

# DIEGO ONGARO

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Please visit <http://ongardie.net/diego/> instead.*

## Education

- **Stanford University**—Stanford, CA  
*Ph.D. Candidate in Computer Science: 2009–present*
  - Advisor: John Ousterhout
  - Coursework: Algorithms (CS161), Databases (CS245), Operating Systems (CS240), Programming Languages (CS242), Network Algorithms (EE384m)
- **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

## Honors/Awards

- Stanford Graduate Fellowship (2010-2013)
- Stanford School of Engineering Fellowship (2009-2010)
- Louis J. Walsh Scholarship in Engineering (2009)
- Rice President's Honor Roll (2006-2008)
- Rice Trustee Distinguished Scholarship (2006-2009)

## Research Experience

- **RAMCloud (Low-Latency Datacenter Storage)**—Stanford University  
*With John Ousterhout, Ryan Stutsman, Stephen Rumble, et al: 2009–2012*
  - RAMCloud takes a new approach to datacenter storage where information is kept entirely in DRAM and large-scale systems are created by aggregating the main memories of thousands of commodity servers. RAMCloud could provide durable and available storage with 100-1000× the throughput of disk-based systems and 100-1000× lower access latency than current disk-based approaches. We envision this providing the foundation for a new breed of data-intensive applications that take advantage of both scale and low-latency.
  - 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

- **Facebook**—Palo Alto, CA  
*Software Engineer Intern: Summer 2011*
  - 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.
  - Evaluated RAMCloud as a storage system for spam detection counters and as a first-level web server cache.
- **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.
  - Developed a set of modifications throughout Xen’s components to isolate the core XenStore daemon into a dedicated, unprivileged virtual machine. These changes are queued for inclusion in the open source Xen project.
- **Essential Technology Solutions, LLC**—The Woodlands, TX  
*Developer: 2004–2008*
  - Developed major enhancements to CRM software based on open-source XRMS project.
  - Created the company’s strategy for Linux-based server management.
  - Developed a custom web application to manage manufactured units and their associated issues.
  - Customized and integrated wiki software based on MoinMoin.
  - Customized issue tracking software solution based on ZenTrack.

## Open Source Experience

- **Xfce Desktop Environment**—[www.xfce.org](http://www.xfce.org)  
*Contributor: 2007–2010*
  - Developed and maintained the `xfce4-places-plugin`, a plugin for Xfce’s panel that provides a menu for access and management of filesystem locations, removable media, and recent documents, <http://goodies.xfce.org/projects/panel-plugins/xfce4-places-plugin>.
  - Maintained the `xfce4-datetime-plugin`, a plugin for Xfce’s panel that provides a clock and calendar, <http://goodies.xfce.org/projects/panel-plugins/xfce4-datetime-plugin>.
  - Contributed improvements to Xfce’s panel plugin API.
- **XRMS Customer Relationship Management System**—[www.xrms.org](http://www.xrms.org)  
*Core Developer: 2005–2007*

## Publications

- D. Ongaro, S. M. Rumble, R. Stutsman, J. Ousterhout and M. Rosenblum. Fast Crash Recovery in RAMCloud. *Twenty-Third ACM Symposium on Operating Systems Principles (SOSP)*, Cascais, Portugal, 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. K. Ousterhout. It's time for Low Latency. *Thirteenth Workshop on Hot Topics in Operating Systems (HotOS)*, Napa, CA, 2011.
- D. Ongaro, A. L. Cox, and S. Rixner. Scheduling I/O in Virtual Machine Monitors. *Fourth ACM International Conference on Virtual Execution Environments (VEE)*, Seattle, WA, 2008.