

Masood Ali

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EXPERIENCE

Palo Alto Networks, USA

2026 – Present

Senior Staff Security Researcher

- Leveraging large-scale systems to facilitate research of Internet-wide security and privacy.

University of Illinois Chicago, USA

2020 – 2026

PhD Research Assistant

- Built automated systems for large-scale browser/app security analysis, PII flow auditing, and cross-platform tracking measurement; resulting in publications at USENIX Security, CCS, NDSS, and PETS.
- Facilitated and led projects with cross-institutional (NYU, Georgia Tech, Stony Brook) and industry collaborations (Brave, Amazon).
- Mentored 6 PhD and 5 Masters students through 4 publications at USENIX Security, NDSS, and PETS.

Brave Software, USA

May 2023 – August 2023

Research Intern

- Built runtime system to rewrite privacy-harming code in JS bundles with 1.00 precision and 0.95 recall.
- Delivered a browser extension capable mitigating bundle-level privacy threats within 0.43s on average.
- Designed controlled measurement and evaluation studies; led to a CCS'24 publication.

Dalhousie University, Canada

Jan 2018 – August 2019

Research Assistant

- Led 10 researchers through an IDEaS grant funded by the Department of National Defence, Canada. Developed a Host-based Intrusion Detection System for cloud services with >98% detection accuracy.
- Led an academia-industry collaboration with a startup, Cartoon Conrad, through a state-funded Nova Scotia Business Inc. (NSBI) grant. Developed a persuasive game design to encourage the use of Glucose Monitors; developed API-mapping to enable redemption of earned points within games like Fortnite.
- Reduced up to 5 weekly man-hours in managing and integrating Stripe-based payments for in-app experiences, and garnered a >30% increase in local sign-ups by integrating secure SSO-based login flows. Led a team of 4, in collaboration with a software engineering team at a startup, Spritely, through an NSBI-funded academia-industry collaboration.

EDUCATION

PhD in Computer Science, **University of Illinois Chicago, USA**

2020 – 2026

MSc in Computer Science, **Dalhousie University, Canada**

2018 – 2019

BEng in Computer Science, **Visvesvaraya Technological University, India**

2013 – 2017

SKILLS

Domains	Web security, browser internals, fingerprinting, cross-platform security, user advertising identity ecosystem, real-time bidding, privacy-preserving ads, Electron security
Techniques	Threat modeling, static & dynamic analysis, system design, instrumentation
Languages	Python, JavaScript, Typescript, Bash, SQL, noSQL
Tools	Burp Suite, mitmproxy, Wireshark, tcpdump, Chrome DevTools, Playwright, Puppeteer

PEER-REVIEWED PUBLICATIONS

1. J. Chauhan, K. Solomos, **M. Ali**, J. Polakis. Exploring Privacy Leakage and Violations in the macOS Application Lifecycle. ACM CCS 2026.
2. A. Infantino, **M. Ali**, K. Solomos, J. Polakis Vault Raider: Stealthy UI-based Attacks Against Password Managers in Desktop Environments. NDSS 2026. DOI: 10.14722/ndss.2026.231067
3. C. Paloscia, K. Solomos, **M. Ali**, J. Polakis. Lost in Translation: Exploring the Risks of Web-to-Cross-platform Application Migration. PETS 2025. DOI: 10.56553/popets-2025-0117
4. **M. Ali**, P. Snyder, C. Kanich, H. Haddadi. Unbundle-Rewrite-Rebundle: Runtime Detection and Rewriting of Privacy-Harming Code in JavaScript Bundles. ACM CCS 2024. DOI: 10.1145/3658644.3690262
5. **M. Ali**, M. Ghasemisharif, C. Kanich, J. Polakis. Rise of Inspectron: Automated Black-box Auditing of Cross-platform Electron Apps. USENIX Security 2024.
6. G. Calderonio, **M. Ali**, J. Polakis. Fledging Will Continue Until Privacy Improves: Empirical Analysis of Google's Privacy-Preserving Targeted Advertising. USENIX Security 2024.
7. D. Balash, **M. Ali**, C. Kanich, A. Aviv. "I would not install an app with this label": Privacy Label Impact on Risk Perception and Willingness to Install iOS Apps. SOUPS 2024.
8. **M. Ali**, D. Balash, M. Kodwani, C. Kanich, A. Aviv. Honesty is the Best Policy: On the Accuracy of Apple Privacy Labels Compared to Apps' Privacy Policies. PETS 2024. DOI: 10.56553/popets-2024-0111
9. **M. Ali**, B. Chitale, M. Ghasemisharif, C. Kanich, N. Nikiforakis, J. Polakis. Navigating Murky Waters: Automated Browser Feature Testing for Uncovering Tracking Vectors. NDSS 2023. DOI: 10.14722/ndss.2023.24072

SERVICE & TEACHING

Program Committee	USENIX Security ('26, '27), AsiaCCS ('27), WWW ('26), Euro S&P ('25,'26), MADWeb ('25), SecWeb ('24,'23), ACM EAAMO ('24,'25)
Artifact Evaluation	USENIX Security ('25), PETS ('25,'26), NDSS ('25)
Organizing Committee	ACM EAAMO ('21,'22,'23)
External Reviewer	CHI ('24,'25)
Student Volunteer	CHI ('21)
Teaching Assistant	Program Design II (UIC), Software Engineering (Dal), Network Security (Dal), Data Structures & Algorithms (Dal)

SELECTED ACHIEVEMENTS

CVEs	2023-43799, 2022-42817, 2022-32933
Bug Bounties	Tor Project, Keeper Security, Google Ads, Wordpress.com, Postman, Cacher
Distinguished Reviewer	USENIX Security AEC ('25), PETS AEC ('25,'26)