

ALAN WANG

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EXPERIENCE:

Research Assistant @ University of California, Berkeley	August 2025 – Current
<ul style="list-style-type: none">Researching practical mobile microarchitectural attacksAnalyzing the Linux kernel and exploiting it using microarchitectural side channel attacks	
Software Developer Intern @ Jane Street	May – August 2024
<ul style="list-style-type: none">Worked with billions of trade orders submitted to the SECImproved the efficiency and utilization of server's used by the entire firm	
Computer Science Intern @ D. E. Shaw Research	May – August 2023
<ul style="list-style-type: none">Researched docking and non-equilibrium FE calculation methodsWrote system software which ran thousands of simulations on Anton3 ASICs and achieved a 2.5x performance improvement	
Research Assistant @ FPSG Lab	September 2021 – May 2025
<ul style="list-style-type: none">Explored new microarchitectural side channel attacks, resulting in attacks exploiting mobile phones and the Linux kernelReverse engineered microarchitectural structures to determine their semanticsModelled non-speculative information flow to decrease mitigation overhead by up to 21%	
Research Aide @ Argonne National Lab	May 2022 – May 2023
<ul style="list-style-type: none">Worked with NVIDIA's Bluefield-3 Data Processing Unit (DPU) for zero trust network architecturesFound critical errors by instrumenting Portable Batch System (PBS) for Argonne's extreme scale systemsDeveloped and programmed a command line interface for Argonne's UserBase3 and used by all Argonne adminsDesigned and collected data for a Python concurrency research project for the Operations division director	
Visiting Student @ Argonne National Lab	Feb – May 2022
<ul style="list-style-type: none">Led the design of a ROS2 interface for Argonne's self-driving labBuilt key infrastructure for Argonne's self-driving lab	
Undergraduate Research Assistant @ Northwestern University	Feb 2021 – June 2022
<ul style="list-style-type: none">Researched the vulnerability INTEL-SA-00086 to gain access to Intel's most secure piece of hardware (microcode project)Worked on the FPVM project led by Professor Peter Dinda	
DoE College Bound Research Intern (CBRP) @ Argonne National Lab	June – August 2021
<ul style="list-style-type: none">Started the design of a ROS2 interface for Argonne's self-driving labCreated important building blocks for future work in Argonne's self-driving lab	
SEAP Intern @ Office of Naval Research	June – August of 2019 and 2020
<ul style="list-style-type: none">Led the development of autonomous bomb-defusing robotsRepaired a variety of programming errors related to navigation, object recognition, and arm manipulation	

PUBLICATIONS:

- [Redacted], *planned for submission to computer security conference*
- Pixnapping**, first author, *to appear at ACM CCS '25*
- EMT**, *to appear in OSDI '25*
- Peek-a-Walk**, first author, *IEEE S&P (Oakland) '25*
- Declassiflow**, second author, *ACM CCS '23*
- Mars Ice Thermal Harvesting Rig & ISRU Laboratory (MITHRIL)**, *ASCEND '22*

ACHIEVEMENTS:

- NSF GRFP Honorable Mention**, NSF, 2025
- Bronze Tablet Scholar Award**, UIUC, 2025
- Siebel Scholar Award**, 2025
- Dean's List**, UIUC's Grainger College, 2021-2023
- 2nd Place Overall**, NASA RASC-AL competition, 2022
- Round 2 qualifier**, Google Codejam competition, 2021

EDUCATION:

PhD in Computer Science, University of California, Berkeley	2025-2030
<ul style="list-style-type: none">GPA: N/A Advisor: Professor Christopher Fletcher	
BSMS in Computer Science, University of Illinois at Urbana-Champaign	2021-2025
<ul style="list-style-type: none">GPA: 4.0 Advisor: Professor Christopher Fletcher	

COMMUNITY SERVICE:

- Taught a free month-long Java course to over 100 K-12 students in the Chicagoland area, June 2020
- Taught a free month-long competitive programming course to 30 K-12 students in the Chicagoland area, Jan 2021
- ACM Mentor – Helping incoming freshman transition to college life, June 2022 – May 2025