

DIEGO ONGARO

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Education

- **Stanford University**—Stanford, CA
Ph.D. in Computer Science: 2009–2014
Master of Science in Computer Science: 2009–2012
 - Advisor: John Ousterhout
 - GPA of 4.075 on a 4.3 scale
 - Coursework: Databases, Operating Systems, Programming Languages, Network Algo.
- **Rice University**—Houston, TX
Bachelor of Arts in Computer Science: 2006–2009
 - Graduated Cum Laude with a GPA of 3.80 on a 4.33 scale
 - Coursework: Operating Systems, Compilers, Network Systems Architecture
- **The Academy of Science and Technology, CISD**—Conroe, TX

Research Experience

- **Raft Consensus Algorithm**—Stanford University
With John Ousterhout: 2012–2014
 - Developed distributed consensus algorithm to be easy to understand.
 - Conducted user study to show that Raft is easier to understand than Paxos.
 - Proved Raft’s correctness and evaluated its leader election and log replication performance.
 - Implemented Raft in the LogCabin coordination system.
- **RAMCloud Low-Latency Datacenter Storage**—Stanford University
With John Ousterhout, Ryan Stutsman, Stephen Rumble, et al: 2009–2012
 - RAMCloud is a high-performance distributed key-value storage system designed with 5 microsecond latency goals to enable the next generation of data center applications.
 - Contributed to the overall system design and implementation, especially the RPC system and recovery aspects.
- **Virtualized I/O Performance**—Rice University
With Alan L. Cox and Scott Rixner: 2007–2008
 - Analyzed and improved Xen’s architecture for CPU scheduling and network I/O.
 - Developed microbenchmarks to simulate CPU-intensive, bandwidth-intensive, and latency-sensitive applications.
 - Eliminated scheduling unfairness for virtual interrupts. This patch was adopted by Xen’s developers.
 - Measured and analyzed the impact of several optimizations to the CPU scheduler.

Work Experience

- **eBay**—San Francisco, CA
Structured Data Architect: August 2017–present
- **Salesforce**—San Francisco, CA
Lead Software Engineer, Compute Infrastructure: July 2015–August 2017
- **Scale Computing**—San Francisco, CA
Software Engineer Contractor, two days per week: November 2014–July 2015
 - Prepared LogCabin for production use. Fixed several important bugs. Made LogCabin easier to operate and issues easier to diagnose. Implemented rolling upgrades.
 - Added timeouts to LogCabin’s client library.
 - Registered TCP port 5254 with IANA for LogCabin servers.
- **Facebook**—Palo Alto, CA
Software Engineer Intern: Summer 2011
 - Evaluated RAMCloud as a storage system for spam detection counters and as a first-level web server cache.
 - Generalized spam detection system to use various counter storage backends.
 - Removed process-wide globals from RAMCloud to allow for multiple client threads to have their own instance of the client library.
- **Citrix Systems R&D**—Cambridge, UK
Software Engineer Intern: Summer 2008
 - Developed and evaluated several solutions for a critical networking-related issue with Linux drivers for the Xen virtual machine monitor. Selected the solution that scaled best for inclusion in the XenServer product.
 - Modified various Xen components to isolate the core XenStore daemon into a dedicated, unprivileged VM (merged into the open source Xen project in 2012).
- **Essential Technology Solutions, LLC**—The Woodlands, TX
Developer: 2004–2008
 - Extended and customized XRMS CRM, MoinMoin wiki, and ZenTrack issue tracker software to meet customer needs.
 - Developed a custom web application to manage manufactured units and their associated issues.

Publications

- J. Ousterhout, A. Gopalan, A. Gupta, A. Kejriwal, C. Lee, B. Montazeri, D. Ongaro, S. J. Park, H. Qin, M. Rosenblum, S. M. Rumble, R. Stutsman, and S. Yang. The RAMCloud Storage System. *ACM Transactions on Computer Systems (TOCS)*, Sept. 2015.
- D. Ongaro. Consensus: Bridging Theory and Practice. *Stanford University Ph.D. Dissertation*, Aug. 2014.
- D. Ongaro, J. Ousterhout. In Search of an Understandable Consensus Algorithm. *USENIX Annual Technical Conference (ATC)*, 2014. *Best Paper Award*.

- D. Ongaro, S. M. Rumble, R. Stutsman, J. Ousterhout and M. Rosenblum. Fast Crash Recovery in RAMCloud. *ACM Symposium on Operating Systems Principles (SOSP)*, 2011.
- J. Ousterhout, P. Agrawal, D. Erickson, C. Kozyrakis, J. Leverich, D. Mazières, S. Mitra, A. Narayanan, D. Ongaro, G. Parulkar, M. Rosenblum, S. M. Rumble, E. Stratmann, and R. Stutsman. The Case for RAMCloud. *Communications of the ACM (CACM)*, July 2011.
- S. M. Rumble, D. Ongaro, R. Stutsman, M. Rosenblum, and J. Ousterhout. It's Time for Low Latency. *USENIX Workshop on Hot Topics in Operating Systems (HotOS)*, 2011.
- D. Ongaro, A. L. Cox, and S. Rixner. Scheduling I/O in Virtual Machine Monitors. *ACM International Conference on Virtual Execution Environments (VEE)*, 2008.