ARCH Lab

University of Massachusetts Amherst

We are looking for motivated PhD students!

The Architectures for Resilient Computing Hardware (ARCH) Lab in the Department of Electrical and Computer Engineering at the University of Massachusetts Amherst is seeking highly motivated prospective PhD students for Spring and Fall 2027 admissions.

We welcome applicants with backgrounds in Computer Engineering, Electrical Engineering, Computer Science, or related fields who are interested in conducting impactful research in computer architecture, computer systems, AI hardware, hardware security, and trustworthy computing platforms. Students who join the lab will have opportunities to work on high-impact research projects, publish in leading conferences and journals, and collaborate with an interdisciplinary research community across academia and industry.

Current Research Directions

- AI Hardware Systems: Efficient and trustworthy architectures for emerging AI and machine learning workloads.
- Secure Computer Architectures: Hardware-assisted security mechanisms for resilient and trustworthy computing platforms, including encrypted computing.
- Hardware-Software Co-Design: Cross-layer optimization techniques spanning compilers, runtimes, firmware, hardware, and operating systems.

Why join us?

- Fully funded (Tuition+Stipend)
- Supportive faculty mentoring
- Collaborative lab culture
- Top-ranked public university
- Industry collaborations
- Real-world research impact
- Vibrant research community
- Scenic Pioneer Valley location

Position Details

- Start: Spring 27 / Fall 27
- Deadline: Until filled
- Location: Amherst, MA

How to Apply

Interested applicants can apply directly at

https://archlabs.us/apply

About PI

Aruna Jayasena is an incoming tenure-track Assistant Professor in the Department of Electrical and Computer Engineering at University of Massachusetts Amherst. He received his Ph.D. from the University of Florida in 2025. His research focuses on secure computing architectures and systems security.

https://archfx.me