# *Mohammad Sabouri*

- *Master student of Genova University in field of Robotic Engineering.*
- *Master's Degree in Electrical-Control Engineering, Shiraz University, Shiraz, Iran.*

- *Laurea Magistrale in Ingegneria dell'Elettrocontrollo, Università di Shiraz, Shiraz, Iran.*

# *EDUCATION*
# *My background*

**Master** of Science in <u>Control Engineering</u>.

<span style="color:red">Modelling and control of non-holonomic mobile robots using the quasi-LPV method.</span>

- LPV and quasi-LPV Techniques
- LMI Techniques for Solve LPV Equations
- Modeling and remodeling

**Bachelor** of Science in Electrical Engineering, with a **<u>specialty in Control</u>**.

<span style="color:red">Design and implementation of sound compass for trajectory control of mobile robot.</span>

**Diploma**:

Diploma in **<u>Industrial Electricity</u>** Discipline.

Diploma in **<u>Mathematics and Physics</u>** Discipline.

# *Research Interest*

| | |
|---|---|
| **Control Theory** | ❖ Control of Linear Parameter Varying (LPV) systems<br>❖ Robust control<br>❖ Controller Allocation<br>❖ Nonlinear Control, Lyapunov Theory |
| **Robotic & Mechatronic** | ❖ Complex Mechatronic Devices<br>❖ Rehabilitation Robot and Devices<br>❖ Path Planning and Motion Planning<br>❖ Autonomous Systems and Vehicles |
| **Data science & Artificial Intelligent** | ❖ Machine Learning, Neural Network Application<br>❖ Data Analysis & Data Mining |

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# *PUBLICATIONS*
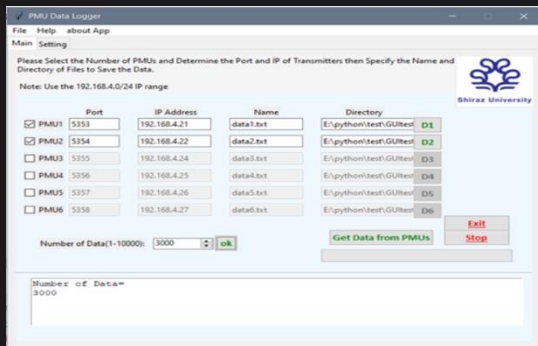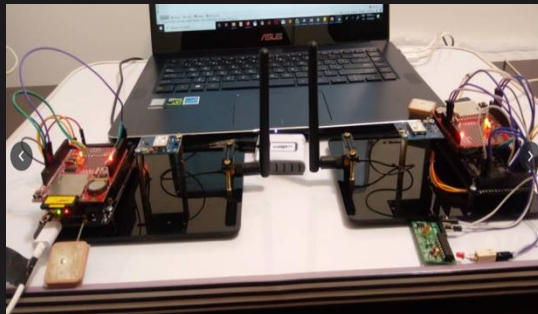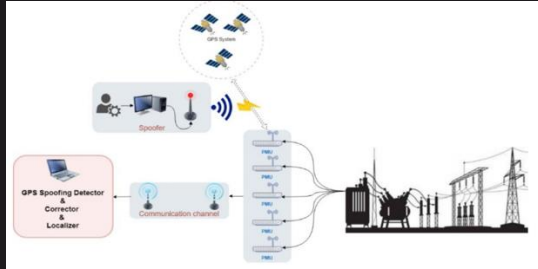






1-**Sabouri, Mohammad**, Sara Siamak, Maryam Dehghani, Mohsen Mohammadi, Mohammad Hasan Asemani, Mohammad Reza Hesamzadeh, and Vedran Peric. "Increasing the resiliency of power systems in presence of GPS spoofing attacks: A data-driven deep-learning algorithm." IET Generation, Transmission & Distribution (2023).

