

Personal information

Surname(s) / First name(s)
Address(es)

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Education

Dates
Name of organization
Title of qualification
Dissertation Title
GPA

08/2006 - 08/2012
Florida International University
Ph.D. in Computer Science
Optimizing Storage and Memory Systems for Energy and Performance
3.95/4

Dates
Name of organization
Title of qualification
GPA

09/2000 - 02/2006
Simón Bolívar University
Computer Science Engineer
3.97/5

Work

Dates
Name of organization
Title of qualification

11/2014 - present
Google Inc.
Software Engineer

Dates
Name of organization
Title of qualification
Principal occupation

10/2012 - 11/2014
VMWare Inc.
Member of Technical Staff
Research, development, and maintenance of the vSphere Storage DRS feature. Storage DRS provides virtual disk placement and load balancing across a set of datastores based on I/O performance and space utilization.

Dates
Name of employer

08/2006 - 08/2012
Florida International University
School of Computing and Information Sciences

Occupation

Research Assistant

Dates
Name of organization
Title of qualification
Principal occupation

05/2011 - 08/2011
VMWare Inc.
Research Intern
Design and implementation of time-domain storage load balancing.

Dates	05/2010 - 08/2010
Name of organization	VMWare Inc.
Title of qualification	Research Intern
Principal occupation	Design and implementation of device performance independent I/O trace re-player.

Publications

Non-blocking Writes to Files

Daniel Campello, Hector Lopez, Luis Useche, Ricardo Koller, Raju Rangaswami

To Appear in USENIX FAST 2015.

Goal-based Storage I/O Control

Ajay Gulati, Mustafa Uysal, Luis Useche, Sachin Manpathak

VMWare vRadio, May, 2013.

Optimizing Storage and Memory Systems for Energy and Performance

Luis Useche

Ph.D. Dissertation, Florida International University Digital Commons, August, 2012.

Truly Non-blocking Writes

Luis Useche, Ricardo Koller, Raju Rangaswami, and Akshat Verma

Proceedings of USENIX 3rd Workshop on Hot Topics in Storage and File Systems (HotStorage), June, 2011.

SRCMap: Energy Proportionality with Dynamic Storage Consolidation

Akshat Verma, Ricardo Koller, Luis Useche, and Raju Rangaswami

Proceedings of 8th USENIX Conference on File and Storage Technologies (FAST), February, 2010.

BORG: Block-reORGanization for Self-optimizing Storage Systems

Medha Bhadkamkar, Jorge Guerra, Luis Useche, Sam Burnett, Jason Liptak, Raju Rangaswami, and Vagelis Hristidis

(First three authors are equal contributors and listed alphabetically.)

Proceedings of 7th USENIX Conference on File and Storage Technologies (FAST), February, 2009.

EXCES: EXternal Caching in Energy Saving Storage Systems

Luis Useche, Jorge Guerra, Medha Bhadkamkar, Mauricio Alarcon, and Raju Rangaswami

Proceedings of IEEE International Symposium on High-Performance Computer Architecture (HPCA), February, 2008.

The Case for Active Block Layer Extensions

Jorge Guerra, Luis Useche, Medha Bhadkamkar, Ricardo Koller, and Raju Rangaswami

Proceedings of IEEE International Workshop on Storage and I/O Virtualization, Performance, Energy, Evaluation and Dependability (SPEED2008), in conjunction with IEEE HPCA, February, 2008.

Service

Program Committee member for the *35th IEEE International Conference on Distributed Computing Systems, Cloud Computing and Data Center Systems*, 2015.

Program Committee member for the *2nd Workshop on Interactions of NVM/Flash with Operating Systems and Workloads (INFLOW '14)*, 2014.

Invited Reviewer for the journal of *IEEE Transactions on Computers on "Emerging Memory Technologies in Very Large Scale Computing and Storage Systems"*, 2014.

Program Committee member for VMware's internal conference *vRadio*, 2013.

Invited Reviewer for the journal of the *40th International Symposium on Computer Architecture*, 2013.

Invited Reviewer for the journal of *Transactions on Computers*, 2012.

Patents

Patent in preparation: *Method for Eliminating Blocking Writes to Pages Out of Memory*.

Patent filed: *Data Reuse Tracking and Memory Allocation Management*, United States 14/304,752.

Patent filed: *Data Reuse Tracking and Memory Allocation Management*, United States 14/304,763.

Patent filed: *Policy-Based Storage I/O Control*, United States.

Technical Skills

Programming Languages
and tool

ANSI C, C++, Java, Python, Ruby, Perl, PHP, HTML, SQL, Bash Script, Make

Kernel Programming

Linux kernel programming since 2006 and OpenBSD kernel experience since 2010