Kiarash Tabesh

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: kiarashtabesh

EDUCATION

- Master of Science in Mechanical Engineering — Sep.2019-Jul.2022 (expected)
  Polytechnic University of Milan (POLIMI); Italy
  [Advanced Mechanical Design]
  GPA: 26.57/30

- 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 effect of energy dissipation. (2021) In: Advanced Structured Materials, vol 127. Springer, Cham

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)