

Ali Fattahi, Ph.D.

Postdoctoral Research Fellow

Medical Image and Signal Processing Research Center (MISP)

School of Advanced Technologies in Medicine,

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Research Interests

- Medical and surgical robotics, particularly in ophthalmology and microsurgery
- Cooperative control and multi-agent systems
- Dynamic system modeling, estimation, and control
- Intelligent and robust control systems

Education

- Ph.D. in Electrical Engineering (Control) — Isfahan University of Technology, Iran (Oct 2012 – Aug 2019)

Dissertation: Finite-Time Cooperative Control for a Class of Nonlinear Multi-Agent Systems in the Presence of Disturbance

Supervisors: Dr. Maryam Zekri, Dr. Mohammad Danesh, Dr. Farid Sheikholeslam

- M.Sc. in Electrical Engineering (Control) — Isfahan University of Technology, Iran (Oct 2007 – Nov 2010)

Thesis: Multivariable Sliding Mode Control of a Robotic Manipulator Arm with Chattering Suppression

Supervisors: Dr. Farid Sheikholeslam, Dr. Maryam Zekri, Dr. Mohammad Danesh

- B.Sc. in Electrical Engineering (Control) — Isfahan University of Technology, Iran (Oct 2003 – Sep 2007)

Project: Design of a Nonlinear Controller for a Magnetic Levitation System

Supervisor: Dr. Farid Sheikholeslam

Academic and Non-Academic Positions

- Faculty Member, (2021–Present)
- Deputy Director, Isfahan Province National Elites Foundation (2022–2024)

- Co-founder, Board Member & CEO, Hooshmand Afarynan Noavar Avicenna Co. (Medical Device Development) (2024–Present)
- CEO & Board Member, Fanavaran Salamat Rouyesh Co. (AI and Medical Software Development) (2025–Present)
- Co-founder & Board Member, Atieh Sazan Mehr Apadana Co. (Renewable & Clean Energy Development) (2017–2019)

Honors and Awards

- Ranked 367st nationwide among over 400,000 participants in Iran’s National University Entrance Exam (2003)
- Simultaneous enrollment in Electrical Engineering and Pure Mathematics programs, Isfahan University of Technology (2003–2007)

Teaching Experience

- Graduate Courses: Intelligent Control, Research Methodology and Seminar, Advanced Engineering Mathematics, Robotics, System Identification
- Undergraduate Courses: Linear Control Systems, Applications of Electrical and Electronic Engineering

Publications

- Ali Fattahi, Mohammad Danesh, Maryam Zekri, “High-Order Robust Fast Finite-Time Containment Control for Multi-Agent Systems,” Transactions of the Institute of Measurement and Control, 2019.
- Ali Fattahi, Mohammad Danesh, Maryam Zekri, Farid Sheikholeslami, “Reduced Chatter Robot Manipulator Sliding Control: A Novel Multivariable Approach,” Proceedings of the 19th International Conference on Electrical Engineering (ICEE), Isfahan, Iran, May 2018.

Technical Skills

- Programming Languages: C, C++
- Engineering Tools: MATLAB/Simulink (Control Toolbox, Real-Time Workshop)
- Hardware: Data Acquisition systems, PC-104, ARM/DSP-based controllers, ZYNQ SoCs
- Real-Time and Embedded Control System Design

Language Skills

- English: TOEFL score 590 (Essay: 4.0, Very Good)
- Persian: Native
- Arabic: Basic proficiency

References

- Dr. Mohammad Danesh — Associate Professor, Dept. of Mechanical Engineering, Isfahan University of Technology — danesh@cc.iut.ac.ir
- Dr. Maryam Zekri — Associate Professor, Dept. of Electrical and Computer Engineering, Isfahan University of Technology — mzekri@cc.iut.ac.ir
- Dr. Farid Sheikholeslam — Professor, Dept. of Electrical and Computer Engineering, Isfahan University of Technology — sheikh@cc.iut.ac.ir
- Dr. Mohammad Haeri — Professor, Dept. of Electrical Engineering, Sharif University of Technology — m_haeri@sharif.ir
- Dr. Hossein Rabbani — Professor, School of Advanced Technologies in Medicine, Isfahan University of Medical Sciences — hrabbani@gmail.com