- RNN and FNN

- Design and Implement the Hardware for test Our Method(ARM based architect)

- Implementation of a Python-based application for monitoring and applying attack modifications
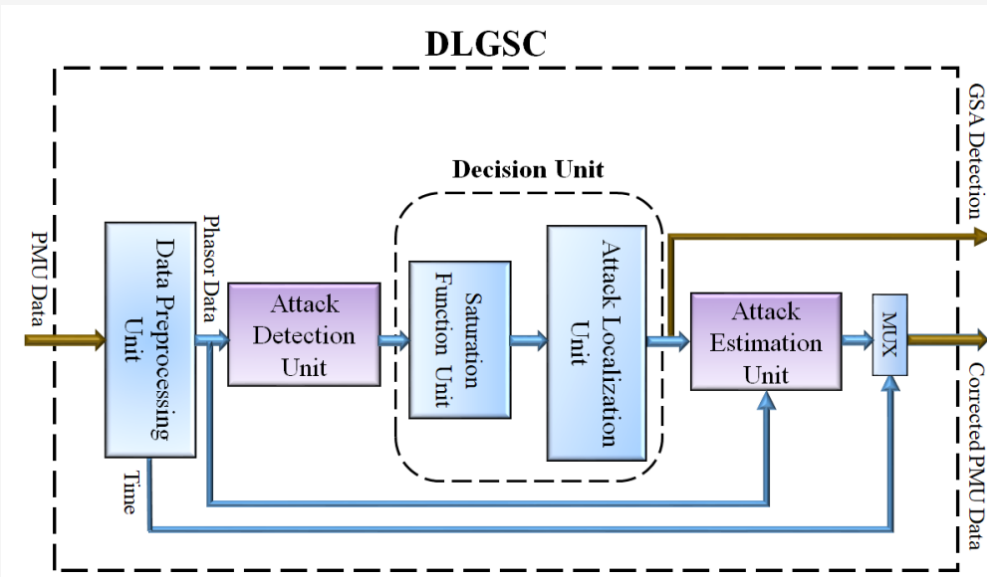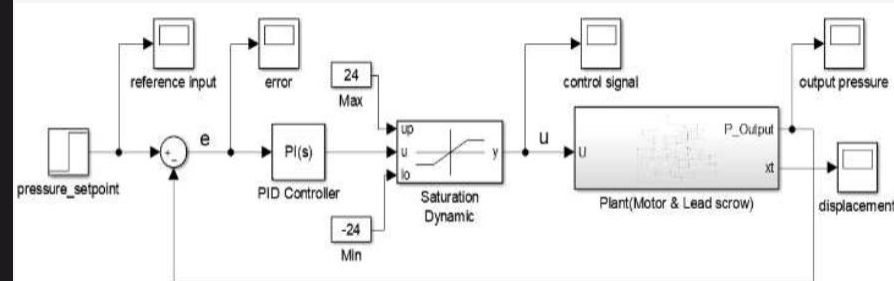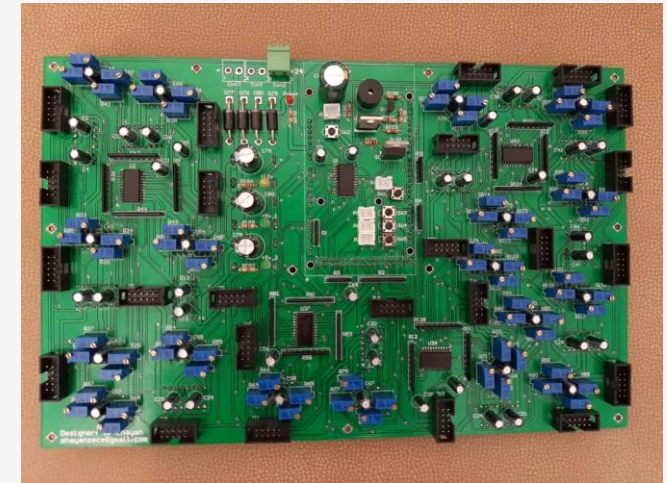
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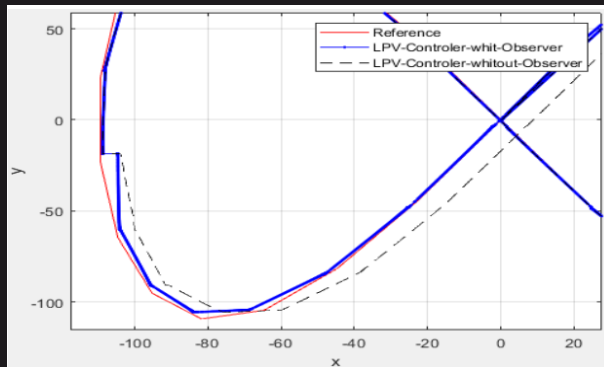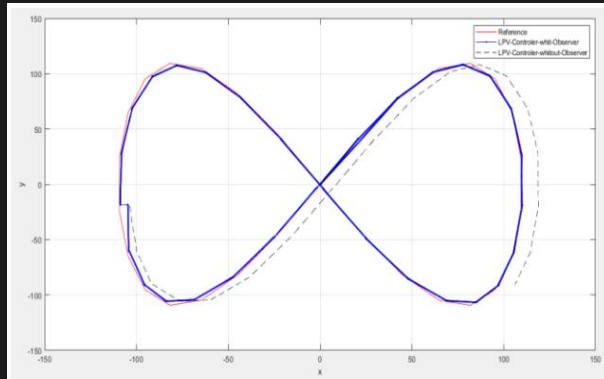




