James Larisch

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Education

2017–2023 **PhD, Computer Science**, *Harvard University*, Cambridge, MA
Advisor: Eddie Kohler

2017–2020 **MS, Computer Science**, *Harvard University*, Cambridge, MA
Advisor: James Mickens

2012–2017 **BS, Computer Science**, *Northeastern University*, Boston, MA
Magna Cum Laude
With Honors

Current Research

In Progress **James Larisch**, Eric Lu, Alisha Ukani, Gabriele Oliaro, Savvy Raghuvanshi, Jeremy Hsu, Stephen Herwig, Eddie Kohler, and James Mickens. "**Juice: Stateful Serverless Functions without Manually Persisted State.**"

In Progress **James Larisch**, Timothy Alberdingk Thijm, Suleman Ahmad, Peter Wu, Tom Arnfeld, and Marwan Fayed. "**[Not yet disclosed, DNS-related]**"

Refereed Publications

2023 **James Larisch**, Waqar Aqeel, Taejoong Chung, Eddie Kohler, Dave Levin, Bruce M. Maggs, Bryan Parno, and Christo Wilson. "**No Root Store Left Behind**" In ACM Workshop on Hot Topics in Networks (HotNets). 2023.

2022 **James Larisch**, Waqar Aqeel, Michael Lum, Yaelle Goldschlag, Kasra Torshizi, Leah Kannan, Yujie Wang, Taejoong Chung, Dave Levin, Bruce M. Maggs, Alan Mislove, Bryan Parno, and Christo Wilson. "**Hammurabi: A Framework for Pluggable, Logic-Based X.509 Certificate Validation Policies.**" In ACM SIGSAC Conference on Computer and Communications Security (CCS). 2022.

2020 Waqar Aqeel, Zachary Hanif, **James Larisch**, Olamide Omolola, Taejoong Chung, Dave Levin, Bruce M. Maggs, Alan Mislove, Bryan Parno, and Christo Wilson. "**Assertion-Carrying Certificates.**" In 2020 Workshop on Foundations of Computer Security (FCS'20). 2020.

2018 **James Larisch**, James Mickens, and Eddie Kohler. "**Alto: Lightweight VMs Using Virtualization-aware Managed Runtimes.**" In Proceedings of the 15th International Conference on Managed Languages & Runtimes, pp. 1–7. 2018.

2017 **James Larisch**, David Choffnes, Dave Levin, Bruce M. Maggs, Alan Mislove, and Christo Wilson. "**CRLite: A Scalable System for Pushing All TLS Revocations to All Browsers.**" In 2017 IEEE Symposium on Security and Privacy (SP), pp. 539–556. IEEE, 2017.

Teaching & Mentoring

2022-2023 **InTouch Peer**, *InTouch Peer-to-Peer Student Support Group*, Harvard

| 2020 | **Undergraduate Research Mentor**, *Harvard Women in Computer Science*, Systems Group |
| Fall 2018 | **Teaching Fellow**, *CS263: Systems Security*, James Mickens |

Work Experience

2024-	**Research Engineer**, *Cloudflare*, Remote
	- Continued a new DNS subsystem (details to come).
2021-2022	**Research Engineer Intern**, *Cloudflare*, Remote
	- Developed a new DNS subsystem (details to come).
2016	**Software Engineer Co-op**, *Sonian*, Waltham, MA
	- Designed and implemented the team's first tracing infrastructure to track and debug requests across microservices.
2015	**Software Engineer Co-op**, *Gem.co*, Los Angeles, CA
	- Implemented Gem's webhook/callback system in which blockchain events trigger customer HTTP endpoints.
	- Forked the Toshi Bitcoin node client to provide blockchain information to the API backend faster than third-party APIs.
	- Added Litecoin and Dogecoin auto-conversion support to multi-signature wallet API.
2014	**Software Engineer Co-op**, *HubSpot*, Cambridge, MA
	- Converted bloated Hadoop event processing pipeline (60–90m) into Kafka pipline (5–15s).
	- Designed and deployed traffic simulation and verification tool which prevented major calculation bugs before production deployment.
	- Maintained the analytics system which processes and aggregates hundreds of customer site events per second.
2013	**Software Engineer**, *Focused Coaching*, Morganville, NJ
	- Sole developer of online SAT score aggregation platform written using Ruby-on-Rails.

Honors & Awards

2022	**Honorable Mention - Best Paper - Hammurabi**, *ACM CCS 2022*
2019	**NSF Graduate Research Fellowship**, *National Science Foundation*
2017	**Chen Graduate Student Research Fellowship**, *Harvard University*
2017	**IEEE Cybersecurity Award for Innovation - CRLite**, *IEEE SecDev 2017 & MITRE*
2017	**Undergraduate Research Award**, *Northeastern University, CCIS*
2012	**Fellows Scholarship**, *Northeastern University, CCIS*
2012	**Excellence Scholarship**, *Northeastern University*

Technical Skills

| actively proficient | Go, Ruby |
| professionally experienced | Java, Clojure, SQL, JavaScript |

academically experienced	C, Rust, Lua, C++, OCaml, Haskell, Prolog, Python, Racket, TypeScript

Research Adoption & Coverage

2020	Introducing CRLite: All of the Web PKI's revocations, compressed. *Mozilla Security Blog*

Community

2018 **Technical Advisory Volunteer**, *ACLU Massachusetts*
Demystified privacy and security concerns at community "Crypto Parties".

2018 **Technical Mentor**, *YouthCITIES*
Mentored high school students building healthcare-focused startup prototypes.

Part-Time Work Experience

2019–2020 **Senior Interview Engineer**, *Karat.io*, Remote
- Conducted over 30 hour-long technical interviews with software engineering candidates.
- Completed comprehensive evaluation write-ups for each candidate.

2017 **Technical Lead**, *Soli*, Boston, MA
- Designed and implemented NodeJS back-end for mobile-only, early-stage startup.
- Interviewed and hired the company's CTO.