

DIEGO PEREZ BOTERO
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RESEARCH EXPERIENCE

I received my Computer Science M.S.E. degree from Princeton University in June 2013 and I am currently working at Microsoft in Redmond, WA.

Between December 2011 and June 2013, I worked with Professor Ruby B. Lee from Princeton University's Electrical Engineering Department on research related to Cloud Computing Security as a member of the PALMS Security Group. My Master's thesis, *Pwnetizer: Improving Availability in Cloud Computing through Fast Cloning and I/O Randomization*, proposes a novel VM Cloning technique for increased security in the Cloud. You can [read it](#), see the [talk slides](#), watch a [quick demo video](#), or visit the [project's website](#).

I published two papers while studying at Princeton University. As part of my Master's thesis, I carried out a study of Hypervisor vulnerabilities, titled *Characterizing Hypervisor Vulnerabilities in Cloud Computing Servers*, which was published in the *2013 International Workshop on Security in Cloud Computing (ASIACCS-SCC)*. You can find it [here](#). Meanwhile, my **COS597D Privacy Technologies** course project, *FourthPartyMobile: A Privacy-Aware Mobile Web Crawler!*, led to a paper titled *Shining the Floodlights on Mobile Web Tracking - A Privacy Survey*, which was published in *Web 2.0 Security & Privacy 2013 (W2SP)*. You can find it [here](#).

My work with Professor Yezid Donoso as a Systems and Computing Engineering student, titled *VoIP Eavesdropping: A Comprehensive Evaluation of Cryptographic Countermeasures*, was published in the *Second International Conference on Networking and Distributed Computing (ICNDC2011)*. You can find it [here](#).

From August 2009 to August 2011, I worked as part of the Risk and Reliability Group of the Civil and Environmental Engineering Department at Universidad de los Andes under the supervision of Professor Mauricio Sánchez-Silva. During that time, I was able to combine both of my majors, Civil Engineering and Systems and Computing Engineering, in the development of a software suite that is now commercially registered under the name of 2R Soft (www.2rsoft.tk).

INTERESTS

Computer Science	Cloud Computing Security, Computer Networks, Network Security, Mobile Computing, Software Development
Civil Engineering	Structural Analysis, Risk and Reliability, Project Management

EDUCATION

Princeton University Princeton, NJ, U.S.A September 2011 – June 2013	M.S.E in Computer Science <u>Thesis:</u> Pwnetizer - Improving Availability in Cloud Computing through Fast Cloning and I/O Randomization <u>GPA:</u> 4.0/4.0, <u>Thesis Grade:</u> A+
Universidad de Los Andes Bogotá D.C, Colombia August 2005 – March 2011	B.Sc. in Systems and Computing Engineering – Summa Cum Laude Top 1% of the Engineering Faculty's historic GPAs from the previous 5 years coupled with special personal merits defined by the Academic Council. <u>Thesis:</u> VoIP Eavesdropping – Network Layer and Application Layer Approaches: All-Round Evaluation of Encryption-Based Countermeasures <u>GPA:</u> 4.75/5.0
Universidad de Los Andes Bogotá D.C, Colombia August 2005 – September 2010	B.Sc. in Civil Engineering – Magna Cum Laude Top 1% of the Engineering Faculty's historic GPAs from the previous 5 years <u>Thesis:</u> 2R Soft - Risk and Reliability Analysis Software <u>GPA:</u> 4.74/5.0

HONORS AND AWARDS

Princeton University

June 2013

Graduate Student Teaching Assistant Award

September 2012 – June 2013

Assistantship in Instruction in Natural Sciences and Engineering

September 2011 – June 2012

Universidad de Los Andes

September 2010

“Ramón de Zuburía” Scholarship
(Best Cumulative GPA of the Faculty of Engineering)

September 2009

“Ramón de Zuburía” Scholarship

September 2008

“Ramón de Zuburía” Scholarship

March 2008

“Academic Excellence” Scholarship
(Best GPA of the Faculty of Engineering in the Previous Semester)

September 2006

“Academic Excellence” Scholarship

Other

September 2009

One of the Top 10 scores nationwide in the Civil Engineering ECAES
(National Examination for the Quality of Higher Education)

PROFESSIONAL EXPERIENCE

Microsoft

July 2013 – Present

Software Engineer II

- Part of the Windows team that owns all core Windows Runtime (WinRT) Networking APIs used by Desktop/Phone/XBOX/Hololens apps, as well as some important Win32 components, such as the Background Intelligent Transfer Service (BITS) used by Windows Update, Cortana, Maps and Store.
- Dev owner of WinRT Sockets, WinRT BackgroundTransfer and BITS. Successfully shipped several new features and performance enhancements in Windows 10, which are now running on tens of millions of devices worldwide.

Princeton University

January 2013 – May 2013

Teaching Assistant for “COS226 – Algorithms and Data Structures”
Computer Science Department

September 2011 – May 2013

Technology Chair for the [LGSA](#) (Latino Graduate Student Association)

September 2012 – January 2013

Teaching Assistant for “COS226 – Algorithms and Data Structures”
Computer Science Department

Summer 2012

Mentor in Summer Programming Experiences (SPE) Program

January 2012 – May 2012

Teaching Assistant for “COS226 – Algorithms and Data Structures”
Computer Science Department

September 2011 – January 2012

Teaching Assistant for “COS217 – Introduction to Programming Systems”
Computer Science Department

PAYC S.A (www.payc.com.co)

May 2009 – August 2011

Main developer of Enterprise web applications.

Highlight: Programmed a Servlet-based system that tracks the progress of various different processes associated with the management of over 40 simultaneous construction projects. The system tolerates a high level of concurrency with the help of a connection pool built from scratch.

Technologies: J2EE, J2SE, SQL servers

Universidad de Los Andes

August 2009 – August 2011

Lead software developer of the 2R Soft software suite (www.2rsoft.tk) as part of the Risk and Reliability Research Group of the Civil and Environmental Engineering Department

August 2010 - December 2010

January 2010 - May 2010

January 2009 - May 2009

Teaching Assistant for “Object-Oriented Programming and Algorithms 2”
Systems and Computing Engineering Department

August 2009 – December 2009

Teaching Assistant for “Data Structures”
Systems and Computing Engineering Department

January 2008 - May 2008

Teaching Assistant for “Structural Systems”
Civil and Environmental Engineering Department

January 2007 - May 2007

Teaching Assistant for “Introduction to Civil Engineering”
Civil and Environmental Engineering Department

Conectar.biz (www.conectar.biz)

January 2010 - May 2010

Mobile software consultant and developer.

Highlight: Programmed a mobile application to support a marketing campaign. It runs on smartphones and sends data of potential future clients to a centralized database for further analysis.

Technologies: J2EE, J2ME, SOA