

# Kiarash Tabesh



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Address: Milan, Italy

## EDUCATION

- Master of Science in Mechanical Engineering Sep.2019-Jun.2022 (expected)  
Polytechnic University of Milan (POLIMI); Italy  
[Advanced Mechanical Design]  
GPA: 27/30
- Bachelor of Science in Mechanical Engineering Sep. 2014-Feb. 2019  
Isfahan University of Technology (IUT); Iran  
GPA: 16.42/20 (3.39/4) Last year GPA: 18.47/20 (3.9/4)

## WORK EXPERIENCE

- Sep. -Feb. 2019  
Jul. -Aug. 2017
- Undergrad Research Assistant**, Advanced Robotics and Mechatronics Laboratory (ARMLab), Department of ME, IUT
- B.Sc. Thesis: Simulating the soft tissues material properties Characterization using a robotic indenter
  - Obtaining experience with mechatronics equipment and robotics
- Sep. 2016-Feb. 2019
- Teaching Assistant**, Department of ME, IUT  
Mechanics of Materials, Automatic Control
- Conducting review sessions
  - Assisting students with a range of complications from fundamental concepts to calculational
  - Preparing final exams' questions, and evaluating students' progress
- Jul. -Aug. 2018
- Undergraduate Research Intern**, Mathematics and Mechanics of Complex Systems(M&MoCS) Research Center, University of L'Aquila, Italy
- Project: A Dissipative Mechanical Model for Bone Remodeling Processes (see report [here](#))
  - Bone mechanics
  - Obtained experience with *COMSOL* software
  - Participated in introductory lectures in continuum mechanics, computational mechanics, variations' principle and energy method, linear algebra
- Sep. 2016-Sep. 2017
- Vice President**, Scientific Association of Mechanical Engineering, IUT
- Student's representative
  - Organized more than 25 training courses and workshops for students
  - Arranged several scientific visits
  - Awarded as the best scientific association of the year at IUT

## PUBLICATIONS

- PAPER**      A mathematical model for bone cell population dynamics of fracture healing considering the dissipation effect (Accepted)
- POSTER**      On the Effects of Dissipation within Bone Cellular Population Dynamic Model (see [here](#))

## OTHER PROJECTS

- FE analysis and optimization of the structure of a machine tool (POLIMI, Italy, 2021)
- Advanced mechanical design of a transparent roller panel for a refrigerator shelf (POLIMI, Italy, 2021) (see the report [here](#))
- Hive drone service startup: creating and scaling up (POLIMI, Italy, 2021)
- Conceptual design of a bioreactor
- Prototype development of smart homes
- Simulation and visualization of metal forming and forging processes using Abaqus
- Design and fabrication of a platform for Kuka Robot
- Development of an anti-shock structure for high-altitude free fall
- Programming PLC controller for hydraulic actuators
- Transmission system design: gears, shafts, bearings, chains, belts, clutch and break
- Development of a 4 DoF anthropomorphic robot, operating with Arduino
- Selection of the appropriate motor/gearbox for an upper-limb exoskeleton with rehabilitation application

## PRESENTATIONS

- FE nonlinear analysis of the mast of a forklift (see the presentation [here](#)) POLIMI, Italy, 2021
- 4D printing and applications (see the report [here](#)) POLIMI, Italy, 2020
- Material selection for bike frame (see the poster [here](#)) POLIMI, Italy, 2019
- Applications of robots in manufacturing IUT, Iran, 2017
- Elastography techniques IUT, Iran, 2016

## FAMILIAR TECHNICAL SKILLS

- Programming Languages: MATLAB and Simulink, C, C++
- Hardware: AVR, Siemens and Vigor PLCs, Arduino
- CAD/CAE Software: Abaqus, COMSOL Multiphysics, CATIA, ANSYS Fluent
- Other: Festo Fluidsim, Ladder Master, Microsoft Office, Welding

## Languages

English (Fluent); Persian (Native); Italiano (A1)