Curriculum Vitae   **Phillip M. Dickens, Ph.D.**   March, 2004

Department of Computer Science
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Education

Ph.D. Computer Science,	**University of Virginia**	January 1993.
M.S. Computer Science,	**University of Virginia**	January 1986.
B.A. Psychology,	**St. Andrews Presbyterian College**	May 1977.

Professional Employment

Assistant Professor	Illinois Institute of Technology Department of Computer Science	8/96 – present
Visiting Scientist	Argonne National Laboratory Mathematics and Computer Science Division	6/97 – present
Adjunct Professor	College of William and Mary Department of Computer Science	8/94 – 6/95
Staff Scientist	Institute for Computer Applications in Science and Engineering (ICASE) NASA Langley Research Center	1/93 – 8/96
Instructor	Object Oriented Design and Programming General Electric, Charlottesville, Va.	6/91 – 8/91
Research Assistant	Department of Computer Science University of Virginia	1/86 – 1/93
Instructor	Introduction to Computer Science University of Virginia	6/84 – 8/84
Teaching Assistant	Department of Computer Science University of Virginia	1/84 – 12/85
Statistical Programmer	University of Virginia Hospital	1/83 - 12/83

Journal Papers

[1]   Evans, J., Hood, C., and P. Dickens. Traffic Analysis and Simulation of a Prioritized Shared Medium. In *SIMULATION: Transactions of The Society for Modeling and Simulation, International.* Volume 79, Issue 4, April 2003.

[2]   Dickens, P. and R. Thakur. Evaluation of Collective I/O Implementations on Parallel Architectures.*Journal of Parallel and Distributed Computing*. Vol. 61, No. 8, August 1,2001.

[3]   Bonachia, D., Dickens, P. and R. Thakur. High-Performance File I/O in Java:
Existing Approaches and Bulk I/O Extensions. *Concurrency and Computation: Practice and Experience*. Volume 13, Issue 8-9, 2001.

[4]   Thurivathucal, G., Dickens, P. and S. Bhatti. JavaNOW: Java on a Network of Workstations**:** A Parallel Computing Framework Inspired by Linda and the Message Passing Interface (MPI). Concurrency: Practice and Experience, Volume 12, Issue 13, November 2000, pp. 1093-1116.

[5]   Dickens, P., Heidelberger, P. and D. Nicol. Parallelized Direct-Execution Simulation of Message Passing Programs**.** *IEEE Transactions on Parallel and Distributed Systems*. Volume 7, Number 10 Pages 1090 – 1105 October, 1996.

[6]   Dickens, P., Nicol, D., Reynolds, P., and J.M. Duva. Analysis of Bounded Time Warp and a Comparison with YAWNS**.** *ACM Transactions on Modeling and Computer Simulation*, Volume 6, Number 4 Pages 297 – 320, October 1996.

[7]   Dickens, P., Heidelberger, P., and Nicol, D. Parallel Simulation of Multicomputer Programs. *ICASE Research Quarterly*, *3* (2). June, 1994

Refereed Conference/Workshop Publications

[8]   Dickens, P., and Larson, J. Classifiers for the Causes of Data Loss Using Packet-Loss Signatures. To appear in the *Proceedings of The 4th IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid2004)*, Chicago, Illinois, 2004.

[9]   Dickens, P., Larson, J., and Nicol, D. Diagnostics for Causes of Packet Loss in a High Performance Data Transfer System. To appear in the *Proceedings of 2004 IPDPS Conference: the 18th International Parallel and Distributed Processing Symposium*, Santa Fe, New Mexico, 2004.

[10]   Dickens, P., and Kannan, V. Application-Level Congestion Control Mechanisms for Large Scale Data Transfers Across Computational Grids. In *Proceedings of The International Conference on High Performance Distributed Computing and Applications*, 2003.

[11]   Dickens, P. FOBS: A Lightweight Communication Protocol for Grid Computing. In *Proceedings of Europar 2003*, 2003.

