


# Jalaladdin Abbasi

School of Mechanical Engineering  
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 Jalal Abbasi

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 s.jalalabasi94

## Research Interests

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

## Education

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

2013–2018 **B.Sc., Material Engineering,** *Amirkabir University of Technology, Tehran, Iran, GPA - 15.91/20 (3.33/4).*

2013 **Diploma in Mathematics and Physics Discipline,** *Mirzakouchak High School, National Organization for Development of Exceptional Talents, Rasht, Iran.*  
GPA - 18.61/20

## Honours and Awards

2015 **Winner of Faculty of Engineering (FoE) award,** *Ranked 2<sup>nd</sup> Among 60 ME Students, School of Material Engineering, Amirkabir University of Technology.*

2011 **Semifinalist in National Olympiad,** *Olympiad of Astronomy and Astrophysics.*

## Notable Projects

- Autonomous Vehicles, Rapidly Exploring Random tree, Prof. Marco Pavone, Stanford University, Expected
- 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
- 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

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## Teaching Experiences

### Teaching Assistant

- Sep. 2017 - **Transport Phenomena**, Teaching Assistant, Prof. S.Firoozi, School of  
Apr. 2018 Material Engineering, Amirkabir University of Technology.
- Sep. 2017 - **Scientific Language**, Teaching Assistant, Prof. N.Parvin, School of  
Apr. 2018 Material Engineering, Amirkabir University of Technology.

### 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 Ed-  
Sep. 2016 ucational Foundation, Tehran, Iran.

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## Working Experiences

### Senior Engineer

- Aug. 2016 - **Technical Inspection of Steels**, Senior Metallurgical Engineer, Ja-  
Dec. 2016 hanAstaneh Trading Company, Tehran, Iran.

### Research Assistant

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

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## Technical Skills

- Programming C++, Matlab, Python,  $\text{\LaTeX}$
- Engineering Solidworks, Abaqus CAE, Ansys Fluent, Adams MSC, Tecplot, Procast  
Softwares

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## Languages

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

## Self-studied Courses

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

## Executive Experiences

### Executive Official Position

- Dec. 2016 – July. 2017 **Secretary of the "Coordination Council of Extracurricular Students Clubs", Amirkabir University of Technology, Tehran, Iran.**
- July. 2015 – Dec. 2016 **Secretary of "Astronomy Center of Amirkabir University of Technology", Tehran, Iran (Ranked Among the Top 3 Astronomy Centers of the Country by Ministry of Science, Research and Technology in 2016).**

### Executive Roles

- Oct 9, 2017 **Organizer of National Conference of The "Latest Findings and Experiences in Maintenance Management Excellence", Iran Maintenance Association and Seville University of Spain.**
- Dec 14, 2016 **Head of the Executive Team in National Conference of "Cultural, Scientific and Social Centers of Iran, Rooyesh", Amirkabir University of Technology, Tehran, Iran.**
- Sep 27, 2016 **Organizer and Head of Executive team of "Ide Bazaar (The Idea of the Market) in Material Engineering", Amirkabir University of Technology, Tehran, Iran.**
- Sep 26, 2016 **Organizer and Head of Executive Team in "13<sup>th</sup> international Conference of Material and Metallurgical Engineering", Amirkabir University of Technology, Tehran, Iran.**

## Sports Records and Honors

- 2013-2017 **Coach in Gymnastics, Yoga, Pilates, C Level.**
- 2010-2013 **Yoga Athlete, Member of Iran National Team of Yoga, Silver Medal Holder in National Yoga Competitions, 2011.**
- 2000-2010 **Gymnastics, Bronze Medal Holder in National Competition, 2008.**

## Hobbies

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

## References

Available upon request