

Jorge Ortiz
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EDUCATION

University of California, Berkeley
Advisor: David Culler

Berkeley, CA

MS/PhD Candidate, expected graduation: Spring 2012

Massachusetts Institute of Technology, 2003

Cambridge, MA

Bachelor of Science Degree in Computer Science and Engineering

RESEARCH INTERESTS *Distributed systems, wireless and sensor networks, overlay networks and internet architecture.*

EXPERIENCE

University of California, Berkeley
Professor Scott Shenker

Berkeley, CA
06/06-02/07

Designed experiments for the evaluation of multichannel MAC protocol. The Hopscotch Multichannel MAC is a medium access control protocol that uses a hop-by-hop channel negotiation scheme to choose a channel to transmit data on between the two negotiating nodes using a single transceiver. The goal is to maximize spacial reuse and reduce interference while maximizing aggregate throughput in an 802.11 multihop wireless network.

Oracle Corporation
Enterprise Planning and Budgeting - Rob LeVine, Manager

Burlington, MA
09/03-02/06

Assisted in creating, debugging, and maintaining several features in Oracle Enterprise Planning and Budgeting (EPB) software suite. Worked on multiple features in the product, including the setup of PL/SQL packages and schemas, as well as the interfaces to the Java-based UI (built using Oracle's OAFramework API).

Charles River Analytics
Dr. Karen Harper

Cambridge, MA
06/03-09/03

Used genetics algorithms for optimizing flight paths under various weather conditions. Re-designed flight-path optimization system (previously in C) into Java. Used RMI for distributed -component architecture for offloading computation across multiple machines.

*International Business Machines T.J. Watson Research Center
Collaborative User Experience Group (CUE) – Dr. Li-Te Cheng*

*Cambridge, MA
06/06-02/07*

CUE researches interfaces that manage email more effectively. One such domain is the mobile device space. I helped build a full functional software suite. I designed a front end in flash and I wrote the backend in C++. They communicate with each other through sockets with well-defined XML interface.

*Merrill Lynch Technology Group-
Technology Infrastructure Services- Network Services Group (TIS-NS)
Corporate and Institutional Client Group Desktop Engineering (CDE)*

*New York, NY
05/01 – 08/01
06/00 – 08/00*

Worked on several internal websites for TIS-NS and set up SQL and Access databases. Also worked on server partitioning research, whereby I evaluated to benefits of using the ES7000 32-way servers. Designed and wrote CDE web site. The site included flash and backend scripted components. Also designed and wrote a beta version of the CIG Global Packaging System.

*MIT Media Laboratory- Personal Information Architecture Group;
Professor Michael Hawley*

*Cambridge, MA
01/00 – 05/00*

Designed and wrote software suite to retrieve sensor metadata stored in log files and merge the information into a JPEG image header. Designed and wrote a graphic interface to display sensor metadata.

Conference, Workshop, and Technical Report Publications

1. Stephen Dawson-Haggerty, Jorge Ortiz, Xiaofan Jiang and David E. Culler, **The Effect of Link Churn on Wireless Routing**. Technical Report No. UCB/EECS-2008-109, EECS Department, University of California, Berkeley, 2008.
2. Jorge Ortiz, Chris R. Baker, Daekyeong Moon, Rodrigo Fonseca, and Ion Stoica. **Beacon Location Service: A Location Service for Point-to-Point Routing in Wireless Sensor Networks**. To Appear in the IEEE International Conference in Information Processing in Sensor Networks: Special Track on Platform Tools and Design Methods for Network Embedded Sensors 2007 (IPSN/SPOTS).
3. Xiaofan Jiang, Jay Taneja, Jorge Ortiz, Arsalan Tavakoli, Prabal Dutta, Jaein Jeong, David Culler, Philip Levis, and Scott Shenker. **An Architecture for Energy Management in Wireless Sensor Networks**. To Appear in the International Workshop on Wireless Sensor Network Architecture 2007.
4. Arsalan Tavakoli, Prabal Dutta, Jaein Jeong, Sukun Kim, Jorge Ortiz, David Culler, Philip Levis, and Scott Shenker. **A Modular Sensor Architecture: Past, Present, and Future Directions**. To Appear in the International Workshop on Wireless Sensor Network Architecture 2007.
5. Ang-Chih and Jorge Ortiz. **Connection Oriented Routing Environment (CORE): A Generalized Device Interconnect**. M.I.T. Student Oxygen Workshop SOW 2002.

Poster Publications

1. Jorge Ortiz and David Culler. **Exploring Diversity: Evaluating the Cost of Frequency Diversity in Communication and Routing**. In the Proceedings of the Sixth ACM Conference on Embedded Networked Sensor Systems (Sensys '08), November 2008. *Best Poster Award Winner*.

Talks and Lectures

1. “The Effect of Link Churn on Wireless Routing”, Networking Seminar, Distributed Network Analysis Lab, Columbia University, Computer Science Department. May 2008.
2. “The Effect of Link Churn on Wireless Routing”, Networks and Distributed System Group Lunch, Li/Subramanian Research Group. New York University, Computer Science Department. May 2008.

SKILLS

- Competent in C, C++, NesC, TinyOS, Perl, Java, Javascript, Scheme/LISP
- Experience with IEEE 802.11, 802.15.4, Berkeley Smote/Omega Testbed, Micaz/Telos Mote technology, Berkeley Roulette testbed with Soekris nodes
- Fluent in Spanish

References Available Upon Request