Curriculum Vitae

# Hamid Manouchehri

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## Education:

- **Master of Science in Mechatronics Engineering** — **Tehran, Iran**
  University of Tehran — **2019 - Feb 2023**
  **Thesis title:** *A Model-Based Control System for Bi-Manual Object Manipulation* (link)

- **Bachelor of Science in Electrical Engineering (Control Engineering)** — **Kashan, Iran**
  University of Kashan — **2015 - 2019**
  **Project title:** *Design and Manufacturing of Pneumatics Table of Instrumentation Lab* (link)

## Research Interests:

- **Legged Locomotion**
- **Machine Vision**
- **Robotic Manipulators**
- **Autonomous Mobile Manipulators**
- **Underactuated Robotics**
- **AI, particularly for robotics applications**

## Teaching Experience:

- **Teacher Assistant** — **Spring 2017**
  **Instructor:** Dr. Farzan Rezaei
  **Course:** Digital Logic and Computer Design
  **Responsibilities:** Teaching applications of '*Proteus Design Suite*' in digital circuit analysis and design, and mentoring the students.

## Project and Research Experiences:

- Implementation of **Ant Colony Optimization (ACO)** in **Vehicle Routing Problem** and **Genetic Algorithm** in a **Decision-Making Problem**. (link) — **Apr 2021**
  **Instructor:** Dr. Masoud AsadPour
  **Course:** Bio-inspired Computing
- Implementation of a **PID Controller** by **Fuzzy Logic** (Self-organizing Fuzzy PID Controller) — **Jan 2021**
  **Instructor:** Prof. Aghil Yousefi Koma
  **Course:** Fuzzy Systems: Theory and Control
- Simulation of a **Wheeled Inverted Pendulum** by **Partial Feedback Linearization** (link) — **Feb 2021**
  **Instructor:** Dr. Khalil Alipour
  **Course:** Nonlinear Control Systems Design
- Design and Manufacturing of a **3-DOF Robotic Manipulator (MeArm)** (link) — **Mar 2020**
  **Instructor:** Dr. Mohammad Dehghani
  **Course:** Advanced Robotics
- Design and Simulation of a **Pipe-inspection Robot** in SolidWorks (link) — **Feb 2020**
  **Instructor:** Dr. Alireza Hadi Hosseinabadi
  **Course:** Mechatronics 2
- **Fanavard Competition of Sharif University of Technology** — **Summer 2017**
  → As a team, we were planning to run an E-Commerce **startup** to provide online repairing services.

## Skills:

- **Robotic Softwares / Middlewares:** Robot Operating System (ROS 1), RBDL toolkit, RViz, MOVEit, OpenCV (familiar), RoboDK (familiar)
- **Programming Languages:** C (Professional), Python, C++, C#, bash script, XML, Lua
- **Technical Softwares:** MATLAB (Script, Simulink, GUI), Proteus, Altium Designer, Docker
- **Mechanical Softwares:** SolidWorks, FreeCad (familiar), MCS Adams
- **Embedded Systems:** MPLAB X IDE (PIC MCUs), Keil (ARM MCUs), CodeVision (AVR MCUs), Raspberry Pi Pico MCU, Arduino IDE, Raspberry Pi (Raspbian OS), NodeMCU, SIM800L GSM
- **Version Control Tools:** Git, GitHub, GitLab
- **Linux:** LPIC-1 (Linux Professional Institute)

## Working Experience:

- **Electronics Engineer, Part-time** (link)
  **Employer:** Parmis Smart Home
  **Business**: Design of smart devices for BMS (Building Management System)
  **Responsibilities:** Embedded system designer, Firmware developer of PIC MCUs
  **Isfahan, Iran**
  **Mar – Dec 2021**

- **Electronics Engineer, CAD Designer, Part-time** (link)
  **Employer:** Kanda Idea Company
  **Responsibilities:** Research and Development, Designing a box for some electrical devices with SolidWorks
  **Tehran, Iran**
  **Feb – Nov 2020**

- **Windows Software Developer, C# programmer, Internship**
  **Employer:** Behyar Sanaat Sepahan Co.
  **Responsibilities:** Development of windows softwares in VisualStudio (WPF), C# programming
  **Isfahan, Iran**
  **Jun – Aug 2017**

## Certificate:

Robot Operating System **(ROS)**: Basic, offered by **PISHROBOT**, approved by **ROBOTIS**
**Covered topics:** Basic concepts of ROS 1 (melodic), navigation of TurtleBot in RViz as final project.
**Sep 2021**

## Language Proficiency:

| Exam | Overall Score | Scores |
|---|---|---|
| TOEFL iBT (Mar 12, 2023) | - | - |
| GRE General (Apr 17, 2023) | - | - |

## References:

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|---|---|---|
| Dr. Mohammad Shahbazi | M.Sc. Supervisor | Assistant Professor \| School of Mechanical Engineering<br>Iran University of Science and Technology<br>Email: shahbazi@iust.ac.ir, HomePage, Google Scholar |
| Dr. Bahrām Tarvirdizadeh | M.Sc. Supervisor | Associate Professor \| Faculty of New Science and Technology<br>University of Tehran<br>Email: bahram@ut.ac.ir, HomePage, Google Scholar |
| Dr. Alireza Hadi Hosseinabadi | M.Sc. Advisor | Associate Professor \| Faculty of New Science and Technology<br>University of Tehran<br>Email: hrhadi@ut.ac.ir, HomePage, Google Scholar |