Engineering, Faculty of Engineering, Assiut University 2003.
21. Served as a member in the Organizing Committee of the *7th International Conference on intelligent Engineering Systems*, March 2003, Assiut-Luxor, Egypt.
22. Served as a member in the Scientific and Organizing Committees of the *1st International Conference Telecomputing & Information Technology*, September 2004, Applied Science University, Amman Jordan.
23. Examined a master thesis at the Electrical Engineering Dept., the High Institute of Energy, Aswan, Egypt, 2001.
24. Examined two master theses at the Electrical Engineering Dept., El-Minia University, Egypt, 2002, 2003.
25. Examined a Ph.D. thesis at the Aerospace Engineering Dept., Cairo University, Egypt, 2005.
26. Served as a member in the International Advisory Committee of the 2nd International Conference on Control, Instrumentation, and Mechatronic Engineering, June 2-3, 2009, Malacca, Malaysia.
27. Reviewed a paper for the *Journal of Engineering Science*, Faculty of Engineering, Assiut University, Assiut, Egypt, in the area of "Magnetic Levitation control". 2010
28. Reviewed a paper for the *Journal of Engineering Science*, Faculty of Engineering, Assiut University, Assiut, Egypt, in the area of "DC Motor control". 2010
29. Examined a master thesis at the Electrical Engineering Dept., Assiut University, Assiut, Egypt, 2011.
30. Examined a master thesis at the Mechanical Engineering Dept., Assiut University, Assiut, Egypt, 2011.
31. Examined a Ph.D thesis at the Electrical Engineering Dept., El-Minia University, Egypt, 2017.
32. Examined a Ph.D thesis at the Electrical Engineering Dept., Beny Sweef University, Egypt, 2018
33. Reviewed a paper for IEEE Transactions on Power Electronics, in the area of Control of PM Synchronous Motors June 2019
34. Reviewed a paper for International Transactions on Electrical Energy Systems, in the area Fuzzy Control of a Distributed Parabolic Solar Collector Field, April 2019
35. Examined one Master thesis at Dept. of Industrial Electronics and Control Engineering, Menoufia University, July 2021
36. Examined a master thesis at the Electrical Engineering Dept., Assiut University, Assiut, Egypt, 2022.

37. Reviewed a paper for ISA Transactions, in the area Stability Control of High-speed Magnetic Levitation Turbomolecular Pumps with Shock excited Disturbance, March 2023
38. Reviewed a paper for the *Journal of Engineering Science*, Faculty of Engineering, Assiut University, Assiut, Egypt, in the area of " Hybrid PSO-HHO Based Optimal Control Strategy To Improve The Power Quality In The Autonomous Microgrids". 2023
39. Member of the National scientific committee in the supreme council of universities for promotion of faculty members in "Systems and Computer Engineering" from September 2019 to now

Google scholar H-index: 17
Scopus H-index: 14
ResearchGate H-index: 14

COMMUNITY SERVICES

1. Teaching a training Course in the area of "Programmable Logic Controllers" for the Engineers of the Fertilizer Factory, Assiut, Egypt, 1998.
2. Teaching training Courses in the area of "Programmable Logic Controllers" for the Engineers of The Aluminum Egyptian Company in Nag Hammady, Egypt, 1998.
3. Teaching training Courses in the area of "Programmable Logic Controllers" for the Engineers of The Aluminum Egyptian Company in Nag Hammady, Egypt, 2001.
4. Teaching a training Course in the area of "Programmable Logic Controllers" for the Engineers of Assiut Cement Company, Egypt, 1998.
5. Teaching a training Course in the area of "Control system Design of Dynamical Systems" for the Engineers of The Aluminum Egyptian Company in Nag Hammady, Egypt, 1991.
6. Working in a project titled as "Improvement of the Performance of the Electrical Power Networks" for the Factories of the Egyptian Sugar Company, 1994/1995.
7. Working in a project titled as "Water Level Control of the Irrigation Tanks of the Farm of Assiut Cement Company Using PLC" for Assiut Cement Company, Egypt, 1998.
8. Investigated the Elevator of Youth hotel in Al Kawther City, Sohag, Egypt, 1998.
9. Member in the center for engineering consultations of the faculty of engineering, Assiut university since 1997. Participating in the electrical engineering and automatic control works.

