
Talks

- Sept 2008 **Invited Speaker**, *Intel Virtualization Security Summit*, The Need for Resilience: Maintaining Security When Your Hypervisor Contains Bugs.
- Aug 2008 **Speaker**, *Defcon 16*, Building a Real Session Layer.
- May 2008 **Speaker**, *2008 UCSD Undergraduate Research Conference*, Trusted Platforms without Trusted Software Stacks.
- Feb 2008 **Invited Panelist**, *Network and Distributed Systems Security Symposium (NDSS '08)*, Virtualization Security Panel.
- Aug 2007 **Speaker**, *Defcon 15*, Virtualization: Enough Holes to Work Vegas.

Experience

Academic

- Sept 2009 – Present **Graduate Student Researcher**, *University of California, Santa Cruz*.
Worked with advisor Darrell Long and faculty member Ethan Miller. Continued *LockBox* and *fived* projects. Started Working-group on Applied Security & Privacy. (WASP) Affiliated with the Storage System Research Center (SSRC)
- Aug 2008 – June 2009 **Researcher**, *University of California, San Diego*.
Continued the *LockBox* project with Alex Orailoglu. Started designing the *fived* project. Loosely affiliated with the Architecture, Reliability and Testing Lab
- June 2008 – Aug 2008 **Research Scholar**, *University of California, San Diego*.
Worked on *LockBox* with Alex Orailoglu
- Apr 2007 – June 2008 **Researcher**, *University of California, San Diego*.
Worked with Alex Orailoglu to identify interesting research areas. Started *LockBox* project, identified and pursued potential funding opportunities

Non-Academic

- June 2009 – Sept 2009 **Sr. Technical Associate**, *Fraser Research*.
Worked on clean-slate networking design. Goal of the project: re-invent the Internet. Examined new design and worked on security issues, among others.
- Mar 2008 – June 2009 **Security Engineer**, *Computer Science and Engineering, UCSD*.
Deployed ROCKS cluster for testing and evaluation. Designed, developed and executed scans for vulnerabilities as needed. Designed PAM components
- Mar 2006 – Feb 2008 **Security Engineer**, *Administrative and Telecommunications, UCSD*.
Helped with SQL whitelisting system to detect SQL injection attacks at the database level. Designed, built and maintained openid.ucsd.edu. Integrated various applications with UCSD's Shibboleth single sign-on system. Deployed and maintained trac project management and SVN version control software

Projects

- Sept 2009 – Present **Maintainer**, *pam_escalate*.
A module for PAM that allows tools that escalate a user's privileges to authenticate against a separate set of escalation credentials.
- Aug 2008 – Present **Maintainer**, *fived*.
A session layer daemon and client that runs a layer 5 session across multiple layer 4 streams and does some cool things in between.
- Apr 2008 – June 2008 **Low Level Hacker**, *NeatHat*, Part of UCSD course CSE 125.
Developed a 3-d realtime multiplayer networked game across three operating systems (OS X, Linux, Win32) across three processor architectures (ppc, x86, x86-64.) Responsible for networking, threading, portability, build engineering and other low level issues.
- May 2005 – Mar 2008 **Linux Platform Manager**, *Blender*.
Blender is a 3-d animation, rendering and compositing suite, among other things. I was responsible for issues affecting the linux port, release engineering and build management.
- May 2006 – Feb 2008 **Maintainer**, *Shibboleth Mediawiki Extension*, Part of UCSD Employment.
Developed authentication plugin for Mediawiki to integrate it with single sign-on technology. Extended portions of the core mediawiki code.
- Mar 2006 – June 2008 **Developer**, *Laboratory Access Monitoring Engine*, Part of UCSD course CSE 199.
Designed and developed a monitoring system for the undergraduate computer labs which tracks usage patterns and gathers other data useful to instructors.

Affiliations

- Member USENIX – Since 2009
- Member Institute of Electrical and Electronics Engineers (IEEE) – Since 2009
- Member Association for Computing Machinery (ACM) – Since 2009
- Member San Diego 2600 Security Group – 2005-2009
- Staff Toorcon Security Conference – TC8, TC9, TCX
- Assurer CAcert SSL Certificate Authority
- Tester One Laptop Per Child Project – B Series Prototype
- Member Board of Managers, California State PTA – 2004-2005

Education

- Sept 2009 – Present **PhD – Computer Science**, *University of California, Santa Cruz*.
Advisor: Darrell Long. Focus in security. Affiliated with the Storage System Research Center. Affiliated with the Working-group on Applied Security & Privacy (WASP)
- Sept 2005 – June 2009 **BA – Computer Science**, *University of California, San Diego*.
In addition to undergraduate coursework, participated in graduate level coursework in computer architecture, operating systems and security.