Daniel Myers

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Education

Currently enrolled at MIT as a graduate student in computer science. GPA: 5.0/5.0
S.M. in Electrical Engineering and Computer Science. MIT, Cambridge, MA. (2008)
B.A. magna cum laude and with distinction in senior exercise. Pomona College, Claremont, CA. (2003)
Major: computer science
Cumulative GPA: 11.61/12.00. Major GPA: 11.64/12.00

Awards

NSF Graduate Research Fellowship (awarded 2005)
Fulbright Grant for work on peer-to-peer systems at the University of Paris VI (2004-2005)
Paul B. Yale Computer Science Prize (given to "an outstanding senior majoring in computer science") (2003)
Member, Phi Beta Kappa (inducted 2003)
Member, Sigma Xi (inducted 2002)
Member, National Society of Collegiate Scholars (inducted 2002)
Pomona College Scholar all four years of college (GPA in top 25% of class)

Publications

Myers, D. S. On the Use of NAND Flash Memory in High-Performance Relational Databases. *SM Thesis*. MIT CSAIL. December 15, 2007.

Myers, D. S., J. N. Carlisle and J. A. Cowling. MapJAX: Data Structure Abstractions for Asynchronous Web Applications. In *Proc. 2007 USENIX Annual Technical Conference*. Santa Clara, CA. June 2007.

Bazinet, A. L., D. S. Myers, J. Fuetsch and M. P. Cummings. Grid Services Base Library: a high-level, procedural API for writing Globus-based Grid services. *Future Generation Computer Systems*, accepted.

Abadi, D. J., D. S. Myers, D. DeWitt and S. R. Madden. Materialization Strategies in a Column-Oriented DBMS. In *Proceedings of ICDE*. Istanbul, Turkey. April 2007.

Cowling, J. A., D. S. Myers, B. Liskov, R. Rodrigues, and L. Shrira. HQ Replication: a Hybrid Quorum Protocol for Byzantine Fault Tolerance. In *Proc. OSDI '06*. Seattle, WA, USA. November 2006.

Myers, D. S. and A. L. Bazinet. Intercepting arbitrary functions on Windows, UNIX, and Macintosh OS X platforms. UMIACS Technical Report CS-TR-4585, UMIACS-TR-2004-28.

Cummings, M. P., D. S. Myers and M. Mangelson. Applying permutation tests to tree-based statistical models. UMIACS Technical Report CS-TR-4581, UMIACS-TR-2004-24.

Cummings, M. P. and D. S. Myers. 2004. Simple statistical models predict C-to-U edited sites in plant mitochondrial RNA. *BMC Bioinformatics* 5:132.

Cummings, M. P., S. A. Handley, D. S. Myers, D. L. Reed, A. Rokas and K. Winka. 2003. Comparing bootstrap and posterior probability values in the four-taxon case. *Systematic Biology* 52:477-487.

Myers, D. S. and M. P. Cummings. 2003. Necessity is the mother of invention: a simple Grid computing system using commodity tools. *J. Parallel and Distributed Computing* 63:578-589.

Presentations

Myers, D. S., A. L. Bazinet, J. D. Fuetsch and M. P. Cummings. *Towards a Production Grid System: The Lattice Project.* Center for Bioinformatics and Computational Biology; UMIACS. 3 Sept. 2004.

Myers, D. S., A. L. Bazinet and M. P. Cummings. *Towards a Comprehensive Grid System*. Center for Bioinformatics and Computational Biology; UMIACS. 8 June 2004.

Research Experience

Graduate Student
Database Group, MIT (Under Samuel Madden) June 2007 -
Programming Methodology Group, MIT (Under Barbara Liskov) September 2005 - June 2007

Fulbright Advanced Student September 2004 - June 2005
Group of Pierre Sens, Laboratoire d'Informatique de Paris VI (Paris, France)
Investigated tolerance to churn of Pastis, a P2P file system

Faculty Research Assistant September 2003 - September 2004
Laboratory of Dr. Michael P. Cummings, University of MD Institute for Advanced Computer Studies
Lead developer of the Lattice Project, a grid computing system for computational biology
- Co-designed architecture and helped write grant proposals
- Led the team that implemented the grid using Globus, BOINC, and Condor-G
- Designed a new, high-level API for writing Globus 3.2 grid services
- Created compatibility libraries to help port legacy bioinformatics applications to BOINC

Investigated RNA editing in plant mitochondria using decision trees

Summer Research Assistant Summers 2000-2003
Laboratory of Dr. Michael P. Cummings, Marine Biological Laboratory (Woods Hole, MA)
Designed and managed a distributed computing system for a 15-CPU-year study
Helped finish a SIMD version of the Smith-Waterman algorithm; increased code's speed by ~25%
Built three Beowulf clusters (totaling over 80 processors)
Designed databases for DNA sequence storage
Provided technical and logistical support for a 100-person summer course on molecular evolution

Senior Thesis in Computer Science Spring, 2003
Advisors: Tzu-Yi Chen and Nicholas Schisler, Pomona College (Claremont, CA)
Thesis title: Decision Trees for Identification of functional RNAs in Genomic Sequences
Applied backpropagation neural networks and decision trees to detect fRNAs in *E. coli*
Found a single-split tree highly competitive with previous work using a 26-variable BPNN
Received a mark of distinction from the department

Other Activities

Commodore, MIT Nautical Association October 2007-
Managed organization representing the recreational sailing community at the MIT sailing pavilion

Student-faculty liaison 2002-2003
Pomona College Computer Science Program (Claremont, CA)
Started and ran a weekly tutoring session for students in lower-division courses
Organized a weekend student-faculty retreat and a series of program barbecues
Spoke with students and met with external review committee as part of a program self-study
Interviewed candidates for an open faculty position

News writer and copy editor Fall 1999 - Spring 2001
The Student Life Pomona College (Claremont, CA)