Baskin School of Engineering
Department of Computer Science
University of California, Santa Cruz

Jeff LeFevre

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Research Objective

My research interests include physical database design, including index tuning as well as physical data layouts. I am currently researching data management in the cloud for replicated databases and Hadoop-based data processing systems.

Education

Ph.D. student in Computer Science
Database Systems Group
University of California, Santa Cruz
Adviser: Neoklis Polyzotis

M.S. in Computer Science
Systems and Networking Group
University of California, San Diego
Thesis: "Improving disk array reliability and performance"
Adviser: Walt Burkhard

B.S. in Computer Science
Focus: DNA encoding methods for computation
University of South Florida

Publications

M. Consens, K. Ioannidou, J. LeFevre, N. Polyzotis, "*Divergent Physical Design Tuning for Replicated Databases*", to appear in SIGMOD 2012.

I. Jimenez, J. LeFevre, N. Polyzotis, H. Sanchez, K. Schnaitter, "*Benchmarking Online Index-Tuning Algorithms*", in IEEE Data Engineering Bulletin 2011.

J. Buck, N. Watkins, J. LeFevre, K. Ioannidou, C. Maltzahn, N. Polyzotis, S. Brandt, "*SciHadoop: Array-based Query Processing in Hadoop*", in SC 2011.

J. LeFevre, "*Improving Disk Array Reliability and Performance*", M.S. Thesis, University of California, San Diego, 2009. ISBN 9781109319682.

D. Kephart, J. LeFevre, "*CodeGen: The Generation and Testing of DNA Code Words*," in IEEE Congress on Evolutionary Computation, 2004.

Teaching Experience

Teaching Assistant, CMPS 111 Operating Systems, UCSC Fall 2008

Professional Experience

NEC Labs America, Cupertino, CA
Summer Research Associate: summer - fall 2011
Data Management Group

- Research on CloudDB project
- Physical design tuning for Hadoop-based systems

Google Inc., Mountain View, CA
Software Engineer Intern: summers of 2007, 2008, 2009, 2010
Platforms - Servers and Storage

- Collection and analysis of storage and subsystems data for performance and reliability trending of Google platforms
- Disk drive SMART data collection and analysis
- MapReduce programming experience

Teradata, San Diego, CA
Software Engineer Intern: summers of 2005, 2006
Storage Virtualization Group

- Method for characterization of heterogeneous storage systems, used for initial data placement
- Participated in architectural design phase and co-wrote internal white paper for automated storage virtualization system

San Diego Supercomputer Center at UCSD, CA
Worldwide Protein Data Bank (www.pdb.org)
Student team leader for systems testing, fall 2004 – spring 2005

- Design and coding of system for automating services monitoring, restart, and notification/ fail-over of main PDB web servers for high traffic scientific data

CitrusToGo.com, Tampa, FL
Co-Founder, 1998 - 2002

- Established and managed www.CitrusToGo.com for online sales of Florida gift fruit

Honors and Professional Activites

- University of California Regent's Fellowship 2008
- Tau Beta Pi Engineering Honor Society, Florida Gamma Chapter
- Student Engineer of the Year 2003 – IEEE CS Florida West Coast Section
- Outstanding Student Chapter of the Year 2003 (USF), IEEE Worldwide
- Officer: Tau Beta Pi 2004, IEEE CS Student Chapter 2003
- Member IEEE, ACM