

Employment History

- December.2024- Present **Postdoctoral Researcher**, *Free University of Bozen-Bolzano, Bozen-Bolzano, Italy, in collaborating with [MavTech](#) and [Fraunhofer](#).*
- May.2023- April.2024 **Postdoctoral Researcher**, *Free University of Bozen-Bolzano, Bozen-Bolzano, Italy, in collaborating with [FlyingBasket](#).*

Education

- Sep.2017-Sep.2021 **Ph.D., Electrical Engineering (Control)**
— Department of Electrical Engineering, K. N. Toosi University of Technology, Tehran, Iran.
— Thesis : "Stability Analysis and Stabilization of Nonlinear Fractional Order Delayed Systems Based on T-S Fuzzy Model".
— GPA : 4.00/4.00
- Sep.2014-Aug.2016 **M. Sc., Electrical Engineering (Control)**
— Department of Electrical and Electronics Engineering, Shiraz University of Technology, Shiraz, Iran.
— Thesis : "Stability Analysis and Stabilization of Nonlinear Time-delay Systems Based on Delay-partitioning Approach".
— GPA : 4.00/4.00
- Sep.2010-Jul.2014 **B. Sc., Electrical Engineering (Control)**
— Department of Electrical and Electronics Engineering, Shiraz University of Technology, Shiraz, Iran.
— Thesis : "Motion Control of Quadrotor Using Neural Networks".
— GPA : 3.65/4.00

Teaching Experience

Lecturer

- 2025-2026 **Department of Engineering, Free University of Bozen-Bolzano, Italy**
— Course :
— Fundamentals of Systems and Control
— Modern Control Lab
- 2020 **Department of Electrical Engineering, K. N. Toosi University of Technology, Iran**
— Course : Fundamentals of Electricity 1 (Electrical Circuits 1)
- 2016-2017 **Department of Electrical Engineering, Sirjan University of Technology, Iran**
— Courses :
— Linear Control Systems
— Signal and Systems
— Digital Systems
— Electrical Measurements

Teaching Assistant

- 2018-2019 **Department of Electrical Engineering, K. N. Toosi University of Technology, Iran**
— Course : Fractional-order Systems and Controllers
- 2016 **Department of Electrical and Electronics Engineering, Shiraz University of Technology, Iran**
— Course : Modern Control Systems

Publications

Journal Article

1. **P. Mahmoudabadi**, and A. Naderi Akhormeh. "Fuzzy Model Predictive Control for Nonlinear Discrete-Time Systems." International Journal of Adaptive Control and Signal Processing, 2023, DOI : 10.1002/acs.3737.
2. **P. Mahmoudabadi**, and M. Tavakoli-Kakhki. "Robust Tracking Control for Nonlinear Fractional Order Delayed Systems: Modified Repetitive Control Approach." Asian Journal of Control, 2023, DOI : 10.1002/asjc.3299.
3. **P. Mahmoudabadi**, and M. Tavakoli-Kakhki. "Stabilization of Nonlinear Fractional Order Faulty Systems with Time-varying Delay." Journal of Vibration and Control, 2023, DOI : 10.1177/10775463231157496.
4. **P. Mahmoudabadi**, and M. Tavakoli-Kakhki. "Improved Stability Criteria for Nonlinear Fractional Order Fuzzy Systems with Time-varying Delay." Soft Computing, vol. 26(9), pp. 4215-4226, 2022.

5. **P. Mahmoudabadi**, M. Tavakoli-Kakhki and H. HosseinNia. "Fuzzy-Model-Based Disturbance Rejection Control for Atomic Force Microscopy with Input Constraint." Journal of Vibration and Control, vol. 29, pp. 597-610, 2022.
6. **P. Mahmoudabadi**, and M. Tavakoli-Kakhki. "Tracking control with disturbance rejection of nonlinear fractional order fuzzy systems: Modified repetitive control approach." Chaos, Solitons Fractals, vol. 150, 2021, DOI : 10.1016/j.chaos.2021.111142.
7. **P. Mahmoudabadi**, and M. Tavakoli-Kakhki. "Fuzzy observer-based disturbance rejection control for nonlinear fractional-order systems with time-varying delay." Journal of Vibration and Control. vol. 28, pp. 2145-2154, 2021.
8. **P. Mahmoudabadi** , M. Shasadeghi, and J. Zarei, "New stability and stabilization conditions for nonlinear systems with time-varying delay based on delay-partitioning approach," ISA Trans., vol. 70, pp. 46–52, 2017.

Conference Article

1. **P. Mahmoudabadi**, K D. von Ellenrieder, M. Moroder, and M. Moroder, "Parameters Estimation and Higher-Order Sliding Mode Control Design for Coaxial Octorotors : Hardware-in-the-Loop Validation." IFAC Joint Symposia on Mechatronics Robotics. (Accepted).
2. **P. Mahmoudabadi**, K D. von Ellenrieder, M. Moroder, and M. Moroder, "Safety-critical Control for a Coaxial Octorotor UAV via Control Barrier Function." 2024 10th International Conference on Control, Decision and Information Technologies (CoDIT), IEEE, 2024.
3. **P. Mahmoudabadi**, M. Tavakoli-Kakhki, and Roohallah Azarmi, "Delayed State-Feedback Fuzzy Control for Nonlinear Fractional Order Systems: An LMI Approach." In 2022 23rd International Carpathian Control Conference (ICCC), pp. 37-42. IEEE, 2022.
4. **P. Mahmoudabadi**, and M. Shasadeghi, "Non-PDC control design for nonlinear time-delay systems by delay-partitioning approach," International Conference on Fundamental Research In Electrical Engineering., pp. 91–98, Sep. 2017.
5. **P. Mahmoudabadi**, and M. Shasadeghi, "Improved stability criteria for time-delay T-S fuzzy systems based on fuzzy Lyapunov function and delay-partitioning approach," 1st International Conference on New Research Achievements In Electrical and Computer Engineering, pp. 1–7, 2016.

Professional Activities

Performed more than 40 reviews for following journals :

- IEEE Transactions on Cybernetics (3)
- IEEE Transactions on Systems, Man, and Cybernetics : Systems (1)
- IEEE Transactions on Robotics (1)
- IEEE Journal of Oceanic Engineering (2)
- IEEE Transactions on Fuzzy Systems (2)
- IEEE Transactions on Automation Science and Engineering (2)
- ISA Transactions (10)
- Chaos, Solitons and Fractals (1)
- Applied Mathematics and Computation (4)
- Nonlinear Dynamics (14)
- Journal of Vibration and Control (1)
- International Journal of Fuzzy Systems (1)
- Transactions of the Institute of Measurement and Control (3)
- IEEE Open Journal of Circuits and Systems (2)