

M. J. Mirshojaeian Hosseini

Mechatronic Engineer

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[http://wp.kntu.ac.ir/aliyari/
fdi/people/alumni.html](http://wp.kntu.ac.ir/aliyari/fdi/people/alumni.html)

languages

Farsi mother tongue
English fluency
Arabic Basic

Software

Matlab, SolidWorks
FlowMaster, C++
Code Vision, Abaqus
Automation Studio
S7 Lite, Winproladder
COMSOL & Latex

education

- 2011–2013 **Master** of Mechatronic Engineering K.N.Toosi University of Technology, Tehran
Design, Simulation and Control of an Electro-Hydrostatic Actuator and Improvement of Its Performance
Supervisor: Dr. Mahdi Aliyari Shoorehdeli
- 2005–2010 **Bachelor** of Mechanical Engineering Ferdowsi University of Mashhad, Mashhad
Governing Equations of DC and AC Motors
Supervisor: Dr. Alireza Akbarzadeh Tootoonchi

experience

- 2009–Now **FDI Lab, Electrical Engineering Faculty, K.N.Toosi University of Technology** Tehran
Research Assistant
Designing, simulating, controlling and developing electro-hydrostatic actuator for a dynamic load simulator. Detailed achievements:
- Researched generally on electro-mechanical, electro-hydraulic and electro-hydrostatic actuators
 - Finally electro-hydrostatic actuator was chosen for DYNAMIC LOAD SIMULATOR:
 - Designed electro-hydrostatic actuator
 - Simulated electro-hydrostatic actuator by two methods:
 - * multidisciplinary method
 - * mathematical method
 - Designed new controller method for electro-hydrostatic actuator
 - Developed a new hydraulic circuit for electro-hydrostatic actuator
- 2009–2011 **Faculty of Engineering, Ferdowsi University** Mashhad
Research Engineer
Designed a novel DC motor characterizer. This new equipment has now been patented (Iran patent # 72956).
- 2008–2009 **Parallel Robot Group, Faculty of Engineering, Ferdowsi University** Mashhad
Group Member
Generated structural equations for AC servo motors.
- 2006–2008 **CAD/CAM Lab, Faculty of Engineering, Ferdowsi University** Mashhad
Research Assistant
Designed a USB communicated circuit for a DC servo motor and implemented STR control on that.

Honour

- 2013 Mechanical Engineering Faculty, K.N.Toosi University of Technology
Receiving MSc in Mechatronic Engineering as the 1st rank student.
- 2008 Microsoft Certified Professional (MCP)
Microsoft Certified System Administrator (MCSA), MCP ID # 6027811
- 2008 Microsoft Certified Professional (MCP)
Microsoft Certified System Engineer (MCSE), MCP ID # 6027811

communication skills

- 2012 **Oral Presentation** Electrical Engineering Faculty, K.N.Toosi University of Technology
Presented the research I conducted for my Masters of Science degree.
- 2013 **Poster** Annual Research Exhibition of K.N.Toosi University of Technology, Tehran
Presented the research I conducted for my Masters of Science degree.

interests

professional: rehabilitation engineering, systems and control, bio engineering, fault detection and identification, system identification, simulation by collaborative methods, modeling by multidisciplinary and mathematical methods, hydraulic circuit design, intelligent controller design, system biology **personal:** hiking, cooking, climbing, running

publications

Journal Papers

Mohammad Javad Mirshojaeian Hosseini, Mahdi Aliyari Shoorehdeli, "Analysis and examination of the factors contributing to rapidness of response time in non-linear model of electro-hydrostatic actuator," ISC Journal of Solid and Fluid Mechanics, 2013 (Accepted, In Farsi)

Mohammad Javad Mirshojaeian Hosseini, Soheil Alidoosti, Mahdi Aliyari Shoorehdeli, " Multidisciplinary modeling and position tracking control of an electro-hydrostatic actuator using a novel adaptive fuzzy-PID controller," ISA Transactions, 2013 (Under Review)

International Conference Papers

Mohammad Javad Mirshojaeian Hosseini, Soheil Alidoosti, Mahdi Aliyari Shoorehdeli, " Multidisciplinary modeling and position control of an electro-hydrostatic actuation system using an adaptive PID controller based on neurofuzzy network", The 3rd International Conference on Control, Instrumentation and Automation, 2013 (Accepted)