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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**
- **Faculty Advisor:** Dr. Laurent Lessard
 - **Current GPA:** 4.00/4.00
- 09/2017 - 01/2020** **M.Sc. in Mechanical Engineering | University of Isfahan, Iran**
- **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**
- **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**
- **Honors:** Ranked 1st in the class of Mathematics and Physics
 - **CGPA:** 19.30/20

PUBLICATIONS

Conference Papers:

- **Milad Alipour Shahraki** and Laurent Lessard, "Spacecraft Attitude Control Under Reaction Wheel Constraints Using Control Lyapunov and Control Barrier Functions," *The American Control Conference (ACC)*, 2025. (**Submitted**)

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/J.2019.206-5572>

PROFESSIONAL EXPERIENCE AND SERVICE

Journal Peer Reviewer:

- IEEE Transactions on Systems, Man, and Cybernetics: Systems (**Q1 - Impact Factor: 8.6**) (1)
- IEEE/ASME Transactions on Mechatronics (**Q1 - Impact Factor: 6.1**) (4)
- Aerospace Science and Technology (**Q1 - Impact Factor: 5.0**) (3)
- ISA Transactions (**Q1 - Impact Factor: 6.3**) (5)

- Control Engineering Practice (**Q1 - Impact Factor: 5.4**) (1)
- Automatica (**Q1 - Impact Factor: 4.8**) (1)

AWARDS AND HONORS

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|------------------------------|---|
| University of Isfahan | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 | <ul style="list-style-type: none"> ▪ 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 - MATLAB and Simulink - \LaTeX - 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.