

### Personal Data

First Name Alisina  
Last Name Bayati  
Immigration Status US Lawful Permanent Resident (Greencard Holder)  
Gender Male  
Website [alisina75.github.io](https://alisina75.github.io)

### Education

- 2020–2026 **PhD in Mechanical Science and Engineering**, *University of Illinois at Urbana-Champaign*, Urbana, IL  
(Expected)
- GPA: 3.93/4.00
  - Supervisor: Srinivasa Salapaka
  - Relevant courses: Mathematical Methods (Complex Analysis, Linear Algebra, ODEs), Control Systems Theory and Design, Optimization, Machine Learning, Random Processes, Real Variables, Statistics and Probability II, Analysis of Nonlinear Systems, Dynamic Programming and Reinforcement Learning, Computer Vision, Optimum Control Systems, Real Analysis
- 2015–2019 **Bachelor of Science in Mechanical Engineering**, *Sharif University of Technology*, Tehran, Iran
- GPA: 18.10/20.0 (3.89/4.00)
  - Supervisor: Hamed Moradi
  - Relevant courses: Automatic Control, Dynamics, Vibrations, Engineering Mathematics, Fundamentals of Electrical Engineering I & II.

### Research Interests

Sequential Decision Making and Reinforcement Learning, Dynamical Systems and Control, Optimization, Robotics

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## Publications

- **Alisina Bayati**, Amir Malvandi, Vedant Mundada, Amber Srivastava, Srinivasa Salapaka, and Hao Feng. *Towards Sustainability in Drying by Multi-frequency Multimode Modulated Ultrasound Technology and Multi-objective Mixed-integer Dynamic Optimization*. (To be Submitted)
- Amber Srivastava, **Alisina Bayati**, and Srinivasa Salapaka. *Efficient Sparsity Enforcement in Linear Regression via Entropy-Based Regularization*. (To be Submitted to IEEE European Control Conference (ECC) 2024)
- **Alisina Bayati**, Amber Srivastava, Amir Malvandi, Hao Feng, and Srinivasa Salapaka. *Towards Efficient Modularity in Industrial Drying: A Combinatorial Optimization Viewpoint*. *IEEE American Control Conference (ACC) 2023*.  
<https://ieeexplore.ieee.org/abstract/document/10156630>

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## Research Projects

- Sep 2021–Present **Self Organizing Wireless Networks, Center for Networked Intelligent Components and Environments (C-NICE)**, UIUC
- Trained a deep neural network to predict WiFi network performance metrics.
  - Developed a combinatorial optimization algorithm for optimal router placement and user assignment.
- Oct 2020–Present **Mixed-integer Multi-stage optimization of ultrasonic/convective food drying processes**, *US Department of Energy (DOE)*, UIUC
- Designed a mixed-integer optimization algorithm for establishing energy-efficient control trajectories with piecewise linear profiles for food drying processes
  - Designed and implemented control systems for thermal system and AC motor of the drying equipment.

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## Experiences

- Jan 2023–Present **Graduate Teaching Assistant**, *Dynamics of Mechanical Systems Course (ME340)*, UIUC
- Aug 2020–Present **Graduate Research Assistant**, *Systems Engineering Lab for Nano Investigation and Control (SENSIC)*, UIUC
- Sep 2018–Aug 2019 **Undergraduate Research Assistant**, *Control Systems Lab*, Sharif University of Technology
- Sep 2019–Dec 2019 **Undergraduate Teaching Assistant**, *Composite Materials Course*, Sharif University of Technology
- June 2018–Sep 2018 **Undergraduate Intern**, *Dam Engineering Projects*, AFCE, Iran
- Gained hands-on experience in dam engineering and water resources development.
  - Assisted in data collection and analysis for various dam projects.

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## Skills

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in [alisina-bayati](#)

Programming Languages: Python, MATLAB, L<sup>A</sup>T<sub>E</sub>X, C

Frameworks: NumPy, Pytorch, SciPy, Simulink, LabView, OpenCV, Pillow, Solidworks

Languages: Persian (Native), English (Fluent), Arabic (Elementary)

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## References

[Srinivasa Salapaka](#)

Full Professor

Department of Mechanical Science and Engineering

University of Illinois at Urbana-Champaign

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