

Ansley B. Post

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INTERESTS Automatic storage management, peer-to-peer networks, distributed systems and applications

EDUCATION **Doctor of Philosophy** in Computer Science May 2005 - August 2009 (expected)
Rice University, Houston, Texas
Thesis: *An autonomous system for data management on personal devices*
Advisor: Peter Druschel

Master of Science in Computer Science August 2002 - May 2005
Rice University, Houston, Texas
Thesis: *Strata: A simple lightweight ad hoc communications infrastructure*
Advisor: Peter Druschel

Bachelor of Science awarded *highest honors* August 1998 - May 2002
Georgia Institute of Technology, Atlanta, Georgia
Major: Computer Science

RESEARCH EXPERIENCE **Ph.D. Candidate** advised by Peter Druschel October 2005 - Present
Computer Science Department, Rice University, Houston, Texas
Visiting the Max Planck Institute for Software Systems, Saarbrücken, Germany

Automatic Storage Management for Personal Devices September 2007 - Present
Designed and implemented an automated, autonomous storage system, which leverages incidental connectivity, and free space that already exists in a typical household. This system was deployed to a number of users, and it was shown to be feasible. Leveraged the results from a prototype deployment to redesign the system by reformulating the problem in a form that is solvable as a linear programming problem, that allows the system to adapt to unexpected changes when it is deployed [1,9].
<http://psn.mpi-sws.mpg.de>

Ostra July 2007 - April 2008
Leveraged the distributed trust present in social networks to prevent unwanted communication between users. The system, Ostra, works by leveraging properties of the social network to prevent a single user from sending too many unwanted messages [2].

Wireless network capacity October 2005 - April 2006
Designed and implemented Periscope, which determines a near-optimal transmission schedule for an ad-hoc wireless network using a linear programming formulation. Periscope accounts for specific environmental conditions such as node placement, traffic workloads, physical radio characteristics, and protocol properties. Used Periscope to explore the impact of several system design choices and validated findings through simulation in ns-2 [13].

Graduate Student advised by Peter Druschel August 2002 - June 2005
Computer Science Department, Rice University, Houston, Texas

SAFARI Project

June 2002 - October 2005

Designed a self organizing wireless routing system, that used landmarks to allow scalable routing in large wireless networks. This routing hierarchy was robust to change, and required relatively little periodic overhead to establish the routing structure.

<http://safari.rice.edu/>

POST and ePOST

December 2002 - June 2005

Designed, implemented, and deployed a completely decentralized collaborative messaging service. Traditional collaborative applications are almost exclusively based on centralized servers, a fact which fundamentally limits their scalability. POST presents an alternative base for such applications, and provides massive scalability and fault tolerance. ePOST is a POST-based email service which provides better security, reliability, and durability guarantees than existing email systems [7,13,16,18].

<http://www.epostmail.org>

FreePastry

June 2002 - June 2005

Contributed to the design and implementation of the open-source FreePastry peer-to-peer substrate. Contributed to implementations of PAST, Scribe, SplitStream, and the on disk persistence library shared by applications the use FreePastry [17].

<http://www.freepastry.org>

**INDUSTRIAL
EXPERIENCE**

Research Engineer

August 2000 - August 2002

Air2web, Atlanta, Georgia

Designed and implemented exploratory projects applying company technology to new areas. Used company's development platform, and custom built hardware to connect a wireless radio to a vending machine, and allow purchases using a wide variety of mobile devices.

