

# KYLE GRAHAM SCHOMP

364 Riverway, #26

Boston, MA 02115

610-563-5473

<https://kyle.schomp.info/>

kyle.schomp@gmail.com

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## RESEARCH INTERESTS

I am a computer scientist with a specialization in distributed systems and networking. My current focus is on Internet measurement and privacy and security, specifically pertaining to the Domain Name System in both present use and potential future directions. Previously, I focused on transport protocols and congestion control in mobile networks and transport layer security.

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## EDUCATION

**Case Western Reserve University** 2010 – 2016  
*Ph.D. in Computer Science* Cleveland, OH

- Dissertation: *Complexity and Security of the Domain Name System.*
- Advisor: Michael Rabinovich

**Case Western Reserve University** 2008 – 2010  
*M.S. in Computer Science* Cleveland, OH

- Thesis: *Dynamic TCP Proxies: Coping with Mobility and Disadvantaged Hosts in MANETs.*
- Advisor: Michael Rabinovich

**Case Western Reserve University** 2002 – 2006  
*B.S. in Computer Science* Cleveland, OH

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## APPOINTMENTS

**Performance Engineer, Senior** February 2016 – Present  
*Akamai Technologies, Inc.* Boston, MA

**Graduate Student Researcher** June 2015 – September 2015  
*International Computer Science Institute* Cleveland, OH

**Research Assistant** August 2010 – May 2015  
*Case Western Reserve University* Cleveland, OH

**Research Internship** September 2014 – December 2014  
*Telefónica I+D* Barcelona, Spain

**Teaching Assistant** August 2010 – December 2012  
*Case Western Reserve University* Cleveland, OH

- Courses: Computer Networks, Analysis of Algorithms, and Data Structures

**Programmer** September 2006 – July 2009  
*Game Communications / TypeFrag* Cleveland, OH

## PUBLICATIONS

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- Schomp, K., M. Rabinovich, & M. Allman. “Towards a Model of DNS Client Behavior.” In *Passive and Active Measurement Conference (PAM)*, pp. 263-275. Springer International Publishing, 2016.
- Varvello, M., K. Schomp, D. Naylor, J. Blackburn, A. Finamore, & K. Papagiannaki. “Is the Web HTTP/2 Yet?.” In *Passive and Active Measurement Conference (PAM)*, pp. 218-232. Springer International Publishing, 2016.
- Naylor, D., K. Schomp, M. Varvello, I. Leontiadis, J. Blackburn, D. Lopez, K. Papagiannaki, P. Rodriguez, & P. Steenkiste. “multi-context TLS (mcTLS): Enabling Secure In-Network Functionality in TLS.” In *Proceedings of the Conference of the ACM Special Interest Group on Data Communication (SIGCOMM)*, pp. 199-212. ACM, 2015.
- Schomp, K., M. Allman, & M. Rabinovich. “DNS resolvers considered harmful.” In *Proceedings of the ACM Workshop on Hot Topics in Networks (HotNets)*, pp. 16-22. ACM, 2014.\*
- Schomp, K., T. Callahan, M. Rabinovich, & M. Allman. “Assessing DNS vulnerability to record injection.” In *Passive and Active Measurement Conference (PAM)*, pp. 214-223. Springer International Publishing, 2014.\*
- Schomp, K., T. Callahan, M. Rabinovich, & M. Allman. “On measuring the client-side DNS infrastructure.” In *Proceedings of the Internet Measurement Conference (IMC)*, pp. 77-90. ACM, 2013.\*

\*gave the conference talk

## NON-CONFERENCE TALKS

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- Cisco FAST Seminar. “mcTLS: Enabling Secure In-Network Functionality in TLS.” September 2015.
- North American Network Operators Group. “DNS Record Injection Attacks in Home Routers.” June 2014. <https://www.youtube.com/watch?v=KgdVcHhMOWw>.

## RELEASED DATASETS

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- Schomp, K., T. Callahan, M. Rabinovich, & M. Allman. “Survey of DNS vulnerability mitigations deployment.” <http://dns-scans.eecs.cwru.edu/>.
- Schomp, K., T. Callahan, M. Rabinovich, & M. Allman. “Measurements of the structure and caching behavior of the DNS resolver infrastructure.” <http://dns-scans.eecs.cwru.edu/>.

## AWARDS & HONORS

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- Worcester Polytechnic Institute STEM Faculty Launch Program (September 2015)
- U.S. Department of Education GAANN Fellowship (August 2010 – July 2013)
- Internet Measurement Conference Travel Grant (October 2013)
- President’s Scholarship of Case Western Reserve University (August 2002 – May 2006)

## PROFESSIONAL ACTIVITIES

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- Graduate student judge for Case Western Reserve University Research ShowCASE, 2013 and 2014.
- Peer reviewer for:

- IEEE/ACM Transactions on Networking
- ACM Transactions on the Web
- IET Information Security