[12]   Kannan, V., Dickens, P., and Gropp, W. A Performance Study of Application Level Acknowlegment and Retransmission Mechanisms. In *Proceedings of The International Conference on High Performance Distributed Computing and Applications*, Reno, Nevada, 2003.

[13]   Dickens, P., and Gropp, B. An Evaluation of Object-Based Data Transfers Across High Performance High Delay Networks. In *Proceedings of the 11th Conference on High Performance Distributed Computing*, Edinburgh, Scotland, 2002.

[14]   Dickens, P. A High Performance File Transfer Mechanism for Grid Computing. In *Proceedings of The 2002 Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA).* Las Vegas, Nevada, 2002.

[15]   Dickens, P., Gropp, B., and Woodward, P. High Performance Wide Area Data Transfers Over High Performance Networks. In *Proceedings of The 2002 International Workshop on Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems.*, 2002.

[16] Vinkat, R., Dickens, P., and Gropp, B. Efficient Communication Across the Internet in Wide-Area MPI. In *Proceedings of the 2001 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA).* Las Vegas, Nevada, 2001.

[17] Dickens, P., and Gurbani, V. Parallel Discrete Event Simulation for an Internet Telephony Call Signaling Protocol. In *Proceedings of 2001 Summer Simulation Conference*, 2001.

[18] Dickens, P. Toward a Simulation Framework for the Evaluation of Distributed Applications Executing in the Internet Domain. In *Proceedings of The 2001 Conference on Internet Computing*, 2001.

[19] Dickens, P., and Thakur, R. An Evaluation of Java's I/O Capabilities for High-Performance Computing. In *Proceedings of the ACM Java Grande 2000 Conference*, 2000.

[20] Gurbani, V., and Dickens, P. Parallel Discrete Event Simulation of Internet Telephony. In *Proceedings of The 2000 Summer Simulation Conference.*, 2000.

[21] Dickens, P., and Thakur, R. Using Threads to Improve the Performance of Two-Phase I/O. In *Proceedings of IPPS'99 (International Parallel Processing Symposium).*

[22] Dickens, P., and Thakur, R. A Performance Study of Two-Phase I/O. In *Proceedings of Europar98: Fourth European Conference on Parallel Computation*, 1998.

[23] Dickens, P., and Thurivathucal, G. Performance Predictions for MPI Codes Executing on Workstation Clusters. In *Proceedings of 1998 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'98)*, Las Vegas, Nevada, 1998.

[24] Dickens, P. A Workstation-Based Direct Execution Simulator. In *Proceedings of the 11th Workshop on Parallel and Distributed Simulation*, 1997.

[25] Dickens, P., Haines, M., Mehrotra, P., and Nicol, D. Towards a Thread-Based Parallel Direct Execution Simulator. In *Proceedings of the 29th Hawaii International Conference on Computer Systems.*, 424-432, 1996.

[26] Dickens, P., Heidelberger, P., and Nicol., D. Parallelized Network Simulators for Message-Passing Parallel Programs. In *Proceedings of MASCOTS'95. Proceedings of the Third International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication Systems.*, IEEE Computer Society Press., 1995.

[27] Dickens, P., Heidelberger, P., and Nicol., D. Timing Simulation of Paragon Codes Using Workstation Clusters. In *Proceedings of the 1994 Winter Simulation Conference*, 1347-1353, 1994.

[28] Dickens, P., Heidelberger, P., and Nicol., D. A Distributed Memory LAPSE: Parallel Simulation of Message-Passing Programs. In *Proceedings of the 8th Workshop on Parallel and Distributed Systems*, 32-38, 1994.

[29] Dickens, P., Nicol, D., Reynolds, P., and Duva, J. The Impact of Adding Aggressiveness to a Non-Aggressive Windowing Algorithm. In *Proceedings of the 1993 Winter Simulation Conference*, 731 - 739, 1993.

[30] Dickens, P., and Reynolds., P. A Performance Model for Parallel Simulation. In *Proceedings of the 1991 Winter Simulation Conference*, 1991.

