Jeffrey T. Rasley Updated: October 27, 2016

CONTACT INFORMATION

Box 1910, Computer Science Department
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Providence, RI 02912

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INTERESTS

Networks, distributed systems, security, software engineering

EDUCATION

Brown University, Providence, RI USA
Ph.D. Candidate, in progress since 2012 — **Current**
Advanced to candidacy, May 2014
Master of Science (ScM), Computer Science, May 2014
Adviser: Prof. Rodrigo Fonseca

University of Washington, Seattle, WA USA
Bachelor of Science with Honors, Computer Engineering — **March 2012**
Minor in Applied Mathematics

Spokane Falls Community College, Spokane, WA USA
A.A. with Honors, Emphasis in Mathematics — **June 2008**

HONORS & AWARDS

Best Paper Award Runner Up at HCOMP 2015
National Science Foundation Graduate Research Fellowship, 2013
Brown University Graduate School Fellowship, 2012
Computing Research Association Outstanding Undergraduate Researcher Honorable Mention, 2011
Wayne C. & Grace M. Stanley Scholarship, 2011
Burkhardt Scholarship, 2011

PUBLICATIONS

"Efficient Queue Management for Cluster Scheduling." **J. Rasley**, K. Karanasos, S. Kandula, R. Fonseca, M. Vojnovic, S. Rao. In proceedings of the 2016 European Conference on Computer Systems (EuroSys). London, UK, 2016

"Detecting Latent Cross-Platform API Violations." **J. Rasley**, E. Gessiou, T. Ohmann, Y. Brun, S. Krishnamurthi, J. Cappos. In proceedings of the IEEE International Symposium on Software Reliability Engineering (ISSRE) 2015.

"Crowdsourcing from Scratch: A Pragmatic Experiment in Data Collection by Novice Requesters." A. Papoutsaki, H. Guo, D. Metaxa-Kakavouli, C. Gramazio, **J. Rasley**, W. Xie, G. Wang, J. Huang. **Best Paper Award Runner Up**. In proceedings of the AAAI Conference on Human Computation and Crowdsourcing (HCOMP) 2015.

"Planck: Millisecond-scale Monitoring and Control for Commodity Networks." **J. Rasley**, B. Stephens, C. Dixon, E. Rozner, W. Felter, K. Agarwal, J. Carter, R. Fonseca. In proceedings of the ACM SIGCOMM 2014, Chicago, IL, 2014.

"Low-latency Network Monitoring via Oversubscribed Port Mirroring." **J. Rasley**, B. Stephens, C. Dixon, E. Rozner, W. Felter, K. Agarwal, J. Carter, R. Fonseca. Extended Abstract, presented as part of the Open Networking Summit 2014 (ONS '14) Santa Clara, CA, 2014

"Runtime Verification of Portable Programming Interfaces." **J. Rasley**. Honors Thesis. Computer Science and Engineering, University of Washington, June 2011.

"Retaining Sandbox Containment Despite Bugs in Privileged Memory-Safe Code." J. Cappos, A. Dadgar, **J. Rasley**, J. Samuel, I. Beschastnikh, C. Barsan, A. Krishnamurthy, T. Anderson. In proceedings of the 17th ACM Conference on Computer and Communications Security (CCS '10). Chicago, IL, 2010

Posters and Talks

"Efficient Queue Management for Cluster Scheduling." **J. Rasley**, K. Karanasos, S. Kandula, R. Fonseca, M. Vojnovic, S. Rao. Poster at the 13th USENIX Symposium on Networked Systems Design and Implementation (NSDI '16). Santa Clara, CA, 2016

"Queue Management at End Hosts for Improved Cluster Scheduling." **J. Rasley**. Talk at the 2nd New England Networking and Systems Day. Boston, MA, October 19th, 2015.

"Planck: Millisecond-Scale Monitoring And Control For Commodity Networks." **J. Rasley**. Invited talk at University of British Columbia, Department of Computer Science, November 4, 2014.

"A Low-Latency Network Monitoring Platform." **J. Rasley**, B. Stephens, C. Dixon, E. Rozner, W. Felter, K. Agarwal, J. Carter, R. Fonseca. Poster at the 11th USENIX Symposium on Networked Systems Design and Implementation (NSDI '14). Seattle, WA, 2014

"Runtime Verification of Portable Programming Interfaces.", **J. Rasley**. Invited talk at New York University, Department of Computer Science and Engineering, September 26, 2011.

