【TL;DR】

That's our kind of fun. Come do a PhD with us at UMD CS— where bold ideas turn into real systems.

Dr. Alan Liu is an Assistant Professor of Computer Science at the University of Maryland, College Park (UMD). Liu's team is seeking highly motivated PhD students to work on cutting-edge research projects in networked and AI systems. Prospective applicants may contact the professor at zaoxing@umd.edu. Deadline: 12/15/2025

- The Maryland Max Planck Ph.D. Program in CS is also available: check out

【PI】

Alan Liu joined UMD CS as a tenure-track assistant professor in September 2023. Prior to UMD, Liu has been an assistant professor of electrical and computer engineering at Boston University since 2021. Liu obtained his Ph.D. in Computer Science from Johns Hopkins University and did postdoctoral research in Carnegie Mellon University. Liu's research has won interdisciplinary recognitions, including USENIX FAST Best Paper Award, USENIX ATC Best of Rest, and ACM STOC Best of Rest.

【Research】

Liu's team works broadly on systems. Specifically, they design, implement, evaluate systems and algorithmic tools for ***networked and distributed systems***, ***AI/ML***, and ***network security***. Liu's research has been supported in part by federal agencies such as NSF and open-source industry such as Red Hat, Microsoft, and Intel. Liu's team publishes in top venues of systems (e.g., NSDI, OSDI, FAST), networking (e.g., SIGCOMM, NSDI, IMC, MobiCom), security (e.g., USENIX Security, NDSS), and data systems (e.g., VLDB).

Several example directions:

- Large-scale telemetry and analytics infrastructures for cloud and NextG networks.
- LLM for cloud and network operations.
- Systems to accelerate ML training and inference efficiency.
- Empirical measurements of security and AI applications.

【Qualifications and Expectations】

- System "hacking" experiences and strong programming/systems skills (e.g., C/C++, Rust, parallel programming and CUDA).
- Backgrounds and interests in networking systems, distributed systems, and machine learning algorithms.
- Prior research experiences or publications are a plus, but not required.
- Self-motivated.