

HAAKON RINGBERG

E-mail: (first name) 'at' cs.princeton.edu

<http://www.haakonringberg.com/>

EDUCATION

Princeton University, Princeton, NJ (GPA: 3.57) *2004-2009*

Ph.D. in Computer Science

Advisor: Jennifer Rexford

Thesis: *Privacy-Preserving Collaborative Anomaly Detection*

Presents and evaluates a complete system that allows enterprises to collaborate in a privacy-preserving manner to detect network anomalies with greater confidence.

Cornell University, Ithaca, NY (GPA: 3.75) *2001-2004*

B.A. in Computer Science, *magna cum laude honors*

B.A. in Philosophy

- SAT Math 740, Writing: 600
- GRE Quantitative: 790, Verbal: 590, Analytical: 5.5

INDUSTRY EXPERIENCE

Google, New York, NY – Software Engineer *August 2009-*

- I work in the networking/infrastructure group

Arbor Networks, Ann Arbor, MI – Research Assistant *Summer 2008*

- Studied Internet traffic from 95 customer ISPs. Characterized traffic growth across geographic regions, changes in the popularity of Internet services, and the commodification of CDNs.

AT&T Labs Research, Florham Park, NJ – Research Assistant *Summer 2007*

- Designed and implemented a software architecture that leverages machine learning algorithms to mimic Snort, the intrusion detection system, but analyzes summarized data for faster processing

Thomson, Paris, France – Research Assistant *Summer and fall 2006*

- Demonstrated that PCA, when used as a network traffic anomaly detector, is very sensitive to the properties of the underlying traffic, and that tuning PCA can be challenging
- Designed and implemented a system to manually inspect and validate anomalies in traffic traces

Data Domain, Palo Alto, CA – Software Development Intern *Summers 2004, 2005*

- Implemented a lossless data compression algorithm and an encryption subsystem using OpenSSL
- Convinced management to use a more standard synchronization primitive

GrammarTech Inc, Ithaca, NY – Software Development Intern *Summer 2003*

- Designed and implemented a prototype refactoring-tool aimed to assist the military in maintaining legacy Ada software
- Designed and implemented a Scheme interface to AT&T Research's DynaDAG incremental graph layout tool

EXTRACURRICULAR ACTIVITIES

- NSF-funded scholarship for a 1 month stay at UCLA's Institute for Pure & Applied Mathematics (IPAM), September-October 2008
- **TPC member**, CoNEXT 2008 Shadow PC
- **Reviewer**, IEICE Transactions on Information Systems, 2008
- Organized two-day training sessions for new Teaching Assistants at Princeton University Department of Computer Science, 2007 and 2008
- Organized presentation on how to be admitted to, and succeed in, graduate school; Cornell University 2005; Princeton University 2006 and 2007
- Held presentation on introductory computer science courses at Princeton and Cornell to the faculty of computer science at the University of Tromsø, 2006
- **Teaching Assistant** for three different courses over six semesters including four as an undergraduate; taught two weekly sections with up to 25 students for four semesters; designed course projects.
- Worked for longer than six months in three different countries across two continents
- Played club soccer since 1989 (captain of Princeton graduate club team 2007-2008)

PUBLICATIONS

- Nick Duffield, Patrick Haffner, Balachander Krishnamurthy, **Haakon Ringberg**. "Rule-Based Anomaly Detection on IP Flows." *IEEE INFOCOM*. April 2009.
- **Haakon Ringberg**, Matthew Roughan, Jennifer Rexford. "The Need For Simulation In Evaluating Anomaly Detectors." *ACM SIGCOMM CCR Editorial*. January 2008.
- **Haakon Ringberg**, Augustin Soule, Jennifer Rexford. "WebClass: Adding Rigor To Manual Labeling of Traffic Anomalies." *ACM SIGCOMM CCR Editorial*. January 2008.
- Augustin Soule, **Haakon Ringberg**, Fernando Silveira, Christophe Diot. "Challenging the Supremacy of Traffic Matrices in Anomaly Detection:" *Proc. ACM Internet Measurement Conference*. San Diego, CA, October 2007.
- **Haakon Ringberg**, Augustin Soule, Jennifer Rexford, Christophe Diot. "Sensitivity of PCA for Traffic Anomaly Detection." *Proc. ACM SIGMETRICS*. San Diego, CA, June 2007.
- Augustin Soule, **Haakon Ringberg**, Fernando Silveira, Jennifer Rexford, Christophe Diot. "Detectability of Traffic Anomalies in Two Adjacent Networks." *Proc. Passive and Active Measurement Conference*. Louvain-la-neuve, Belgium, April 2007.
- Justin Koser, **Haakon Larsen**¹, Jeffrey A. Vaughan. "sml2java: A Source To Source Translator." *DP-COOL (Declarative Programming in the Context of Object-Oriented Languages) Workshop at PLI (Principles, Logics, and Implementations of High-Level Languages) 2003*. Uppsala, Sweden, August 2003.

TECHNICAL SKILLS

- UNIX and Windows
- Excel, Access, PowerPoint, and Word
- C/C++

ADDITIONAL INFORMATION

Citizenships

- United States of America
- Norwegian (full work-privileges in European Union)

Native fluency in English and Norwegian

¹ I legally changed my name from "Haakon Andreas Ringberg Larsen" to "Haakon Andreas Ringberg" during my Ph.D.