

Jalaladdin Abbasi

School of Mechanical Engineering,
Politecnico di Milano, Milan, Italy

☎ +39 351-502-4648

🌐 Jalal Abbasi

✉ seyyedjalaladdin.abbasi@mail.polimi.it

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Research Interests

- Modeling Dynamic Systems and Control
- Mechatronics and Robotics
- Artificial Intelligence and Machine Learning

Education

- 2013 **Diploma in Mathematics and Physics Discipline**, *Mirzakouchak High School, National Organization for Development of Exceptional Talents*, Rasht, Iran.
GPA - 18.61/20
- 2013–2018 **B.Sc., Metallurgical Engineering**, *Amirkabir University of Technology*, Tehran, Iran, GPA - 15.91/20 (3.33/4).
- 2019–2021 **M.Sc., Mechanical Engineering, Mechatronics and Robotics field**, *Politecnico di Milano*, Milan, Italy, GPA - 26.94/30 (3.81/4).
Effective Courses: Measurements(28/30), Design and Management of Production Systems(27/30), Control and Actuating Devices for Mechanical Systems(27/30), Machine Design 2(25/30), Applied Metallurgy(28/30), Functional Mechanical Design(27/30), Smart Structures and Devices (28/30)
Excess Courses: Robotics and Design(29/30), Electric Systems for Transportation(26/30), Materials for Electronics(25/30), Dynamics of Electrical Machines and Drives(25/30), Electrochemical Energy Generators(27/30)
Upcoming Excess Courses: Machine Learning, Computer science and Engineering Department, spring 2021

Honours and Awards

- 2015 **Metallurgical Engineering School**, *Amirkabir University of Technology*, Winner of Faculty of Engineering (FoE) award, 2nd Rank Among 60 ME Students.
- 2011 **Olympiad of Astronomy and Astrophysics**, *Semifinalist in National Olympiad*.

Teaching Experiences

Teaching Assistant

- Sep. 2017 - **Transport Phenomena**, Teaching Assistant, Prof. S.Firoozi, ME Department, AmirKabir University of Technology.
Apr. 2018
Sep. 2017 - **Scientific Language**, Teaching Assistant, Prof. N.Parvin, ME Department, AmirKabir University of Technology.
Apr. 2018

University Entrance Exam Teacher

- Sep. 2013 - **Physics**, Teacher, Ghalamchi Educational Foundation, Tehran, Iran.
Sep. 2016

Elementary and High School Teacher

- Sep. 2013 - **Physics and Natural Sciences, Mathematics**, Teacher, Ghalamchi Educational Foundation, Tehran, Iran.
Sep. 2016

Working Experiences

Senior Engineer

- Aug. 2016 - **Technical Inspection of Steels**, Senior Metallurgical Engineer, JahanAstaneh Trading Company, Tehran, Iran.
Jul. 2016

Research Assistant

- Dec. 2015 - **Waste-to-Energy conversion**, *Research Assistant*, JahanAstaneh, Viatech, PlasmaFannavar and Roch-Intermediaires Companies, Tehran, Iran.
July. 2016
Feb. 2017 - **Waste-to-Energy conversion**, Research Assistant, JahanAstaneh and Bonotecs company, Tehran, Iran.
Mar. 2017
June. 2017 - **Risk Base Inspection of heat exchanger EA-704C**, Researcher, I-Ream Research Based Company, Bandar-e-Emam Petrochemical Company and Niroo Research Institute, Tehran, Iran.
Sept. 2017

Notable Projects

- Design and Fabrication of Cable Driven Wearable Exos and Seamless Intelligent Control, Master's Degree Thesis, Supervisor: Prof. Robert Reiner, ETH Zurich, Expected
- Fluid and Heat Flow Simulation of Open-Cell Metallic Foams (CFD Simulation), Bachelor's Degree Thesis, Supervisor: Prof. Seyyed Mohammad H. Mirbagheri, AmirKabir University of Technology, Jan. 2017- Apr.2018
- Design, Fabrication and Control of a Quadcopter Drone, Mechatronic Systems and Laboratory Course, Supervisor: Prof. Francesco Braghin, Present

- Solving Kinematics Problem of a Manipulator in Direct and Inverse Methods and Analyzing Its Singular Configurations, Robotic System Design Course, Supervisor: Prof. Hermes Giberti, Present
- Modal Analysis on Different Systems, Advance Measurement Techniques Course, Supervisor: Prof. Stefano Manzoni, Present
- Design and Fabrication of a Warrior Robot, HEROKIDNA, Robotics and Design Course, Supervisor: Prof. Andrea Bonarini, Feb. 2020 - June. 2020: Announced as the Best Team Among All Teams in the Course Competition. YouTube Video [Here](#)
- Press and Discharging System: Designing the Motion Law of the Tilting Pad, Synthesizing the Slider Crank Mechanism and the Cam Mechanisms, Analysing the Mechanism Through Kinematic Parameters and Computing the Motion Law, Calculating Forces Transmitted and the Motor Torque, Functional Mechanical Design Course, Supervisor: Prof. Simone Cinquemani, Feb. 2020 - June. 2020
- Bandgap Formation and Energy Harvesting from an Electromechanical System Using Electric Shunts and Piezoelectric Sensors, Common Course with Georgia Institute of Technology: Smart Structures and Devices Course, Supervisor: Prof. Alper Erturk, Feb. 2020 - June. 2020
- Modal Analysis on a Beam and Analysis of the Mode Shapes and Natural Frequencies of a Bridge Using FEM, Mechanical Systems Dynamics Course, Supervisor: Prof. Roberto Corradi, Feb. 2019 - June. 2019
- Determining the Stability Limit Depth of Cut for Different Spindle Speeds Using Semi-discretization Time Domain Method and Determining Milling Chatter Stability Limit, Advance Manufacturing Processes Course, Supervisor: Prof. Matteo Strano, Sep. 2019 - Jan. 2020

Technical Skills

Programming C++, Matlab, Python, L^AT_EX

Engineering Softwares Solidworks, Abaqus CAE, Ansys Fluent, Adams MSC, Tecplot, Procast

Languages

- Persian: Native
- English: Fluent
- Italian: Familiar
- Arabic: Familiar

Self-studied Courses

- Stanford University Machine Learning
- Data Collection and Processing with Python

Hobbies

- Sports: Soccer, Yoga, Jogging, Bicycling
- Other: Movies, News, TV Series, Music

References

Available upon request