# Farshad Rahimi

## PERSONAL DETAILS

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## EDUCATION

### Master's Degree

Sahand University of Technology, Tabriz, Iran.     2015 – 2018
*M.Sc. Electrical Engineering with specialization in control systems*
Thesis: Predictive controller design for networked mobile robots.

### Bachelor's Degree

Hamedan University of Technology, Hamedan, Iran.     2010 – 2015
*B.Sc. Robotic Engineering.*
Final Project: Control of 2-DOF underwater planar manipulator.

## PUBLICATION

*Journals*

1. **Rahimi, Farshad**. "An online fault-tolerant control approach based on policy iteration algorithm for nonlinear time-delay systems." *International Journal of Systems Science*, 2024.
   DOI: https://doi.org/10.1080/00207721.2024.2440785

2. **Rahimi, Farshad**. "Adaptive dynamic programming-based fault tolerant control for nonlinear time-delay systems." *Chaos, Solitons & Fractals* 188 (2024): 115544.
   DOI: https://www.sciencedirect.com/science/article/abs/pii/S0960077924010968

3. **Rahimi, Farshad**, and H. Rezaei. "A Distributed Fault Estimation Approach for a Class of Continuous-time Nonlinear Networked Systems Subject to Communication Delays." *IEEE Control Systems Letters*, 6 (2021): 295-300.
   DOI: https://ieeexplore.ieee.org/abstract/document/9397783

4. **Rahimi, Farshad**, and H. Rezaei. "An event-triggered recursive state estimation approach for time-varying nonlinear complex networks with quantization effects." *Neurocomputing*, 426 (2021): 104-113.
   DOI: https://www.sciencedirect.com/science/article/abs/pii/S0925231220316088

5. **Rahimi, Farshad**, and Shirin Ahmadpour. "Neighborhood-based distributed robust unknown input observer for fault estimation in nonlinear networked systems." *IET Control Theory & Applications* 16.10 (2022): 972-984.
   DOI: https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/cth2.12278

6. Rezaei, H., Farnam, A., **Rahimi, Farshad**, and Guillaume. C. "A Scalable Distributed State estimation for a Class of State-Saturated Systems Subject to Quantization Effects." *IEEE Access*, 9 (2021): 138724-138733.
   DOI: https://ieeexplore.ieee.org/abstract/document/9562519

7. **Rahimi, Farshad**, and Hero Shahi. "Neighborhood-Based Event-Triggered Distributed Fault Estimation Observer for Multi-Agent Systems." *AUT Journal of Electrical Engineering* 54.2 (2022): 281-294.
   DOI: https://eej.aut.ac.ir/article_4854.html

8. **Rahimi, Farshad**. "A Distributed Optimization Approach for Multi-Agent Systems over Delaying Networks." *International Journal of Information and Communication Technology Research* 13.4 (2021): 18-27.
   DOI: http://ijict.itrc.ac.ir/article-1-495-en.html

9. **Rahimi, Farshad**, and Reza Mahboobi Esfanjani. "Estimating tolerable communication delays for distributed optimization problems in control of heterogeneous multi-agent systems." *IET Control Theory & Applications* 18.5 (2024): 626-639.
   DOI: https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/cth2.12595

*Conferences*

1. **Rahimi, Farshad**, Sepideh Ziaei, and Reza Mahboobi Esfanjani. "A reinforcement learning-based control approach for tracking problem of a class of nonlinear systems: applied to a single-link manipulator." *2023 31st International Conference on Electrical Engineering (ICEE)*. IEEE, 2023.
   DOI: https://ieeexplore.ieee.org/abstract/document/10334874

2. **Rahimi, Farshad**, and Reza Mahboobi Esfanjani. "A distributed dual decomposition optimization approach for coordination of networked mobile robots with communication delay." *2021 9th RSI International Conference on Robotics and Mechatronics (ICRoM)*. IEEE, 2021.
   DOI: https://ieeexplore.ieee.org/abstract/document/9663474

3. **Rahimi, Farshad**, and Reza Mahboobi Esfanjani. "Distributed predictive control for formation of networked mobile robots." *2018 6th RSI International Conference on Robotics and Mechatronics (IcRoM)*. IEEE, 2018.
   DOI: https://ieeexplore.ieee.org/abstract/document/8657625

# PROFESSIONAL EXPERIENCE

**Laboratory Technician and Instructor**                                    2020 – 2025
*the Linear Control Laboratory, Sahand University of Technology, Iran*

- Lab: Modern Control Systems
- Assisted in setting up and conducting experiments
- Assisted students with programming assignments and coursework.

**Reviewer for ISI Journals**                                               2020 – Pre
*Web of Science (My profile ID: ABA-1505-2020)*

- IEEE Transactions on Systems, Man, and Cybernetics
- International Journal of Robust and Nonlinear Control
- IEEE Control Systems Letters (L-CSS)

**Teaching Assistant**                                                      2016 – 2019
*Sahand University of Technology, Iran*

- Courses: Adaptive Control, Optimal Control

## EXTRA COURSES TAKEN

Course: Diagnosis and Fault-Tolerant Control at Sahand University of Technology, Grade Achieved : 19.91/20.
Course: Model Predictive Control at Sahand University of Technology, Grade Achieved : 19.25/20.
Online Course: Control of Mobile Robots, https://www.coursera.org/learn/mobile-robot.
Online Course: Autonomous Navigation for Flying Robots, https://www.edx.org.
Online Course: Introduction to Programming Using Python, https://www.edx.org.

## SKILLS

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|---|---|
| *Software* | MATLAB, Julia, Webots, LaTeX, SolidWorks, V-Rep, Python |
| | My Sample codes: Julia programming and Matlab codes (Link) |
| *Languages* | English (TOEFL Certificate 89), Persian, Kurdish |

## REFERENCES

1. Hossein Rezaei, PhD. Associated Researcher, Department of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.
Email: h_rezaei@sut.ac.ir , Profile Link: Google Scholar Profile

2. Arash Farnam, PhD. Assistant Professor, Department of Electrical Energy, Systems and Automation, Ghent University, Belgium.
Email: Arash.Farnam@UGent.be , Profile Link: Google Scholar Profile

3. Ahmad Akbari, PhD. Associate Professor, Department of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.
Email: a.akbari@sut.ac.ir , Profile Link: Google Scholar Profile