THESIS SUPERVISED

1. "Analysis and Design of Magnetic Levitation Control Systems" M.Sc thesis submitted to the Dept. of Electrical Engineering, Assiut University, 1994.
2. "Design of Robust Prescribed Eigenstructure Controller for Interconnected Power Systems" M.Sc. thesis submitted to the Dept. of Electrical Engineering, Assiut University, 1998.
3. "Performance of 3-Phase Induction Motor Fed By VSI Using PWM Techniques" M.Sc. thesis submitted to the Dept. of Electrical Engineering, Assiut University, 1998.
4. Design of Robust Control for Two-Link Robot" M.Sc. thesis submitted to the Dept. of Electrical Engineering, Assiut University, 1998.
5. Helped in supervising Master and Ph.D theses at the university of Texas at Austin, USA (1991-1993) in the area of "Micro Automation".
6. Helped in supervising a Ph.D thesis at Kanazawa University, Japan (1996-1997) in the area of "Unbalance Control of Magnetic Bearing Systems".
7. "Modern Robust Control of Magnetic Bearings With Imbalanced Rotor." Ph.D. thesis submitted to the Dept. of Electrical Engineering, Assiut University, 2002.
8. "Robust Control of A Two Area Power System," M.Sc thesis submitted to the Dept. of Electrical Engineering, Assiut University, 2004.

9. “Discretization of Continuous Time Controllers,” M.Sc thesis submitted to the Dept. of Electrical Engineering, Assiut University, 2005.
10. “Intelligent Control of Unstable Nonlinear System,” M.Sc thesis submitted to the Dept. of Electrical Engineering, Assiut University, 2007.
11. “A Fault-Tolerant Scalable Dynamic Hierarchical Scheduler For Grid Computing,” M.Sc thesis submitted to the Dept. of Electrical Engineering, Assiut University, 2013.
12. “ECG Signal Compression Algorithms In Wireless Data Transmission Context,” M.Sc thesis submitted to the Dept. of Electrical Engineering, Assiut University, 2014.
13. “Intrusion Detection System in Telecommunication Network,” M.Sc thesis submitted to the Dept. of Electrical Engineering, Assiut University, 2015.
14. “Haptic Control Development of Robotic Arm,” M.Sc thesis submitted to the Dept. of Mechanical Engineering, Assiut University, 2015.
15. “Motion Control of a Skid Steering Mobile Robot,” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2015.
16. “Design and Control of Contactless Robotic Joint Using Magnetic Bearing,” M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2015.
17. “Controller Design and Implementation of Transformation /Manipulation of System for a Novel Ground/Aerial Robot” M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2016.
18. “Synthesis of a Hybrid brain for Humanoid Robot” M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2017.
19. “Versatile Climbing Robot for Industrial Vessels Inspection” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2017.
20. “Dynamic Analysis and Control of a Novel All-Terrains Wearable Vehicle” M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2017.
21. “Dynamic Modelling and Controller Design /Implementation of a Novel 3D Translational Pantograph Manipulator” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2017.
22. “Design and Implementation of a Novel 3D Translational Pantograph Manipulator” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2017.
23. “Design, Dynamic Modeling and Control of a Novel 3D Compliant Pantograph Manipulator for Micromanipulation” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2017.
24. “Design and Control of a Magnetic Bearing System for Horizontal Axis Wind Turbine” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2017.
25. “Design, Control, and Implementation of a New Dexterous Parallel Manipulator for Minimally Invasive Surgery” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2018.
26. “Design and Control of a Robot with Multiple Contactless Joints Using Active Magnetic Bearing” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2018.
27. “Design and Implementation of a Novel All-Terrains Wearable Vehicle” Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2019.

28. "Optimal design of renewable energy resources with energy storage systems " Ph.D thesis submitted to the Dept. of Energy Resources Engineering, Egypt-Japan University of Science and Technology, 2019.
29. "Optimal Design of Micro Energy Grid with Operating Conditions Variations" Ph.D thesis submitted to the Dept. of Energy Resources Engineering, Egypt-Japan University of Science and Technology, 2020.
30. "Efficient Model Predictive Control Based on Linear Parameter-Varying Representations with Application to Magnetic Bearing Systems" Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2021.
31. "SOLAR PHOTOVOLTAIC PANEL BASED PUMPING SYSTEMS: A SOLUTION WITHOUT BATTERIES" Ph.D thesis submitted to the Dept. of Energy Resources Engineering, Egypt-Japan University of Science and Technology, 2021.
32. "Modeling and Flight Control of Small/Micro Sized UAVs with Active Morphing Wings" Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2021.
33. "Design and Implementation of A new Interconnected Translational Manipulator." Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2022.
34. "Optimal Design and Control of a New Interconnected Industrial Robot," M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2022.
35. "Design and Control of a Photo voltaic System for Solar-Powered Exploration Robots" Ph.D thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2022.
36. "Development of a Compliant Robotic Leg Based on a New Biarticular Actuation with Series Elastic Actuator" M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2022.
37. "Development of an Autonomous Assistive Robotic System for Oral Intake Assistance of People with Disability" M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2022.
38. "Development of a Compliant Wrist Rehabilitation Device" M.Sc thesis submitted to the Dept. of Mechatronics and Robotics Engineering, Egypt-Japan University of Science and Technology, 2022.
39. "Intelligent Tracking Control of a D-C Motor," thesis submitted to the Dept. of Electrical Engineering, Assiut University,2002
40. "Intrusion Detection System in Telecommunication Network," thesis submitted to the Dept. of Electrical Engineering, Assiut University,2015
41. " ECG Signal Compression Algorithms In Wireless Data Transmission Context ",thesis submitted to the Dept. of Electrical Engineering, Assiut University,2014
42. "A Fault-Tolerant Scalable Dynamic Hierarchical Scheduler For Grid Computing," thesis submitted to the Dept. of Electrical Engineering, Assiut University,2013
43. " Discretization of Continuous Time Controllers" thesis submitted to the Dept. of Electrical Engineering, Assiut University,2005