1-**Sabouri, Mohammad**, and Mohammad Hassan Asemani. **"LPV Controller Design for Trajectory Tracking of Non-holonomic Wheeled Mobile Robots in the Presence of Slip."** 202129th Iranian Conference on Electrical Engineering (ICEE).IEEE.(2021,October).
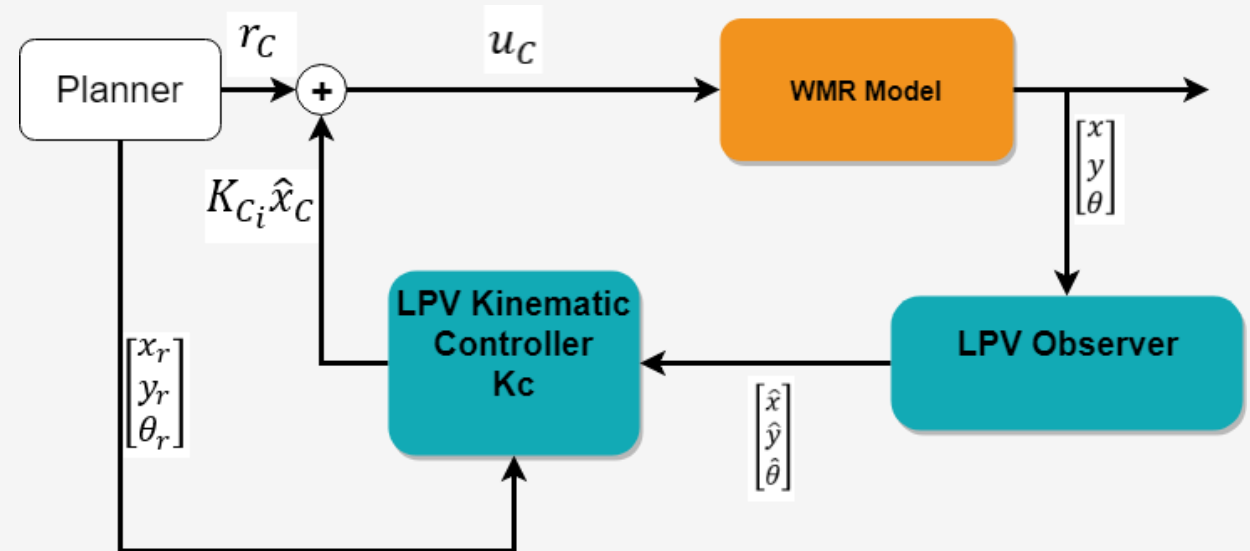
# PUBLICATIONS

2-Shayan, Z.,**Sabouri, M**., Shayan, M., Asemani, M. H., Sarmoori, A. B., & Zare, M.,**"Pressure Control of Cellular Electromechanical Medical Mattress For BedsorePrevention**,"7th International Conference on Control, Instrumentation and Automation (ICCIA),IEEE. (2021, February).