**REFEREED
PUBLICATIONS**

- [1] **Ansley Post**, Petr Kuznetsov, and Peter Druschel. PodBase: transparent storage management for personal devices. *Proceedings of 7th International Workshop on Peer-to-Peer Systems (IPTPS'08)*, Tampa Bay, FL, February 2008.
- [2] Alan Mislove, **Ansley Post**, Krishna P. Gummadi, and Peter Druschel. Ostra: Leveraging trust networks to thwart unwanted communication. In *Proceedings of the 5th Symposium on Networked Systems Design and Implementation (NSDI'08)*, San Francisco, CA, April 2008.
- [3] Shu Du, Ahamed Khan, Santashil PalChaudhuri, **Ansley Post**, Amit Kumar Saha, Peter Druschel, David B. Johnson and Rudolf Riedi. Safari: A Self-Organizing Hierarchical Architecture for Scalable Ad Hoc Networking. In *Elsevier Ad Hoc Networks Journal*, 2007.
- [4] Alan Mislove, **Ansley Post**, Andreas Haeberlen, and Peter Druschel. Experiences in building and operating ePOST, a reliable peer-to-peer application. In *Proceedings of the 1st Conference of the European Professional Society for Systems (EuroSys'06)*, Leuven, Belgium, April 2006.
- [5] Andreas Haeberlen, Alan Mislove, **Ansley Post**, and Peter Druschel. Fallacies in evaluating decentralized systems. In *Proceedings of the 5th International Workshop on Peer-to-Peer Systems (IPTPS'06)*, Santa Barbara, CA, February, 2006.
- [6] Dan Sandler, Alan Mislove, **Ansley Post**, and Peter Druschel. Sharing micronews with peer-to-peer event notification. In *Proceedings of the 4th International Workshop on Peer-to-Peer Systems (IPTPS'05)*, Ithaca, NY, February 2005.

[7] Alan Mislove, Gaurav Oberoi, **Ansley Post**, Peter Druschel, and Dan S. Wallach. AP3: Cooperative, decentralized anonymous communication. In *Proceedings of the 11th ACM SIGOPS European Workshop (SIGOPS-EW'04)*, Leuven, Belgium, September 2004.

[8] Alan Mislove, **Ansley Post**, Charles Reis, Paul Willmann, Peter Druschel, Dan S. Wallach, Xavier Bonnaire, Pierre Sens, Jean-Michel Busca, and Luicana Arantes-Bezerra. POST: A Secure, Resilient, Cooperative Messaging System. In *Proceedings of the 9th Workshop on Hot Topics in Operating Systems (HotOS'03)*, Lihue, HI, May 2003.

**UNDER
SUBMISSION**

[9] **Ansley Post**, Petr Kuznetsov, Juan Navarro, and Peter Druschel. Automatic storage management for personal devices with PodBase, October 2008.

[10] **Ansley Post**, Alan Mislove, and Peter Druschel. Periscope: Exploring the capacity limits of multi-hop wireless networks. 2008.

BOOK CHAPTERS

[11] Alan Mislove, Andreas Haeberlen, **Ansley Post**, and Peter Druschel. *Peer-to-Peer Systems and Applications, LNCS 3485*, chapter ePOST, pages 171-192. Springer-Verlag Publishers, Heidelberg. August 2005.

THESES

[12] **Ansley Post**. Strata: A simple lightweight ad hoc communications infrastructure. Master's Thesis, Department of Computer Science, Rice University, April 2005. Advisor: Peter Druschel.

POSTERS

“Automatic storage management for personal devices with PodBase”, *OSDI'08 Poster*

TALKS

“PodBase: transparent storage management for personal devices”, *IPTPS 2008*

TEACHING

Teaching Asst., COMP 540, Statistical Machine Learning, Rice Spring 2005

Teaching Asst., COMP 440, Artificial Intelligence, Rice Fall 2004

Teaching Asst., COMP 420, Introduction to Distributed Computer Systems, Rice Spring 2004

Teaching Asst., COMP 212, Intermediate Programming, Rice Fall 2003

Teaching Asst., COMP 421, Operating Systems, Rice Spring 2003

SERVICE

Representative, Ph.D. Admissions Committee, International Max Planck Research School 2006 - Present

Graduate Student Representative, MPI-SWS 2005 - 2006

Representative, Graduate Student Association for the Computer Science Department, Rice 2003 - 2005

STATUS

Citizenship: US

Languages: English (native); German (working knowledge)

REFERENCES

Available upon request.