

Joel H. W. Weinberger

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SUMMARY

Security and software engineer and manager. Excels at building teams with high engineering output and execution. Looking for technical leadership positions in security engineering or backend engineering.

PROFESSIONAL EXPERIENCE

Snap *Security Engineering Manager and Technical Lead* Jan 2017 - Feb 2024

Security engineering manager at Snap leading supply chain security infrastructure. Focused on hardening of dependency management, the CI/CD tool chain, and sandboxing of untrusted code. Previously managed and led Snap's secrets management program. Prior to that, was a tech lead on the Application Security Team.

Google *Software Engineer* Feb 2013 - Jan 2017

Software engineer on the Chrome web browser security team. Focused on new features to enhance security for users. Built tools for both the client and server to utilize to help developers write more secure web applications, such as designing and implementing the Subresource Integrity (SRI) web feature and many parts of Content Security Policy.

Coverity *Security Research Internship* Jun 2012 - Aug 2012

Research intern in the office of the CTO working on security technology research. Focused on next-generation analysis of Web applications. In particular, looked at ways to connect server static analysis with client analysis to try to find new sets of Web application vulnerabilities.

Microsoft Research *Security and PL Research Internship* Jun 2011 - Aug 2011

Intern in the Research in Software Engineering (RiSE) group, working with Juan Chen, Ben Livshits, and Nikhil Swamy. Focused on type checking of JavaScript using F*, an F]-like language with dependent and refinement typing. Worked on statically enforcing complex security policies on Web applications through the type system, focusing on browser extensions. Built a compiler from JavaScript to F* and worked on type checking on resulting code for correctness and security properties.

Sun Microsystems *Software Engineer* Jul 2007 - Jul 2008

Full-time software engineer in the Fishworks advanced development team on Sun Storage 7000 NAS products. Worked on iSCSI and FTP integration, clustering interface support, and appliance stack management. Worked on operating system, application, and AJAX Web development.

VMware *Software Engineer Internship* Jun 2006 - Aug 2006

Intern in the VMware ESX Core Kernel group. Developed shared memory infrastructure and signal handling capabilities.

EDUCATION

2008 - 2012 Ph.D., Computer Science at **University of California, Berkeley** Thesis: Analysis and Enforcement of Web Application Security Policies, advised by Dawn Song

2003 - 2007 Bachelor's and Master's Degrees at **Brown University**

REFEREED PUBLICATIONS

- Weinberger, Joel and Adrienne Felt (2016). “A Week to Remember: The Impact of Browser Warning Storage Policies”. In: *Proc. of 12th Symposium on Usable Privacy and Security (SOUPS)*.
- Swamy, Nikhil, Joel Weinberger, Cole Schlesinger, Juan Chen, and Ben Livshits (2013). “Verifying Higher-order Programs with the Dijkstra Monad”. In: *Proc. of 34th Programming Language Design and Implementation (PLDI)*.
- Felt, Adrienne, Matthew Finifter, Joel Weinberger, and David Wagner (2011). “Diesel: Applying Privilege Separation to Database Access”. In: *Proc. of ACM Symposium on Information, Computer and Communications Security (ASIACCS), 2011*.
- Weinberger, Joel, Adam Barth, and Dawn Song (2011). “Towards Client-side HTML Security Policies”. In: *Proc. of 6th USENIX Workshop on Hot Topics in Security*.
- Weinberger, Joel, Prateek Saxena, Devdatta Akhawe, Matthew Finifter, and Dawn Song (2011). “A Systematic Analysis of XSS Sanitization in Web Application Frameworks”. In: *Proc. of 16th European Symposium on Research in Computer Security (ESORICS)*.
- Finifter, Matthew, Joel Weinberger, and Adam Barth (2010). “Preventing Capability Leaks in Secure JavaScript Subests”. In: *Proc. of Network and Distributed System Security Symposium, 2010*.
- Barth, Adam, Joel Weinberger, and Dawn Song (2009). “Cross-Origin JavaScript Capability Leaks: Detection, Exploitation, and Defense”. In: *Proc. of the 18th USENIX Security Symposium (USENIX Security 2009)*.
- Gordon, Colin, Leo Meyerovich, Joel Weinberger, and Shriram Krishnamurthi (2007). “Composition with Consistent Updates for Abstract State Machines”. In: *Proc. of the International ASM Workshop, 2007*.

TECHNICAL REPORTS

- Swamy, Nikhil, Joel Weinberger, Juan Chen, Ben Livshits, and Cole Schlesinger (2012). “Monadic Refinement Types for Verifying JavaScript Programs”. In: URL: <https://research.microsoft.com/en-us/um/people/nswamy/papers/js2fs-icfp12-submitted-version.pdf>.
- Weinberger, Joel (2012). “Thesis: Analysis and Enforcement of Web Application Security Policies”. In: URL: <https://www.eecs.berkeley.edu/Pubs/TechRpts/2012/EECS-2012-232.pdf>.
- Meyerovich, Leo, Joel Weinberger, Colin Gordon, and Shriram Krishnamurthi (2006). “ASM Relational Transducer Security Policies”. In: CS-06-12. URL: <http://www.cs.brown.edu/research/pubs/techreports/reports/CS-06-12.html>.

TECHNICAL SKILLS

Product Security, Infrastructure Security, and Application Security.

Core languages: C++, C, Java, Go. Proficient languages: JavaScript, Python.

INTERESTS

Running, skiing (alpine and water), tap dance, rock climbing, road biking, history, video games, reading

Serving as elected at-large representative in the South Robertson Neighborhoods Council (soronc.org) within the Los Angeles Neighborhoods Council system.