PUBLICATIONS

Journal Papers:

1. Magdy Mohsen, **Abdelfatah M. Mohamed**, S.M. Ahmed, and Khalil Ibrahim, "Bilateral Control of A 2-DOF Teleoperated Manipulator Using UDP Scheme," Ain Shams Engineering Journal https://doi.org/10.1016/j.asej.2022.102065

2. Mwayi Yellewa, **Abdelfatah Mohamed**, Hiroyuki Ishii and Samy F. M. Assal, "Design and Hybrid Impedance Control of a New Compliant Wrist Rehabilitation Device," submitted for publication to Part C: Journal of Mechanical Engineering Science. QU = 2 , IF = 1.762
3. Abdonoor kalibala; **Abdelfatah Mohamed**; Shinjiro Umezu; Samy F. M Assal, "Dynamic Modeling and Hybrid Compliant Control for a 2-DOF Compliant Robotic Leg With a New Biarticular Actuation", submitted for publication to Journal of Control, Automation and Systems. QU = 2 , IF = 3.314
4. Amos Alwala, Haitham El-Hussieny, **Abdelfatah Mohamed**, Kiyotaka Iwasaki, Samy F. M. Assal, "Hybrid Impedance Control-Based Autonomous Robotic System for Natural-Like Drinking Assistance for Disabled Persons," International Journal of Control, Automation and Systems. http://dx.doi.org/10.1007/s12555-022-0690-7, 21(6) (2023) 1978-1992. QU = 2 , IF = 3.314.

5. Diaa E. Abdelfatah, **Abdelfatah M. Mohamed**, and Mohamed Fanni, "Modeling and Flight Control of Small UAV with Active Morphing Wings" Journal of Intelligent & Robotic Systems**.** QU = 1, IF = 2.646. Published online: 5 October 2022, https://doi.org/10.1007/s10846-022-01740-y
6. Abdelrahman Morsi, Hossam S. Abbas, Sabah M. Ahmed and **Abdelfatah M. Mohamed**, "Imbalance Compensation of Active Magnetic Bearing Systems Using Model Predictive Control Based on Linear Parameter-Varying Models". Journal of Vibration and Control, April 2022. QU = 1, IF = 3.095. (https://doi.org/10.1177/10775463221099074)
7. Essam Mahmoud, Mohamed Fanni and **Abdelfatah M. Mohamed**, "A New Battery Selection System and Charging Control of a Movable Solar Powered Charging Station for Endless Flying Killing Drones," Sustainability February 2022. QU = 2, IF=2.592 Sustainability 2022, 14, issue 4, 2071. https://doi.org/10.3390/su14042071

8. Ahmed S. Abdelaziz, Mohamed Fanni, Victor Parque , and **Abdelfatah M. Mohamed**, "Development of a Balanced 3D Translational Interconnected Manipulator with Solely Rotary Joints/Actuators and Free-Internal-Singularity Workspace" IEEE ACCESS, January 2022 Vol. 10, PP. 167880 – 167899. DOI:10.1109/ACCESS.2021.3136779. QU = 2, IF = 3.745

9. Diaa E. Abdelfatah, Mohamed Fanni, **Abdelfatah M. Mohamed**, and Shigeo Yoshida "Low-Computational-Cost Technique for Modeling Macro Fiber Composite Piezoelectric Actuators Using Finite Element Method" materials, Vol. 14 No. 15, August, 2021, https://doi.org/10.3390/ma14154316 QU = 2, IF = 3.623

10. Ahmed S. Abdelaziz, Mohamed Fanni, and **Abdelfatah M. Mohamed**, "Finite Element Analysis, Control and Simulation of a Novel 3D Hybrid Balanced Manipulator" International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol:21 No:01, 2021. QU = 2, SJR= 0.29

