

Mohammad SHARIFZADEH

AFFILIATION: Ph.D. Student of Systems Engineering at [Arizona State University](#),
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RESEARCH INTERESTS

Robotics & Mechatronics, Human-Robot Interaction (HRI), Parallel Mechanisms, Dynamic & Position Control of mechanisms, System Identification, Haptic, Analytic Control, Neural Networks.

ACADEMIC BACKGROUND

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| 2013 - 2016 | MSc , University of Tehran, (Mechatronics Engineering)
GPA: 18.4 (out of 20)
Research Team: Human-Robot Interaction Laboratory (Taarlabs).
Thesis: Dynamical Control & Identification of 3-DOF Decoupled Parallel Mechanism (Tripteron) and Constructing a Human-Robot Interaction Interface (under supervision of Dr. Mehdi Tale Masouleh & Dr. Ahmad Kalhor)
Core modules: Advanced Robotics, Mechatronics I-II, System Identification, Neural Networks, Optimal Control, Advanced Engineering Mathematics. |
| 2008 - 2012 | BSc: Shiraz University (Electrical Engineering, Control field).
GPA: 15(out of 20)
Thesis: Designing and constructing an AC/DC Converter with various ranges of output voltage (+2-50 Voltage) by new approach in digital controlling of Buck and Boost converters. (under supervision of Dr. Haidar Samet)
Core modules: Computer Application in Control, Digital Control Systems, Modern Control Systems, Industrial Control I, Industrial Control II (PLC), Linear Control Systems, Instrumentation, Fundamentals of Microcomputers. |
| 2004 - 2008 | High School , National Organization for Development of Exceptional Talents, Shiraz branch, Dastgheib high school.
GPA: 18.97(out of 20) |

ACCEPTED PAPERS

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| <i>Journal of Meccanica</i> , Springer, 2016 | On Human-Robot Interaction of a 3-DOF Decoupled Parallel Mechanism Based on the Design & Construction of a Novel and Low-cost 3-DOF Force Sensor |
| <i>Conference of ICRoM</i> , 2016, will be indexed in IEEE | Experimental Identification of Friction and Dynamics of an Over-constrained 3-DOF Decoupled Parallel Mechanism |
| <i>Conference of ICRoM</i> , 2015, indexed in IEEE | Design, Construction & Calibration of a Novel Human-Robot Interaction 3-DOF Force Sensor |

SUBMITTED PAPERS

- Transactions on Control Systems Technology, IEEE*, 2016 An Experimental Dynamic Identification & Control of an Over-constrained 3-DOF Parallel Mechanism in Presence of Variable Friction and Feedback Delay
- Journal of Mechanism and Machine Theory*, Cambridge, 2016 An Experimental Study on the Direct & Indirect Identification of an Over-Constrained 3-DOF Decoupled Parallel Mechanism

PROJECTS

- Winter 2016 Dynamic control of the 3-DOF parallel mechanism (Tripteron)
- Winter 2015- Winter 2016 Dynamic identification of the 3-DOF parallel mechanism (Tripteron)
- Spring 2015 Open-loop Speed/Position control of the 3-DOF parallel mechanism via the developed 3-DOF force sensor
- Winter 2015 Development of a load-cell based 3-DOF force sensor
- Fall 2014 Open-loop control of a 3-RRR planar parallel mechanism via Joy-stick
- Summer 2014 Open-loop control of a cable driven planar parallel mechanism via Joy-stick

TEACHING ASSISTANCE EXPERIENCE

- Summer 2015 Supervising a bachelor student on "Design & Construction of a Novel 3-DOF Force Sensor to be installed on Falcon Haptic device".
- Spring 2015 Teaching assistant of Advanced Robotics, under supervision of Dr.Tale Masouleh
- Fall 2014 Teaching assistant of Advanced Engineering Mathematics, under supervision of Dr.Tale Masouleh
- Fall 2012 Teaching assistant of Instrumentation under supervision of Dr.Karim Aghaei

INDUSTRIAL EXPERIENCES (APPRENTICESHIP)

- Spring & Summer 2013 **Shiraz Petrochemical Company (SPC)**, Shiraz, Fars, Iran. The company's activity is in producing Fertilizers. I spent 4 months in Utility department, especially in its Powerhouse. My duties: collecting information and data classification and PLC programming to renew the old Water Treatment Alarm system with Siemens PLC (S7 Family). Participating in renewing Generators' Alarm System with Shinkawa PLC.
- Summer 2011 **Noavaran Hooshmand Fars Co.**, Shiraz, Iran. The company's activities are focused on intelligent buildings and building management systems (BMS). My duties were to perform a comprehensive research into mechanisms of BMS subsystems, in addition to teamwork with design and installation group, in which my contribution was to designing a fire alarm system for a residential building. It was a great opportunity for me to become familiar to mechanisms and application of BMS and its subsystems.

HONORS

- Ranked 506 in National MSc entrance exam of Electrical Engineers (In Mechanics Engineering filed)
- Ranked 427 in National BSc entrance exam of math and physics, Iran, 2008.
- Ranked 10 in Islamic Azad University's entrance exam, (In architecture engineering field), Iran, 2008.

PROGRAMMING SKILLS

- **Engineering Software:** MATLAB(Simulink), SolidWorks(Designing), Altium Designer, LabVIEW, Pspice(Orcad Capture), Proteus.
- **Programming:** Qt programming, MATLAB coding, C++ programming, Arduino ide, Bascom(AVR), CodeVision(AVR).
- **Office Software Suit:** \LaTeX , Microsoft Office(Word, Excel and Power-point)

EXTRACURRICULAR ACTIVITIES

- Active committee member of Society of Electrical Engineering at Shiraz University, 2008-2012.
- Active member and one of the founders of IEEE's Shiraz University Section (Iran). Recruiting new members and organizing events.
- Attending courses and workshops in business management and attending workshop of creativity and innovation.
- Attending introductory courses in Nano-Materials, Shiraz Nano Technology Research Centre.

LANGUAGES

- **English:** Fluent.
TOEFL iBT: 104 → R.:27, L.: 30, S.: 23, W.: 24.
GRE General CBT → V.: 140, Q.: 167, A.W.: 3.
- **Persian:** Mother tongue.
- **Arabic:** Basic Knowledge.

PERSONAL INTERESTS

- **Sport:** Playing chess, ping-pong and futsal with friends as the goalie.
- **Music and Movies:** I spend part of my spare time, listening to music and watch TV shows and movies.

REFERENCES

[Dr. Daniel Aukes](#)
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[Dr. Mehdi Taleh Masouleh](#)
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