

ERNIE CHAN

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EXPERIENCE

- National Instruments** Austin, TX
Software Engineer Intern supervised by Jim Nagle June 2007 – August 2007 / June 2008 – August 2008
Interfaced the Formal Linear Algebra Method Environment libraries and API to LabVIEW
- Argonne National Laboratory** Argonne, IL
Research Aide Appointment supervised by Dr. William Gropp and Dr. Rajeev Thakur June 2005 – August 2005
Developed and implemented collective communication algorithms on IBM Blue Gene/L
- University of Virginia** Charlottesville, VA
Graduate Teaching Assistant for undergraduate courses August 2004 – May 2005
Information Assurance, Intro to Computer Science, and Discrete Mathematics II
- Texas Advanced Computing Center** Austin, TX
Undergraduate Research Assistant supervised by Dr. Avi Purkayastha February 2004 – August 2004
Implemented INTERCOL a plug compatible collective communication library for MPI

EDUCATION

- The University of Texas at Austin** Austin, TX
Ph.D. Student in Computer Sciences advised by Prof. Robert van de Geijn August 2005 – Present
Application of Dependence Analysis and Data Flow Graph Scheduling at Runtime to Block Formulations of Matrix Computations
- Bachelor of Science* in Computer Sciences GPA: 3.80 August 2000 – May 2004
Graduated with Honors and Special Department Honors in Computer Sciences

SELECTED PUBLICATIONS

- Ernie Chan, Field G. Van Zee, Paolo Bientinesi, Enrique S. Quintana-Ortí, Gregorio Quintana-Ortí, and Robert van de Geijn. SuperMatrix: A Multithreaded Runtime Scheduling System for Algorithms-by-Blocks. In *PPoPP'08: Proceedings of the 2008 SIGPLAN Symposium on Principles and Practice of Parallel Programming*, pages 123-132, Salt Lake City, UT, USA, February 20-23, 2008.
- Ernie Chan, Enrique S. Quintana-Ortí, Gregorio Quintana-Ortí, and Robert van de Geijn. SuperMatrix Out-of-Order Scheduling of Matrix Operations for SMP and Multi-Core Architectures. In *SPAA'07: Proceedings of the Nineteenth Annual ACM Symposium on Parallelism in Algorithms and Architectures*, pages 116-125, San Diego, CA, USA, June 9-11, 2007.
- Ernie Chan, Marcel Heimlich, Avi Purkayastha, and Robert van de Geijn. Collective Communication: Theory, Practice, and Experience. *Concurrency and Computation: Practice and Experience*. 19(13):1749-1783, July 5, 2007.
- Ernie Chan, William Gropp, Rajeev Thakur, and Robert van de Geijn. Collective Communication on Architectures that Support Simultaneous Communication over Multiple Links. In *PPoPP'06: Proceedings of the 2006 SIGPLAN Symposium on Principles and Practice of Parallel Programming*, pages 2-11, New York, NY, USA, March 29-31, 2006.

SERVICE, AWARDS, AND SELECTED TALKS

- Undergraduate Studies Faculty Committee for UTCS September 2007 – Present
- Awarded Student Travel Grant at *PPoPP'08* conference February 2008
- Talk at IBM T.J. Watson Research Center hosted by Dr. John Gunnels March 2007
- Awarded Student Travel Grant at *PPoPP'06* conference March 2006
- Talk at Argonne National Laboratory hosted by Dr. Rajeev Thakur March 2005
- Awarded Student Travel Grant at *Cluster'04* conference September 2004

INTERESTS

RunTex Distance Challenge finisher, Texas Longhorn sports, and brass musician; United States citizen