[31] Dickens, P., and Reynolds, P. SRADS with Local Rollback. In *Proceedings of the SCS Multiconference on Distributed Simulation*, 1990.

[32] Reynolds, P., and Dickens, P. SPECTRUM: A Parallel Simulation Testbed. In *Proceedings of the Fourth Conference on Hypercubes, Concurrent Computers and Applications*, 1989.

Other Publications

[33] J.W. Larson and P.M. Dickens. Symbolic Dynamics of Reanalysis Data. *American Geophysical Union Fall Meeting*, San Francisco, CA, December 8-12, 2003. (Poster)

[34] Dickens, P. Analysis of the Aggressive Global Windowing Algorithm (Ph.D. Dissertation), University of Virginia Computer Science Technical Report CS 93 - 70, 1993.

Grants:

Argonne National Laboratory: **$5,950**
High-Performance Remote I/O on Computational Grids
5/25/03 – 8/15/03.

NSF Next Generation Software Program: **$30,000**
*End-to-End Performance Modeling of Applications Executing in the Internet2
Domain.* 9/1/02-9/1/03.

NSF CISE Research Resources: **$175, 333**
*Acquisition of a Computing Cluster And Access Grid Node for Information
Technology.* Co-PI with **Xian-He Sun,** Cindy Hood, Ophir Freider, and Hong
Zhang. 09/15/01 – 9/15/03.

Argonne National Laboratory: **$11,500**
High Performance Wide Area Data Transfers. 9/1/01 – 12/31/01

Department of Defense: **$173,000**
Research Infrastructure for Distributed System Development.

Department of Defense Equipment Grant.
Co-PI with **Xian-He Sun**, Cindy Hood, Ophir Frieder, and
Hong Zhang. 1/15/01.

Sun Microsystems: **$34,000**
Performance Prediction for Message-Passing Parallel Programs.

Sun Microsystems Equipment Grant. 3/1/2000.

Argonne National Laboratory: **$22,000**

Implementation Issues in Wide-Area MPI.

Illinois Institute of Technology: **$10,000**
*Performance prediction for super computers using ordinary workstation
clusters.* (Internal Grant) 5/96-5/97.

Other Support:

NCSA Computational Resources Allocations: **$150,000**
*High-performance Data Transfers over High-performance
Networks.* 2/28/2002 – 2/28/2004. 20,000 SUs of computer
tim*e* on NCSA SGI Origin2000,Valued at approximately
$7.5/SU.

Faculty Research Participation Award. **$170,000**

Argonne National Laboratory.
Summers of 1997 – 2003.

Professional Activities

Panelist:

NSF Review Panel	October, 2002
NSF Review Panel	May, 2002
NSF Review Panel	May, 2002
NSF Review Panel	April, 2000

Program Committee:

IEEE High-Speed Local Network Workshop (2003).
International Workshop on Parallel I/O on Clusters (2001).

Session Organizer:

Parallel and Distributed Processing Technique and Applications (PDPTA'99).	June, 1999

Associate Editor:

Parallel and Distributed Processing Technique and Applications (PDPTA'99).	July, 1999

Session Chair:

International Conference on High Performance Distributed Computing and Applications.	August, 2003
Parallel and Distributed Programming Techniques and Applications (PDPTA). (1998, 1999, 2002).	
29th Hawaii International Conference on System Sciences	January, 1996
Winter Simulation Conference. (1993, 1991).	

Reviewer for:

Journal of Parallel and Distributed Computation; ACM Transactions on Modeling and Computer Simulation; IEEE Transactions on Parallel and Distributed Systems; Journal of Supercomputing; Winter Simulation Conference; Workshop on Parallel and Distributed Simulation; Workshop on Parallel I/O on Workstation Clusters; 2002 Cluster Computing; IEEE Workshop on IP Operations and Management; IEEE High-Speed Local Network Workshop.

Significant System Software for Grid Computing: The FOBS Large Scale Data Transfer Engine. (URL: http://www.csam.iit.edu/~pmd/FOBS/fobs_index.html).

Citizenship: USA

References:

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