Farshad Rahimi

PERSONAL DETAILS

Name: Farshad Rahimi
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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

Research Consultant in Control Projects 2019 – 2024
Freelancer and Research Consultant

- Collaborated with online platforms, including Tehran Trainer Website
- Provided expert consultation on various control projects and topics

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)

Assistant Researcher 2020 – 2023
Sahand University of Technology, Iran

- Field: Control Engineering
- Conducted cutting-edge research in control systems

Laboratory Assistant 2018 – 2020
Sahand University of Technology, Iran

- Lab: Modern Control Systems
- Assisted in setting up and conducting experiments

Teaching Assistant 2016 – 2019
Sahand University of Technology, Iran

- Courses: Adaptive Control, Optimal Control
- Supported professors and students in control systems courses

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

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