

# Farshad Rahimi

## PERSONAL DETAILS

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## EDUCATION

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### 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

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### Journals

1. **Rahimi, Farshad.** "Fault-tolerant control for nonlinear time-delay systems using neural network observers." *International Journal of Dynamics and Control*, 13.1, 2025, 1–12.  
DOI: <https://doi.org/10.1007/s40435-024-01536-y>
2. **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>
3. **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>
4. **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>
5. **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>
6. **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>

7. 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>
8. **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](https://eej.aut.ac.ir/article_4854.html)
9. **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>
10. **Rahimi, Farshad**, and Reza Mahboobi Esfajani. "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 Esfajani. "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 Esfajani. "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 Esfajani. "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 – Pre  
*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.

**Online Teacher** 2019 –  
*Freelancer Teaching*

- Collaborated with online platforms, including Ostadbak (private tutoring) and Tehran Trainer Website

**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**  
*Sahand University of Technology, Iran*

2016 – 2019

- Courses: Adaptive Control, Optimal Control

## **EXTRA COURSES TAKEN**

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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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<i>Software</i>	MATLAB, Julia, Webots, L <sup>A</sup> T <sub>E</sub> X, SolidWorks, V-Rep, Python <a href="#">My Sample codes</a> : Julia programming and Matlab codes ( <a href="#">Link</a> )
<i>Languages</i>	English ( <a href="#">TOEFL Certificate</a> 89), Persian, Kurdish

## **REFERENCES**

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1. Hossein Rezaei, PhD. Associated Researcher, Department of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.

Email: [h.rezaei@sut.ac.ir](mailto: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](mailto: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.

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