Kiarash Tabesh

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: kiarashtabesh

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 (see the report here) (POLIMI, Italy, 2021)
- 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, PLC, Arduino
- CAD/CAE Software: Abaqus, CATIA, COMSOL Multiphysics, ANSYS Fluent
- Other: Festo Fluidsim, Ladder Master, Microsoft Office, Welding

Languages

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