11. Abdelrahman Morsi, Hossam S. Abbas, Sabah M. Ahmed and **Abdelfatah M. Mohamed**, "Model Predictive Control Based on Linear Parameter-Varying Models of Active Magnetic Bearing Systems**.** IEEE ACCESS, January 2021 Vol. 9. 10.1109/ACCESS.2021.3056323. QU = 1, IF = 3.745

12. Neama Yussif, Omar H. Sabry, Ayman S. Abdel-Khalik, Shehab Ahmed**,** and **Abdelfatah M. Mohamed "** Enhanced Quadratic V/f-Based Induction Motor Control of Solar Water Pumping System**." Energies 2021, 14, 104.** https://dx.doi.org/10.3390/en14010104**.** QU = 2, IF = 2.702

13. Alaa Farah, Hamdy Hassan, Alaaeldin M. Abdelshafy , and **Abdelfatah M. Mohamed**, "Optimal Scheduling of Hybrid Multi-carrier System Feeding Electrical/Thermal Load Based on Particle Swarm Algorithm," Sustainability, https://doi.org/10.3390/su12114701 June 2020. QU = 2, IF=2.592

14. Maha Salman, Ahmed Sameh, Mohamed Fanni, Shigeki Sugano, and **Abdelfatah M. Mohamed**, "Design, Control, and Dynamic Simulation of Securing and Transformation Mechanisms for a Hybrid Ground Aerial Robot", International Journal of Mechanical & Mechatronics Engineering, Vol:20 No:02, 2020. **QU = 2**

15. Alaaeldin M. Abdelshafy, Jakub Jurasz, Hamdy Hassan**, Abdelfatah M. Mohamed,** "Optimized energy management strategy for grid connected double storage (pumped storage-battery) system powered by renewable energy resources," Journal of Energy, Volume 192, 1 February 2020, 116615. https://doi.org/10.1016/j.energy.2019.116615. IF=5.537.

16. Mohamed G. Alkalla, Mohamed A. Fanni, **Abdelfatah M. Mohamed**, Shuji, Hashimoto, Hideyuki Sawada**,** Miwa Takanobu**,** and Amr Hamed "EJBot-II: An Optimized Skid Steering Propeller-type Climbing Robot with Transition Mechanism," Journal of Advanced Robotics, https://doi.org/10.1080/01691864.2019.1657948 , Volume 33, 2019 - Issue 20, August 2019**.**

17. Omar Ibn Elkhatab Zahra, Mohamed Fanni and **Abdelfatah M. Mohamed**, "Synthesis of a Hybrid Brain for a Humanoid Robot," Journal of Robotics and Autonomous Systems, Vol.119, 135–150 July 2019. https://doi.org/10.1016/j.robot.2019.05.006

18. Mohamed Selmy, Mohamed Fanni, and Abdelfatah M. Mohamed, and Tomoyuki Miyashita "A New Novel 6-DOF Two-Link Manipulator using Active Magnetic Bearing: Design, Kinematics and Control," International Journal of Advanced Robotic Systems, December 2018. https://journals.sagepub.com/doi/10.1177/1729881418817634

19. Bikheet M. Sayed, Mohamed Fanni**,** and **Abdelfatah M. Mohamed**, "Design and Control of a Novel All-Terrains Wearable Vehicle," accepted for publications in the Industrial Robots: An International Journal. https://www.emerald.com/insight/content/doi/10.1108/IR-03-2018-0042/full/html November 2018.

20. M. Fekry, **Abdelfatah M. Mohamed**, Mohamed Fanni, and S. Yoshida, "A Comprehensive Performance Assessment of the Integration of Magnetic Bearings with Horizontal Axis Wind Turbine," Mathematics and Computers in Simulation (Elsevier), https://doi.org/10.1016/j.matcom.2018.06.011, July 2018.

21. Manar Lashin, Abdullah T. Elgammal , Mohamed Fanni, **Abdelfatah M. Mohamed,** and Tomoyuki Miyashita "Optimal Controller Design for Fully Decoupled 3D Transnational Pantograph Manipulator for High-Speed Pick and Place", Accepted for publication in the International Journal of Mechatronics and Automation, May 2018.

22. Alaa Khalifa, Mohamed Fanni, **Abdelfatah M. Mohamed**, and Tomoyuki Miyashita, "Development of a New 3-DOF Parallel Manipulator for Minimally Invasive Surgery", The International Journal of Medical Robotics and Computer Assisted Surgery, March 2018, https://onlinelibrary.wiley.com/doi/abs/10.1002/rcs..

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