

MILAD ALIPOUR SHAHRAKI

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RESEARCH INTERESTS

- Control Theory and Applications
- Adaptive Learning Control and Optimization
- Safety-Critical Control and Stability Analysis
- Artificial Intelligence and Machine Learning

EDUCATION

09/2022 - Present	Ph.D. in Electrical Engineering Northeastern University, Boston, MA <ul style="list-style-type: none">▪ Faculty Advisor: Dr. Laurent Lessard▪ Current GPA: 4.00/4.00
09/2017 - 01/2020	M.Sc. in Mechanical Engineering University of Isfahan, Iran <ul style="list-style-type: none">▪ Thesis Title: Active Fractional-Order Sliding Mode Control of Flexible Spacecraft Considering Actuators' Saturation▪ Faculty Advisors: Dr. Maryam Malekzadeh and Dr. Alireza Ariaei▪ Honors: Ranked 1st in the class of Mechanical Engineering▪ CGPA: 3.88/4.00
09/2013 - 07/2017	B.Sc. in Mechanical Engineering Fasa University, Fars, Iran <ul style="list-style-type: none">▪ Thesis Title: Control Under External Disturbance Using Disturbance Observers▪ Faculty Advisor: Dr. Mohamadreza Homayounzade▪ Honors: Ranked 1st in the class of Mechanical Engineering▪ CGPA: 3.59/4.00
09/2009 - 06/2013	Diploma in Mathematics and Physics Sadi High School, Isfahan, Iran <ul style="list-style-type: none">▪ Honors: Ranked 1st in the class of Mathematics and Physics▪ CGPA: 19.30/20

PUBLICATIONS

Journal Papers:

- Milad Alipour, Maryam Malekzadeh, and Alireza Ariaei, "Practical fractional-order nonsingular terminal sliding mode control of spacecraft," *ISA Transactions*, 2022. DOI: <https://doi.org/10.1016/j.isatra.2021.10.022>
- Milad Alipour, Maryam Malekzadeh, and Alireza Ariaei, "Active fractional-order sliding mode control of flexible spacecraft under actuators saturation," *Journal of Sound and Vibration*, 2022. DOI: <https://doi.org/10.1016/j.jsv.2022.117110>
- Mohamadreza Homayounzade, and Milad Alipour, "Output feedback adaptive control of dynamically positioned surface vessels: a disturbance observer-based control approach," *International Journal of Robotics and Automation*, vol. 34, no. 4, 2019. DOI: <http://dx.doi.org/10.2316/I.2019.206-5572>

Conference Papers:

- Milad Alipour Shahraki and Laurent Lessard, "Spacecraft Attitude Control Under Reaction Wheel Constraints Using Control Lyapunov and Control Barrier Functions," *2025 American Control Conference (ACC)*, pp. 947-952. IEEE, 2025. DOI: <https://doi.org/10.23919/ACC63710.2025.11108025>

PROFESSIONAL ACTIVITIES AND SERVICE

Journal Reviewer:

- IEEE Transactions on Automatic Control
- IEEE Transactions on Systems, Man, and Cybernetics: Systems
- IEEE/ASME Transactions on Mechatronics

- Automatica
- ISA Transactions
- Aerospace Science and Technology
- Control Engineering Practice

Conference Reviewer:

- L4DC 2025: 7th Annual Learning for Dynamics and Control Conference
- CDC 2025: 64th IEEE Conference on Decision and Control

AWARDS AND HONORS

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| University of Isfahan | ▪ Faculty of Engineering scholarship as an Exceptional Talent Student for all semesters |
| | ▪ Ranked 1st in the class of Mechanical Engineering |
| | ▪ Exempted from the National Ph.D. Entrance Exam (Exceptional Talents Ph.D. Admission Offer : This type of admission is offered to the top 3 M.Sc. students with the highest GPAs) |
| Fasa University | ▪ Faculty of Engineering scholarship as an Exceptional Talent Student for all semesters |
| | ▪ Ranked 1st in the class of Mechanical Engineering |
| | ▪ Exempted from the National M.Sc. Entrance Exam (Exceptional Talents M.Sc. Admission Offer : This type of admission is offered to the top 3 B.Sc. students with the highest GPAs) |
| Sadi High School | ▪ High School scholarship as an Exceptional Talent Student for all years |
| | ▪ Ranked 1st in the class of Mathematics and Physics |

LANGUAGES AND SKILLS

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| Languages | English (Fluent) (TOEFL iBT: 104 - R: 27, L: 30, S: 27, W: 20) - Persian (Native) |
| Software Skills | Python - Julia - MATLAB and Simulink - L ^A T _E X - C++ - Microsoft Office - LabVIEW - SolidWorks - AutoCAD - Adobe Photoshop |
| Operating Systems | MacOS - Microsoft Windows - IOS - Android |
| Hardware Skills | PC Hardware Assembly - Electromechanical Systems' Repair and Upgrade |

RESEARCH EXPERIENCE

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| Research Assistant | Lessard's Research Group Northeastern University , Boston, MA
▪ Instructor: Dr. Laurent Lessard |
| Research Assistant | Mechatronics Lab University of Isfahan , Iran
▪ Instructor: Dr. Maryam Malekzadeh |

TEACHING EXPERIENCE

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| Teaching Assistant | Industrial Drawing - Statics
▪ Instructor: Dr. Reza Vaghefi |
| Private Tutor | Physics - Mathematics - Algebra - Geometry - English Language |

ADDITIONAL ACTIVITIES AND HOBBIES

- Watching Documentaries, Series, and Movies
- Playing Billiard, Snooker, and Chess

FURTHER INFORMATION AND REFERENCES ARE AVAILABLE UPON REQUEST.