

Curriculum Vitae



Personal Details

Name : *Mostafa Mahmoodi*
Date of Birth : *December 6, 1985*
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Education & Training:

- **2010-Current:** Qazvin Islamic Azad University (QIAU), **M.Sc.** Mechanical Eng., Applied Design
Thesis Title: “*Control and Motion Planning of Wheeled Mobile Robotic Systems*”
Place: QIAU, Mechatronics Research Lab. (MRL), Middle Size Soccer Robot Lab.
- **2005-2009:** Islamic Azad University of Qazvin (QIAU), **B.Sc.** Mechanical Eng., Solid Mechanics, (GPA: 17.67/20),
Thesis Title: “*Design & Optimization of Handling & Control systems for Parax Electric Vehicle¹*”
Place: QIAU, Incubator Center of Technology Units (ICTU), Mechanic Engineering & Vehicle Research Center.
Training (Novitiate) Title: “*CNC Machines & Robotic Arms, Programming & Design*”
Place: TAM Irankhodro Co. Tehran, Iran.

Research Interest, Skill & Activities:

- Evolutionary-Based Optimization & Design Study
- Design & Implementation of Advanced Robotic Systems
- Computational Advanced Programming (Based C++)
- Kinematics & Dynamics of Mobile, Serial & Parallel Robots
- Motion Planning
- Vehicle Dynamics & Control (VDC)

¹ The Parax EV is a two-manned electric car, is built by a group of students at Qazvin's Azad University. Parax weight's is only 450 kg. It can travel for 100 km on a single charge (60 miles) and can reach a top speed of 110 km/h (68 mph)

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- Hybrid Systems

Software Experience:

- OOP (Visual C++)
- Computer Algebra System: MATLAB, Wolfram Mathematica , Maple
- CAD System: CATIA, Solid Works, Mechanical Desktop, AutoCAD, ADAMS

Awards & Honors:

- Privileged Student of **B.Sc.** with GPA 17.67/20
- 2nd Place of **RoboCup** Soccer Robot Middle Size League (Main League), Mexico City, Mexico 2012;
- 2nd Place of **RoboCup** Soccer Robot Middle Size League (Main League), Dutch Open, Netherland 2012;
- 1st Place of 3rd Iranian Machine Design Competition 2011(**IMDC**) with "*Parax Hybrid Electric Vehicle²*";
- 2nd Place of **RoboCup** Soccer Robot Middle Size League (Free Challenge), Istanbul, Turkey 2011;
- 1st Place of **RoboCup** Soccer Robot Middle Size League (Main League), Iran Open, Iran 2011;
- 1st Place of **RoboCup** Soccer Robot Middle Size League (Technical Challenge), Singapore 2010;
- 3rd Place of **RoboCup** Soccer Robot Middle Size League (Free Challenge), Singapore 2010;
- Invited by the Institute for Research & Technology Transfer (**IRTT**) for Research about Electric Vehicle & Integration them with Hydrogen Fuel Cell Technology, New York, From May 1st 2010 to April 30, 2011;
- 1st Place of 2nd Iranian Machine Design Competition 2009(**IMDC**) with "*Parax EV*";
- Member of Referee Committee of **RoboCup** Junior League in the IranOpen International Competition from 2009;

Language Skills:

	<i>Speaking</i>	<i>Listening</i>	<i>Reading</i>	<i>Writing</i>
Persian	Excellent	Excellent	Excellent	Excellent
English	Good	Good	Good	Good
Turkish	Good	Good	Excellent	Good
Azerbaijani	Excellent	Excellent	Good	Good

² The Parax HEV is a sedan car with hybrid parallel series (Torque coupling) drivetrain, is built by a group of students at QIAU. Parax HEV with a 2-kWh lithium-ion battery that allows an all-electric range of 15 km. It offers an estimated 45 mpg city/40 mpg highway/44 mpg combined and can reach a top speed of 220 km/h (137 mph).

Work Experience:

- **2013-Current:**
Place: University of Tehran, Faculty of New Science and Technology, Human-Robot Interaction Laboratory (TaarLab). www.taarlab.com
Subject: Researcher
- **2009-2013:**
Place: QIAU, Incubator Center of Technology Units (ICTU), Mechanic Engineering & Vehicle Research Center. www.ictu.qiau.ac.ir
Subject: Design, Implementation & Manufacturing of Parax HEV for 3rd IMDC-2011 & Head of Hybrid Control Unit (HCU) Group in the Parax Hybrid project.
- **2009-2010**
Place: TAM Irankhodro Company, Iran, Tehran; www.tamco.ir
Subject: Designer Engineer in the BIW (Body-in-White) & Robotic Department
- **2008-2013**
Place: QIAU, Mechatronic Research Laboratory (MRL). www.mrl.ir
Subject: Head of Mechanics & Control Groups in the Middle Size Soccer Robot Lab.
- **2008-2009**
Place: QIAU, Incubator Center of Technology Units (ICTU), Mechanic Engineering & Vehicle Research Center.
Subject: Head of Steering & Control System group in the Parax EV project & Head of Body & Chassis design group in the Parax EV project.

Conference Papers:

1. Mahmoodi, M. Ziarati, H. Karimi Asl, B. “*Simulation of control system and Power management in a parallel hybrid vehicle based on static optimization*”. First National Conference of Energy, Vehicle and Sustainable Development, Tehran, 23&24 October 2011.
2. Mahmoodi, M. Karimi, M. “*Implementation of a parallel hybrid vehicle energy management system based on heuristic approach*”. Second International Conference of Emerging Trends in Energy, Tehran, 2&3 March 2013.

References:

- I. Dr. Khalil Alipour, Assistant Professor. Faculty of Mechanical Eng., QIAU;
- II. Dr. Mehdi Tale Masoule, Assistant Professor, Faculty of New Science and Technology Robotic Laboratory, University of Tehran;
- III. Dr. Mohammad Javad Yazdanpanah, Professor. Faculty of Electrical & Computer Eng., University of Tehran;
- IV. Dr. Mohammad Eftekhari Yazdi, Assistant Professor. Faculty of Mechanical Eng., QIAU;