# PUBLICATIONS

3-Firouzimagham, D., Aminaie, P., Shayan, Z.,**Sabouri, M**., & Asemani, M. H., "**Online Transformer Oil Analysis Based on Spectroscopy Technique and Machine Learning Classifier: Experimental Setup**,"15th International Conference on Protection and Automation of Power Systems (IPAPS). IEEE. 2020.
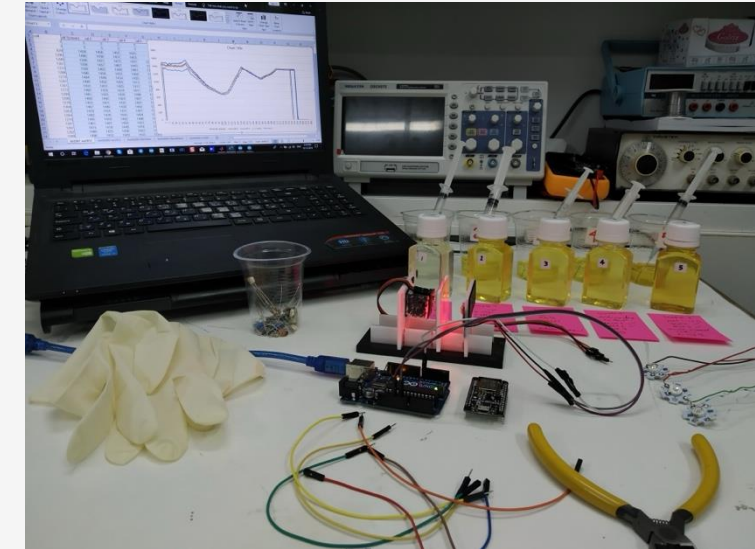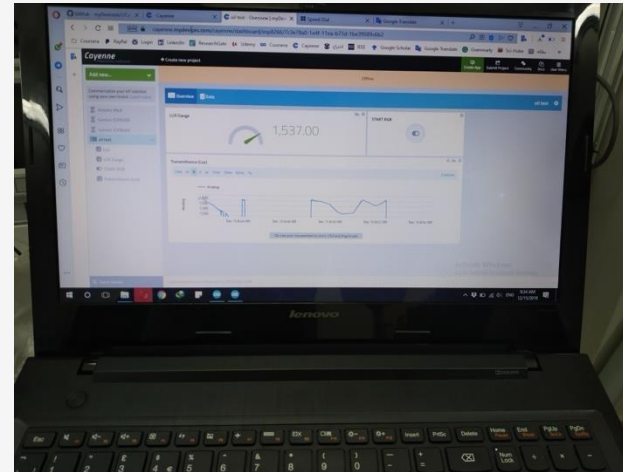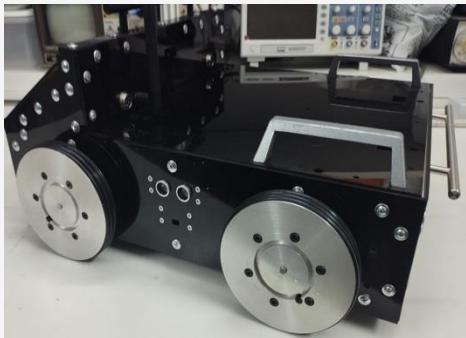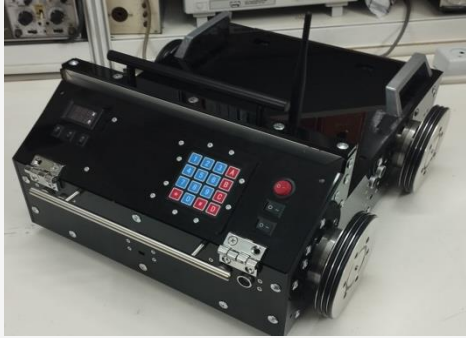
# PUBLICATIONS

4-**M. Sabouri**,P. Setoodeh, M.H. Asemani, **"Construction of Lyapunov Functions using Multi-Objective Genetic Algorithm**",28thIranian Conference on Electrical Engineering (ICEE), Tabriz University,2020,Tabriz, Iran.

