Hassan Abdul-Rahman Umari

Research Assistant, UAEU

Mechatronics Engineering

https://www.youtube.com/warshat

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Al Ain, UAE

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Date of birth: 25th March 1991.

Place of birth: Bonn, Germany

Nationality: Jordanian.

Marital status: Single.

Objective

To be part of a leading research institute where I can put my skills and education in practice. Looking for a position that involves embedded systems, control, mechanical design, programming, and automation.

Education

2/2015 – 5/2017

M.Sc in **Mechatronics Engineering,** American University of Sharjah (AUS), UAE

- CGPA: 3.77/4 (**Excellent**).
- Thesis Topic: **Multi-Robot Map Exploration Based on Multiple Rapidly-exploring Randomized Trees.**

9/2009 – 6/2014

B.Sc in **Mechanical Engineering,** Jordan University of Science and Technology (JUST), Jordan

- CGPA: 80.8/100 (**Very good**).
- Senior design project: **System Modeling of a Variable Pitch Quadrotor**.

2008 –2009

High School Certificate, **Science Stream**, Irbid Secondary School, Irbid, Jordan

- CGPA: 92.6/100 (**Excellent**).

Publications and Achievements

2017

- **Hassan Umari** and Shayok Mukhopadhyay, "Autonomous Robotic Exploration Based on Multiple Rapidly-exploring Randomized Trees," in Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2017. (acceptance rate 45%).
  Paper has been accepted but not published yet. Expected publishing/indexing date is by December 2017.

5/2017

- Hassan Umari, "Multi-robot Map Exploration Based on Multiple Rapidly-Exploration Randomized Trees," M.S. thesis, Dept. Mech. Eng., American Univ. of Sharjah, Sharjah, UAE, 2017.

2013

- A member of a 2nd place winner- team, at URC 2013 robotics competition, in the ball collection theme.

Experience

4/2017 – current

Research Assistant

- United Arab Emirates University (UAEU). Al Ain, UAE.
- Designing a wearable hand assistive device for stroke patients.
- Designing a small-scale concrete 3D printer.

2/2015 – 12/2016

Research and Teaching Assistant

- American University of Sharjah (AUS). Sharjah, UAE.
- Research work load was mainly dedicated to my thesis.
- Designing a prototype for an adjustable speed-controlled four-bar mechanism.

- I was a teaching assistant for the following courses: Introduction to Mechatronics Lab. (MTR501L), Dynamics Control Systems Lab (MCE 415L), Introduction to Robotics (MCE 464), Computer Applications in MCE II (MCE 326L), Modeling and Simulation of Dynamical Systems (MTR 530), and Advanced Engineering Mathematics (NGN 500).

8/2014 –12/2014

Junior Automation Engineer

- Al-Wefaq Control Systems. Amman, Jordan.
- PLC programming (Siemens 1200).
- Testing panel boards.
- Documentation.
- Prepare CAD drawings for panel boards.

6/2013–8/2013

Mechanical Engineer Trainee (Internship)

- King Abdullah II Design and Development Bureau (KADDB). Amman, Jordan.
- During my stay at KADDB, I was working on my senior design project (System Modeling of a Variable Pitch Quadrotor). The project was funded and supported by KADDB.

Technical Skills

Engineering

- MATLAB/Simulink.
- Octave.
- LabView.
- LTSpice.
- Fritzing.

CAD Drawing

- Inventor (Autodesk).
- Fusion 360 (Autodesk).
- AutoCad (Autodesk).
- PTC Creo (ProEngineer previously).
- Rihno.

Hardware

- Embedded systems and Data Acquisition: PIC 24 Family, Motorola 68HC11, Arduino, Raspberry Pi, NI my RIO, dSpace.
- PLC: Siemens 1200, Allen-Bradly.

Programming Language

- Assembly (Motorola 68HC11 instruction set).
- C.
- C++.
- Python.
- MATLAB.

Marking-up Languages

- LaTeX.
- HTML.

Software Tools	• Robot Operating System (ROS). I have developed an open source ROS package which implements my thesis work. It was written in Python and C++. The package is published and documented on ROS wiki page. Package name is: rrt_exploration Also available on my GitHub account: https://github.com/hasauino/rrt_exploration • OpenCV. • Numpy.
Operating Systems	• Windows (All versions). • GNU/Linux (Ubuntu, Raspbian).
Miscellaneous	• Photoshop, Inkscape, GIMP, Macromedia Flash (Adobe Flash now), adobe Premiere.

Languages:

- Arabic: native speaker.
- English: Full professional proficiency (96 TOEFL IBT, with 22/30 in speaking, 2014).
- German: basic (equivalent to level A1).

References are available upon request

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