

Haakon A. Ringberg Larsen

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EDUCATION

2004- **Princeton University**, Princeton, NJ, USA
Ph.D. candidate in Computer Science
MA 2006; Ph.D. expected 2009
Advisors: Jennifer Rexford and Kai Li

2001-2004 **Cornell University**, Ithaca, NY, USA
AB *magna cum laude* honors in Computer Science,
Major in Philosophy, distinction in all subjects

WORK EXPERIENCE

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

- Developed a software system that tries to mimic an intrusion detection system (IDS) but by analyzing summarized data for faster processing

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

- Studied the sensitivity of PCA for network traffic anomaly detection; identified challenges include:
 - Determining the “proper” dimensionality of the normal subspace
 - Identifying flows responsible for detected outliers
- Studied the influence of data-reduction techniques on network traffic anomaly detection
 - Level of temporal aggregation, IP address anonymization, and sampling rate has strong impact on detectability
 - Different types of anomalies are impacted differently

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

- Implemented: lossless data compression algorithms, an encryption subsystem using OpenSSL, and phased out the usage of an archaic synchronization primitive
- Analyzed the performance of the above sub-components

Cornell and Princeton Universities **2002-04; 2005-06**
Teaching Assistant (CS126, CS312, CS333)

- Taught recitations twice a week with up to 30 students
- Aided and evaluated small student groups in designing three-tiered Web applications
- Designed, implemented, and graded course projects and exams

GrammaTech Inc, Ithaca, NY, USA

Summer 2003

Software Development Intern

- 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

University of Tromsø IT Dept, Tromsø, Norway

Summers 2000, 2001

Software Development Intern

- Administrated computer clusters for scientific computing

PUBLICATIONS

- [1] Haakon Ringberg, Augustin Soule, Jennifer Rexford, Christophe Diot. "Sensitivity of PCA for Traffic Anomaly Detection." *Proc. ACM SIGMETRICS*. San Diego, CA, June 2007.
- [2] 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.
- [3] 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.
- [4] Justin Koser, Haakon Larsen, Jeffrey A. Vaughan. "sml2java: A Source To Source Translator." *DP-COOL Workshop at PLI 2003*. Uppsala, Sweden, August 2003.

REFERENCES

Available upon request.