

Curriculum Vitae



Mansour Torabi

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Education:

- ▶ **2012-2015: M.Sc., Mechatronics Engineering, [Sharif University of Technology \(SUT\)](#),**
 - **Dissertation Title:** "*Impedance control of a knee rehabilitation exoskeleton using robust adaptive control*", Supervisor: [Dr. Gholamreza Vossoughi](#),
 - **Thesis Grade:** 19 / 20, **GPA:** 17.71 / 20
- ▶ **2008-2012: B.Sc., Automotive Engineering, [Iran University of Science and Technology \(IUST\)](#),**
 - **Dissertation Title:** "*Multi-objective optimization of multi-layer acoustic panels using a genetic algorithm*", Supervisor: [Dr. Roohollahi Talebitooti](#),
 - **Thesis Grade:** 20 / 20, **GPA:** 18.38 / 20
- ▶ **2004-2008: High School Diploma, Major in Mathematics and Physics,**
 - **GPA:** 19.87 / 20

Work Experience:

- ▶ **Head of Product Engineering Departments**
 - **Company:** [MAPNA Group \(PARS\)](#), Detail Design Engineering Dept. [Apr **2022** to **present**]
 - **Experiences:**
 - Managing Prototype process for new products (Traction Motors, Alternators, Motor for EVs, Induction Motors)
 - Design and conducting Test process for new products
 - Engineering and Technical supporting for Procurements and Production in field of I&C and Electric part of Projects
- ▶ **Instrumentation Engineer**
 - **Company:** [MAPNA Group \(PARS\)](#), Engineering and R&D Dept. [Apr **2017** to **2022**]
 - **Experiences:**
 - Instrumentation, Wiring, control/protection logic design for turbo-generators and auxiliary systems, electric motors and test stands.
 - Design and Preparation of technical documents: 3D Modeling and Drawings (CATIA), P&ID's, Layout drawings (AutoCAD), Wiring and JB Termination diagrams (AutoCAD), IO List, Electrical Load List, Logic Charts, MTOs, Commissioning Manual, ...
 - Field experiences including power plant commissioning as an Electrical and I&C engineer, Site surveys, Trip Tests
- ▶ **Mechatronic Engineer**
 - **Company:** [SDRA Co.](#) (Knowledge-based Company) [Dec **2012** to Apr **2017**]
 - **Experiences:**
 - Electronic/Hardware design, PCB design (Altium Designer), MCU programming (C/C++), Windows software developing (C#)
 - Hands-on experience with different Digital Communication Protocols (Ethernet/RS-232/RS-485/Hart/I2C/SPI/CAN/USB), MCU-side and PC-side Programming
 - Great experience in Object Oriented Programming (C#), Multi-threading, IOs, Windows Forms, WPF, SQL,...
 - Data Acquisition system design, (Hardware, MCU-side and PC-side Programming)
 - Vibration Monitoring System, (USB and Ethernet protocol, PC-side Software)
 - Online Air pollution monitoring for [Tehran Air Quality](#) (Hardware/Software)

Teaching Experience:

- ▶ **2023: SABALAN** Combined Cycle Power Plant, **Course Title:** "Setting, Monitoring and Instrumentation of Turbo-generator"
- ▶ **2022: MAPNA Group (PARS)**, **Course title:** "Programming with Python-scripting for ANSYS"
- ▶ **2022: MAPNA Group (PARS)**, **Course title:** "Programming with MATLAB"
- ▶ **2015: Exoskeleton Lab, SUT**, **Course Title:** "Model-based design, Simulink Real Time, Embedded Systems"
- ▶ **2012: IUST**, **Course Title:** "MATLAB and Simulink in engineering"
- ▶ **2011: IUST**, **Course Title:** "Introduction to MATLAB and Simulink"
- ▶ **2008: Private tutor**, **Course Title:** "Calculus", "Discrete Mathematics"

Honors and Awards:

- ▶ **2022:** Selected as a Top Tutor in the MAPNA Pars
- ▶ **2021:** Selected Work Group (as a Head of Work Group) for the Project: Design and Manufacture of InWheel Motor
- ▶ **2018:** Published a text book in fields of "Programming in engineering" entitled "[How to Leverage MATLAB in Mechanical Engineering](#)" / In Persian / Dibagaran Tehran Publications
- ▶ **2014:** Exempted from Military Service - Selected as Exceptional Talent
- ▶ **2012-SUT:** Merit-based Admission Offer to **MSc Program**, Major in **Mechatronics**, (Selected as Exceptional Talent)
- ▶ **2012-IUST: Ranked First** among all undergraduate students, [School of Automotive Engineering](#), GPA: 18.38 / 20
- ▶ **2011,2010,2009-IUST:** Outstanding Student Award
- ▶ **2009-IUST:** Ranked 3rd in Inter-University Mathematical Competition among all undergraduate students (Attended as freshman student)

Publications:

- ▶ **2018:** [Book] Mansour Torabi, Ebrahim Nikghalb Rudsari, "[How to Leverage MATLAB in Mechanical Engineering](#)", Publisher: Dibagaran Tehran Publications
- ▶ **2017:** [Paper] Mansour Torabi, Mojtaba Sharifi, Gholamreza Vossoughi, "[Robust Adaptive Sliding Mode Admittance Control of Exoskeletal Rehabilitation Robots](#)", Scientia Iranica.
- ▶ **2015:** [Paper] Rooholla Talebi, Mansour Torabi, "[Identification of tire force characteristics using a Hybrid method](#)", [Applied Soft Computing Journal](#) (Q1),
- ▶ **2014:** [Conference] Mansour Torabi, [Mojtaba Sharifi](#), Gholamreza Vossoughi, "Impedance control of a knee therapeutic robot to investigate the effect of patellar reflex", *Proceeding of Iranian Conference of Medical Physics*, Tehran, Iran / In Persian.
- ▶ **2014:** [Paper] Rooholla Talebitooti, Mansour Torabi, Reza Ahmadi, "[Optimization of power transmission interaction of multilayered panel using genetic algorithm](#)", [Journal of Modares Mechanical Engineering](#), / In Persian
- ▶ **2013:** [Paper] M.H. Shojaeefard, Rooholla Talebitooti, S. YarmohammadiSatri, Mansour Torabi, "[Enhancing Rollover Threshold of an Elliptical Container Based on Binary-coded Genetic Algorithm](#)", [International Journal of Automotive Engineering](#)
- ▶ **2012:** [Conference] Abolfazl Khalkhali, Sina Samare Mousavi, Mansour Torabi, "Multi-objective optimization of foam-filled thin-walled tubes for crashworthiness performance", *Proceeding of ISME-2012*, / In Persian.

Software Skills:

Skill Levels: [E]: Expert, [A] Advanced, [I] Intermediate

<ul style="list-style-type: none"> ▶ Technical Languages MATLAB-Simulink [E], LabVIEW [A] ▶ Programming Languages <ul style="list-style-type: none"> • C/C++ [E], C# [E], Python [E], VBA [A] • <u>Database, Web:</u> SQL [I], HTML/CSS [I] ▶ Electronics and Digital <ul style="list-style-type: none"> • <u>PCB Design:</u> Altium Designer [E] • <u>Micro-Controller:</u> <ul style="list-style-type: none"> - ARM - M3 & M4: Keil uVision [E] - AVR: Atmel Studio [A], CodeVision [A] • <u>Electronic:</u> Proteus [I], Multisim [I] 	<ul style="list-style-type: none"> ▶ Mechanics: <ul style="list-style-type: none"> • <u>CAD:</u> CATIA [E], AutoCAD [E], SolidWorks [A] • <u>FEM:</u> ANSYS [A], ABAQUS [I] - <u>Multi-Body Dynamics:</u> ADAMS [I] ▶ General software: MS-Office [E], Windows [E], EndNote [E], Photoshop [A] CorelDRAW [A]
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Courses / Certificates

1) Train The Trainer / 2022 / QM ACADEMY / IR-TC/093058

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- 2) Basic Operation Training – Electrical and I&C Part / 2022 / SIEMENS
 - 3) Explosive Atmospheres: Equipment – General requirements / EN 60079-0:2018 / 2021 / Nobel Academy / Ex-GN-1030
 - 4) Explosive Atmospheres: Equipment Protection by flameproof enclosures “d”/ EN 60079-1:2014 / 2021 / Nobel Academy / Ex-Exd-1011
 - 5) Explosive Atmospheres: Equipment Protection by increased safety “e”/ EN 60079-7:2015 / 2021 / Nobel Academy/Ex-e-1001
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Language Skills:

► **English:** Fluent

► **Persian & Kurdish :** Native