"Seattle: The Internet as a Testbed.", **J. Rasley**, M. Muhammad, A. Hanson, S. Morgan, A. Loh, J. Cappos. Poster at the 8th USENIX Symposium on Networked Systems Design and Implementation (NSDI '11). Boston, MA, 2011

Community Involvement

Elected and served as Faculty-Graduate Liaison (FGL) for 2015-2016 academic year
Taught a day ('13 & '14) at Nathan Bishop Middle School as part of CS Education Week
Poster Judge at the 2014 New England Undergraduate Computing Symposium (NEUCS '14).
Brown Computer Science Ph.D. Recruiting Co-organizer (2013 & 2014)
USENIX & ACM Student Member

Industry Experience

Microsoft Research — Redmond, WA

Research Intern **June 2016 – September 2016**
Work is ongoing with Yuxiong He, Olatunji Ruwase, and Trishul Chilimbi on topics related to building an "application-aware" resource scheduler for distributed deep neural network frameworks.

Microsoft Research / Cloud and Information Services Lab — Mountain View, CA

Research Intern **June 2015 – September 2015**
Worked with Konstantinos Karanasos, Sriram Rao, and Srikanth Kandula on topics related to building more efficient resource schedulers for distributed systems. Work resulted in a EuroSys '16 paper and ongoing work related to transferring our system into the Apache YARN project.

VMware, NSX/Nicira — Palo Alto, CA

Intern, MTS, NSX R&D **May 2014 – August 2014**
Worked with Alan Shieh and Rajiv Ramanathan building a prototype of a network measurement system inside of the NSX product, with a focus on reliability and scalability.

IBM Research — Austin, TX

Research Intern **June 2013 – September 2013**
Worked with Colin Dixon, Eric Rozner, & John Carter studying data center network performance. Developed a system for ultra low-latency network monitoring and control for high-speed 10 GbE+ networks, turned into a SIGCOMM '14 publication and two patents.

Isilon Systems, a division of EMC^2 — Seattle, WA

Software Development Engineer in Test Intern **June 2011 – September 2011**
Developed a test framework for the OneFS distributed file system change notification system. Researched various customer workloads to evaluate and debug the system. Integrated my test framework into development and test engineering infrastructures, still in use today.

University of Washington Medical Center — Seattle, WA

Computer Support Specialist **September 2008 – February 2010**
Supported all technical needs for over 20 departments and over 700 users. Helped to administer the network domain, email and firewall.

Spokane Public Schools, Instructional Technology Support Center — Spokane, WA

Computer Support Specialist **April 2001 – January 2008**

Supported all technical needs for over 60 facilities and over 4,000 users, my primarily responsibility was the administration office. Created numerous scripts to help maintain software/network stability. Performed regular security audits of shared network resources.

Patents

"Determining Sampling Rate from Randomly Sampled Events." K. B. Agarwal, J. B. Carter, C. K. Dixon, **J. T. Rasley**. Granted March 26th, 2015, Publication Number: US20150089045 A1

"Port Mirroring for Sampling Measurement of Network Flows." K. B. Agarwal, J. B. Carter, C. K. Dixon, **J. T. Rasley**. Granted March 26th, 2015, Publication Number: US 20150085694 A1

Relevant Coursework

Brown University

Topics in Parallel and Distributed Computing *Prof. Maurice Herlihy*
Topics in Data Science *Prof. Tim Kraska*
Pattern Recognition & Machine Learning *Prof. Pedro Felzenszwalb*
Topics in Distributed Systems and Databases, *Prof. Ugur Cetintemel*
Intro. to Programming Languages, *Prof. Shriram Krishnamurthi*

University of Washington

Distributed Systems, *Prof. Tom Anderson*
Intro. to Networks, *Prof. David Wetherall*
Intro. to Operating Systems, *Prof. Ed Lazowska*
Computer Security, *Prof. Tadayoshi Kohno & Daniel Halperin*
Home Networking Capstone, *Prof. John Zahorjan*

References

Prof. Rodrigo Fonseca
Computer Science
Brown University
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Dr. Colin Dixon
Distinguished Engineer
Brocade
colin@colindixon.com

Dr. John Carter
Senior Manager, Future Systems
IBM Research — Austin
retrac@us.ibm.com

Prof. Justin Cappos
Tandon School of Engineering
New York University
jcappos@nyu.edu

Citizenship

United States