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## OMAR WALEED NAJM MAAROOF

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### Education:

1. B.Sc. in Mechanical Engineering / General / University of Mosul / Mosul, Iraq. Class of 2005-2006. Grade (Good) average mark is 76.724%, Rank is 2<sup>nd</sup> out of 13 students.
2. Diploma in Turkish Language / Ankara University/ TÖMER Izmir, Turkey. Class of 2010, with *C1* level in (ELP) European Language Portfolio.
3. M.Sc. in Mechanical Engineering / Robotics and Control Systems / Izmir Institute of Technology / Izmir, Turkey. 2012. (CGPA) 3.69.

### Experiences:

1. Worked as an *Assistant Engineer* in Mechanical Engineering Department at Mosul University during the period 19/03/2007 until 13/06/2008, where my duties was including; training the students on laboratory's experiments and academic workshop. Also on maintaining procedures. I also participated with two engineers to install an Industrial CNC Cutting Machine (SATO) in its academic workshop.
2. Worked in Mechatronics Engineering Department at Mosul University during the period 13/6/2008 until 07/05/2013 (excluding time off for studying My MSc) as *Engineer* and *Assistant Researcher*. I instructed the students various subject areas of laboratory experiments, Academic Workshop and Computer aided drawing (AutoCAD). I also participated with a team to maintain an Industrial Robot (ASEA IRB L6/2) at the department.
3. Worked in Mechatronics Engineering Department at Mosul University as *Assistant Lecturer* from 07/05/2013 until 1/12/2014, teaching students at Robotics Lab., Fluid Lab., and Automations Lab. and lecturing Engineering Drawing (CAD).

### Research Areas:

- Teleoperation systems.
- Haptic system design.
- Surgical robots.
- Service robots
- Mechanics of robot and analysis.

- Modeling of robotic systems.
- Structure synthesis and analysis of robotic manipulators.
- Control of Robotic systems.

### **Publications:**

- **Theses;**
  1. Omar W. N. Maarroof, "Self-Motion Control of Kinematically Redundant Robot Manipulators," MSc Thesis, Izmir Institute of Technology, 2012.
- **Journal papers ;**
  1. Maarroof, O. W. and M. İ. C. Dede (2014). "Kinematic synthesis of over-constrained double-spherical six-bar mechanism" *Mechanism and Machine Theory* 73(0): 154-168.
  2. Mehmet İsmet Can Dede, Omar W. Maarroof and Enver Tatlicioglu (2016) "A New Objective Function for Obstacle Avoidance by Redundant Service Robot Arms" *International Journal of Advanced Robot Systems* 13(48): 1-13. doi: 10.5772/62471.
- **Conference Papers;**
  3. O. Maarroof, E. Gezgin, and M. İ. C. Dede, "General Subtask Controller for Redundant Robot Manipulators," 12th IEEE Int. Conf. on Control, Automation, Jeju Island, Korea, October 17-21, 2012.
  4. Dede, M. İ. C., O. W. Maarroof, G. Ateş, M. Berker, İ. Işıkkay, and Ş. Hanalioğlu. "Unilateral Teleoperation Design for a Robotic Endoscopic Pituitary Surgery System," MESROB 2016, 5th International Workshop on Medical and Service Robots, Graz, Austria, July 4-6, 2016.
- **Book Chapters;**
  1. O. W. N. Maarroof ve M. İ. C. Dede "A Comparative Study on Application of Decomposition Method in Function Generation Synthesis of Over-Constrained Mechanisms," *New Advances in Mechanisms, Transmissions and Applications*, Victor Petuya, Charles Pinto, and Erwin-Christian Lovasz (Eds.), pp. 309-316, Springer, Dordrecht, The Netherlands, 2013 (ISBN: 978-94-007-7484-1).
  2. Omar W. Maarroof, and Mehmet İsmet Can Dede. "Physical Human-Robot Interaction: Increasing Safety by Robot Arm's Posture Optimization," *ROMANSY 21 - Robot Design, Dynamics and Control*, Vincenzo Parenti-Castelli and Werner Schiehlen (Eds.), pp. 329-337, Springer International Publishing, 2016 (ISBN: 978-3-319-33714-2).

3. Omar W. Maarroof, Mehmet İsmet Can Dede, Gökhan Kiper. “Alternating Error Effects on Decomposition Method in Function Generation Synthesis,” New Trends in Mechanism and Machine Science, Philippe Wenger and Paulo Flores (Eds.), pp.293-301, Springer, 2017 (ISBN: 978-3-319-44155-9)

#### **Ongoing Funded Projects:**

- Robot Assisted endoscope Control that can be controlled by the surgical tools (NeuRoboScope). (Funding Organization : TÜBİTAK).

#### **Conferences Attendance:**

- Proceedings of the International Symposium of Mechanism and Machine Science, 2010 AzC IFToMM – Izmir Institute of Technology, 5-8 October 2010, Izmir, Turkey.
- IEEE World Haptics Conference 2011, June 22-24 2011, Istanbul, Turkey.
- The Second Engineering Scientific Conference under the theme “The Scientific Research is a Fundamental Pillar for Construction and Development”, at the College of Engineering /University of Mosul, 19-21 November 2013, Mosul, Iraq.
- The First Conference for the graduated students of the Ministry of Higher Education and Scientific research scholarship programs under the theme “exploitation of mentality and knowledge carriage for better reconstructed future”, at 28 Oct. 2013, Baghdad, Iraq.
- Uluslararası katılımlı 17. Makina Teorisi Sempozyumu / TrC-IFTToMM Symposium on Theory of Machines and Mechanisms / UMTS2015 / TrISToMM, 14-17/06/2015, Izmir, Turkey.
- ROMANSY 2016 21st CISM IFTToMM Symposium on Robot Design, Dynamics and Control, June 20-23, 2016, Udine, Italy.

#### **Certifications:**

1. Got a certification in Syrian Arab Co. for Electronic IND. (Syronics) /Damascus/Syria (2005). Trained on the procedures of manufacturing, the production lines, the use of Automation and (FMS) Flexible Manufacturing Systems.
2. Certification of efficiency in computer usage (2009). Computer & Internet Center / Mosul University / Mosul, Iraq.
3. Certificate in Teaching Methods (2013). Center for Developing Teaching Methods & Staff Training / Mosul University / Mosul, Iraq.
4. The computer-based Graduate Record Examination (GRE) revised General Test (Score: Quantitative, 158), (May 2015).

5. Official FARO Certificate on FARO® Arm CAM2 Measure 10. Turkey, (June 2016).

**Awards:**

1. Türk Hukümet Bursu (2009) (Turkish Government Scholarship program for postgraduate study).
2. Honor certificate (2013), produced by The Ministry of Higher Education And Scientific Research / Scholarships and Cultural Relations Directorate.

**Letter of appreciations:**

1. A letter of appreciation (2013) from the minister of Higher Education and Scientific Research.
2. Two letters of appreciation from the Dean of Engineering Collage / Mosul University.

**Computer software experience:**

3. AutoCAD
4. SolidWorks
5. MATLAB / MATLAB-Simulink
6. NI LabVIEW
7. Wolfram MATHEMATICA
8. Microsoft Office: Word, Excel and Power Point

**Languages:**

1. Native language: *Arabic*.
2. Other languages:
  - i. *English*: Official TOEFL Test (IBT) 79, (Mar 2015).
  - ii. *Turkish*: Diploma in Turkish language.