5-M. Zare, M. Jampour, A.S. Arezoomand,M. **Sabouri**, "**Handwritten Recognition basedon Hand Gesture Recognition using Deterministic Finite Automata and Fuzzy Logic,**" 4th International Conference on Pattern Recognition and ImageAnalysis(IPRIA), 2019, Tehran, Iran. IEEE.
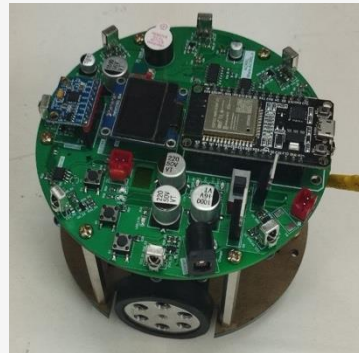
# Research and operational experiences

1- Design and Implementation Non-holonomic Mobile Robot.

2- Design and Implementation Differential Mini-Mobile robot for Swarm applications.

3- Patch planning and control the movement of Hovercraft. (re modeling the dynamic and kinematic with LPV method and design LPV Controller by LMI techniques.
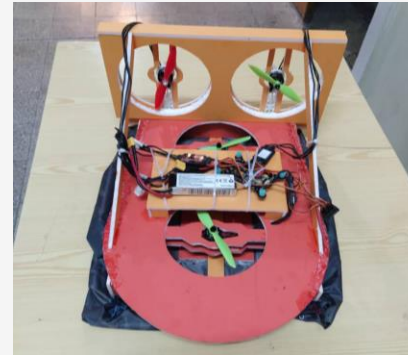
4- Design and Implementation controller algorithm for 3 DOF special manipulator for robotic fountain.

All Part : mechanical design, electronic design and implementation and programing

Completely done by myself

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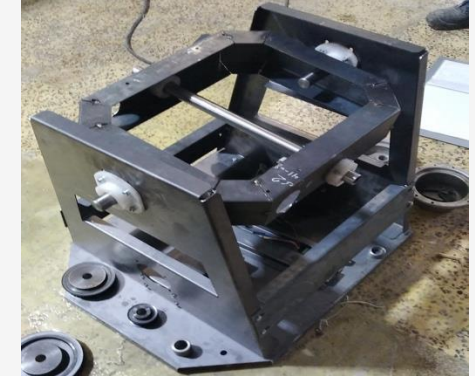
Modeling and design motion controller board and algorithms

# Research and operational experiences

1- Design and Implementation
Servo and stepper motor Driver.
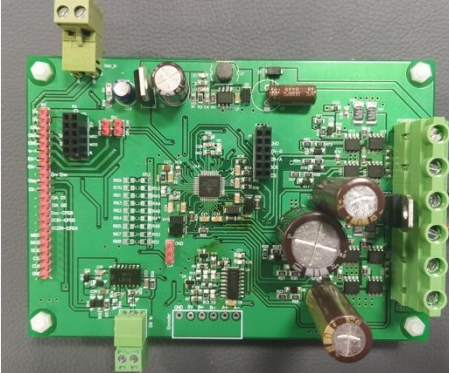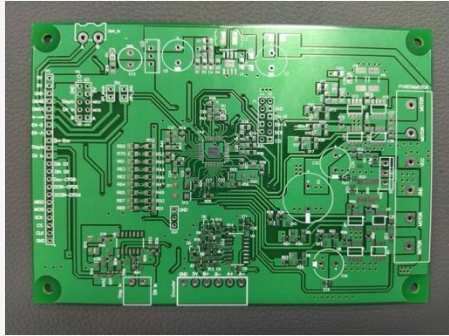
2- Large Shear Apparatus

