

Jennifer Ortiz

Computer Science PhD Student
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Education

University of Washington

Expected degree: PhD, Computer Science 2012-Present

National Science Foundation Graduate Research Fellow 2012-2015

Advisor: Magdalena Balazinska

University of Washington

Master of Science, Computer Science 2012-2014

Arizona State University

Bachelor of Science Degree, Applied Computing (Databases)

GPA: 4.0, Summa Cum Laude, Dean's List: 2008 – 2012

Advisors: Suzanne Dietrich, Mahesh Chaudhari

Graduate Research Projects

A DYNAMIC SCALING ENGINE FOR DATA ANALYTICS 2015-Present

Developing a system that automatically scales a cluster in order to guarantee performance-centric SLAs

PERSONALIZED SERVICE LEVEL AGREEMENTS IN THE CLOUD 2012-2015

Defined and developed Personalized Service Level Agreements (PSLAs), a tool to help users select from different configurations in order to analyze their data in the cloud

DATA MANAGEMENT FOR ASTRONOMY USE-CASES 2013-2014

Collaborated with astronomers at the University of Washington to facilitate exploration of simulation datasets

Publications

- ***The Myria Big Data Management System and Analytics System and Cloud Service***, J. Wang, T. Baker, M. Balazinska, D. Halperin, B. Haynes, B. Howe, D. Hutchison, S. Jain, R. Maas, P. Mehta, D. Moritz, B. Myers, **J. Ortiz**, D. Suciu, A. Whitaker, S. Xu, CIDR 2017.
- ***PerfEnforce Overview : A Dynamic Scaling Engine for Analytics with Performance Guarantees***, **J.Ortiz**, SIGMOD 2017 Student Research Competition (Extended Abstract).

- ***PerfEnforce Demonstration: Data Analytics with Performance Guarantees***, J. Ortiz, B. Lee, M. Balazinska, SIGMOD Demonstration 2016.
- ***Changing the Face of Database Cloud Services with Personalized Service Level Agreements***, J. Ortiz, V. T. Almeida, M. Balazinska, CIDR 2015.
- ***Towards a hybrid relational and XML benchmark for loosely-coupled distributed data sources***, M.B. Chaudhari, S.W. Dietrich, J. Ortiz, S. Pearson, Journal of Systems and Software 2015.
- ***Big-Data Management Use-Case: A Cloud Service for Creating and Analyzing Galactic Merger Trees***, S. Loebman, J. Ortiz, L. Choo, L. Orr, L. Anderson, D. Halperin, M. Balazinska, T. Quinn, and F. Governato, Workshop on Data Analytics in the Cloud (DanaC) with SIGMOD 2014.
- ***Demonstration of the Myria Big Data Management Service***, D. Halperin, V. T. de Almeida, L. Choo, S. Chu, P. Koutris, D. Moritz, J. Ortiz, V. Ruamviboonsuk, J. Wang, A. Whitaker, S. Xu, M. Balazinska, B. Howe, and D. Suciu, SIGMOD 2014.
- ***A Vision for Personalized Service Level Agreements in the Cloud***, J. Ortiz, V. T. Almeida, M. Balazinska, Workshop on Data Analytics in the Cloud (DanaC) with SIGMOD 2013.
- ***Learning from Database Performance Benchmarks***, J. Ortiz, S. W. Dietrich, and M.B. Chaudhari, Consortium for Computing Sciences in Colleges, March 2012.

Internships

Microsoft Research (Redmond) June 2014 – September 2014
 Implemented an extension to Microsoft SQL Server's query optimizer
 Mentor: Hyunjung Park

Undergraduate Research Experience

LEARNING FROM DATABASE PERFORMANCE BENCHMARKS 2011-2012
 Developing a scaled-down version of the TPC-H relational benchmark to integrate into the database curriculum at ASU

A STOCHASTIC SIR MODEL OF THE ROTAVIRUS INFECTION 2009 – 2012
 Developed a modified Susceptible-Infected-Recovered (SIR) model through MATLAB for the rotavirus infection, which allows scientists to measure the behavior of the disease and how it can spread across a population.

VIEWS IN A DISTRIBUTED EVENT STREAM PROCESSING ENVIRONMENT 2009 – 2012
 Defined and maintained hybrid materialized views over heterogeneous data sources in a distributed event stream processing environment

Teaching Experience

Employer: University of Washington

Teaching Assistant for CSE444 (Database Internals)

Winter 2017

- Held weekly sections to help reinforce course material

Employer: Arizona State University

Computer Science 101 and 102 Lab Assistant

2009 – 2012

- Assisted professors with creation of programming assignments
- Provided individual help to students through programming examples

Employer: Arizona State University

BSS Instructor

July 2012

- Created syllabus for week long course on *Introduction to Programming*
- Provided 7th graders with hands-on examples to reinforce learning

Conference Presentations

Ortiz, J., Building Scalable Systems with Performance Guarantees, Women's Research Day 2016, Seattle, WA.

Ortiz, J., A Dynamic Scaling Engine for Data Analytics with Performance Guarantees, UW Database Day 2015, Seattle, WA.

Ortiz, J., Changing the Face of Database Cloud Services with Personalized Service Level Agreements, CIDR 2015, Asilomar, CA.

Ortiz, J., A Personalized Service Level Agreement in the Cloud, Workshop on Data Analytics in the Cloud with SIGMOD 2013, New York, NY, June 2013.

Ortiz, J., Learning from Database Performance Benchmarks, CCSC, Stockton, CA, March 2012.

Ortiz, J., A Modified SIR Model of the Rotavirus Infection, Arizona Nevada Academy of Science Conference, Glendale, AZ, 2011.

Awards

- Outstanding Graduate Award from Arizona State University 2012
- Recipient of the Moeur Award at Arizona State University 2012
- Received the Presidential Scholarship from Arizona State University from 2008-2012
- Recipient of the National Science Foundation Graduate Research Fellowship 2012-2015

- Received Travel Grant from the SACNAS National Conference 2010, 2011 and 2012
- Received Richard Tapia Travel Scholarship in 2013
- Runner-up Winner of the Madrona Prize 2013 (research with greatest potential for commercialization)
- Received SIGMOD Travel Award in 2015 and 2016
- Runner-up Winner of the 2017 SIGMOD Student Research Competition

Outreach

- Volunteered in the Martin Luther King event at the West Campus in 2012
- Volunteered twice for the Sonia Kovalevsky Mathematics event at the West Campus in 2010 and 2012
- Volunteered at the SIGMOD conference at Scottsdale, Arizona in 2012
- Participating in the ASU Alumni Mentor Program 2014