Design and programing

Mechanical Design, Programing,
and implementation
- **PLC Delta**
- **LabVIEW**
- **SolidWorks**

# *Professional Experience*

## Work Experiences:

- ❑ **Internship in the GreenProject Company**

- ❑ **Robotic Research at Minoosa company.**

- ❑ **Research Assistant at Applied Control & Robotics Research Laboratory(ACRRL).**

- ❑ **Research Assistant at Mechatronics Department at "Arioobarzan" company.**

- ❑ **Designer engineer at "Kasbo Kar Jahan Jadid" company.**

## Teaching Experiences:

**Teacher Assistant:**

- ❑ **Computer Applications in Control (LabVIEW and Matlab), Shiraz University. (3 years)**

- ❑ **Multi Input Multi Output Control, Shiraz University. (1 simester)**

- ❑ **Modern Control, Shiraz University. (1 simister)**

# PROFESSIONAL SKILLS

- **Programming Languages**: C, C++, Python, PLC Programming.

- **Technical Software**: MATLAB, LabVIEW, Altium Designer, Proteus.

- **Embedded Systems:** ARM, AVR, PIC, Arduino, Raspberry Pi, NodeMCU.

- **Robot Simulators:** ROS, KUKA.Sim, CoppeliaSim.

- **CAD Tools:** SolidWorks, Core PTC, Siemens NX, Abaqus, 3D printing.

- **Industrial Robot:** KUKA, ABB.

- **Libraries:** OpenCV, TensorFlow, Keras.

- **Operation Systems:** Windows, Linux.

- **Public Software:** Microsoft Office, EdrawMax, Visio, Latex, Endnote, Mendeley.

# *Thank you for your consideration*

# *AWARDS AND PRIZES*

❑ 1st Place Gladiators Warrior Robot League, RoboSkill Competition under the Supervision of Kerman Technical and Vocational Training Organization, Aug. 2016.

❑ Third place in 30 kg Warrior Robot League, RoboSkill Competition under the super vision of Kerman Technical and Vocational Training Organization, Aug. 2016.

❑ Diploma of Honor In 15th National Skill Competitions in the field of robotics, Iran Technical and Vocational Training Organization, Karaj, Iran, Aug. 2014.

❑ First place in National Skill Competitions, the provincial stage in the field of robotics, Iran Technical and Vocational Training Organization, Fars, Iran, Jun. 2014.

❑ Second place in National Skill Competitions, the provincial stage in the field of robotics, Iran Technical and Vocational Training Organization, Fars, Iran, Jun. 2013.

# EXTRA TRAINING

- **Altium Designer Software**, Educational institution in Shiraz, Summer2019.

- **AVR microcontrollers**, Educational institution in Shiraz, Summer2017.

- **Robotic teaching certificate**,NURMS,Feb.2017.

- **Designer and analyst of AVR microcontrollers**, Iran Technical and Vocational Training Organization, Jun.2017.

- Entrepreneurship with the KAB method, Iran Technical and Vocational Training Organization, Jun.2017.

- Installer of Intelligent Building Management System (BMS),Iran Technical and Vocational Training Organization,Nov.2016.

- **Assembly and installation of electrical panels**, Iran Technical and VocationalTraining Organization,Sep.2016.

- ICDL 2, Iran Technical and Vocational Training Organization,Sep.2016.

- Industrial grade 2 electrical power, Iran Technical and Vocational TrainingOrganization,July2016.

- **Robotic Programming**, Iran Technical and Vocational Training Organization,Oct.2014.

- **Basics of Robotic Concept**, Iran Technical and Vocational Training Organization, Oct.2014.

- **Robotic Hardware**, Iran Technical and Vocational Training Organization,Sep.2014.

- **MATLAB**, South Industrial Management Institute(SIMI),Summer2013.