

## Biographical Sketch

### Collin McCurdy

Future Technologies Group  
Computer Science and Mathematics Division  
Oak Ridge National Laboratory  
One Bethel Valley Road  
P.O. Box 2008, MS-6173  
Oak Ridge, TN 37831-6173 USA

Phone: (865) 241-6433  
Fax: (865) 241-2650  
Email: [cmccurdy@ornl.gov](mailto:cmccurdy@ornl.gov)  
URL: <http://ft.ornl.gov/~cmccurdy>

### Education

1. Ph.D. in Computer Science, University of Wisconsin, Madison, WI, 2008 (expected).
2. M.S. in Computer Science, Rice University, Houston, TX, 1999.
3. B.A. in Music, University of California, Santa Cruz, CA, 1992.

### Experience

1. Postmasters Researcher, Oak Ridge Associated Universities, 2005 – present.
2. Research Assistant, University of Wisconsin, Madison, WI, 2000 – 2005.
3. Consultant, Infotech Systems Management, San Diego, CA, 1999.
4. Teaching Assistant, University of Wisconsin, Madison, WI, 1998 – 2000.
5. Research Assistant, Rice University, Houston, TX, 1995 – 1998.

### Research Interests

High performance parallel computing, particularly the interfaces between programmer, compiler, operating system, and hardware.

### Related Publications

1. McCurdy, C., Cox, A. L., Vetter, J. S., “Investigating the TLB Behavior of High-end Scientific Applications on Commodity Microprocessors,” In *Proceedings of the IEEE International Symposium on Performance Analysis of Systems and Software*, April, 2008.
2. McCurdy, C., Fischer, C., “Using Pin as a Memory Reference Generator for Multiprocessor Simulation,” *ACM SIGARCH Computer Architecture News*, December, 2005.

## Additional Publications

1. Alam, S. R., Barrett, R., McCurdy, C., Roth, P. C., Vetter, J., “Characterizing Applications on the MTA2 Multithreading Architecture,” *48th Cray User Group meeting*, May, 2006.
2. Ong, H., Vetter, J., Studham, R. S., McCurdy, C., Walker, B., and Cox, A., “Kernel-level Single System Image for Petascale Computing,” *ACM SIGOPS Operating Systems Review*, April, 2006.
3. McCurdy, C., Studham, R. S., Fischer, C., “The Fast Multipole Method on RAM, the Altix 3700 at Oak Ridge National Laboratory,” In *Proceedings of the 2005 SGI Users Group*, June, 2005.
4. McCurdy, C. and Fischer, C., “A Localizing Directory Coherence Protocol,” In *Proceedings of the 3rd Workshop on Memory Performance Issues*, June, 2004.
5. McCurdy, C. and Fischer, C., “User-controllable coherence for high performance shared memory multiprocessors,” In *Proceedings of the Ninth ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*, June, 2003.
6. McCurdy, C., Mellor-Crummey, J., “An Evaluation of Computing Paradigms for N-body Simulations on Distributed Memory Architectures,” In *Proceedings of the Seventh ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*, May, 1999.

## Collaborators

1. **Oak Ridge National Laboratory:** Jeffrey Vetter, Philip Roth, Sadaf Alam, Weikuan Yu, Richard Barrett, Scott Studham, Patrick Worley, Michael Bast, Mark Fahey, Jeffrey Kuehn, James Rogers, Ramanan Sankaran.
2. **University of Wisconsin:** Charles Fischer, Todd Bezenek, Trey Cain, Ross Dickson, Timothy Heil, Milo Martin, Ravi Rajwar, Eric Weglarz, Craig Zilles, Mikko Lipasti.
3. **Rice University:** Alan L. Cox, John Mellor-Crummey.

## Thesis Advisor

1. Prof. Charles Fischer, Computer Sciences Dept., University of Wisconsin, Madison, WI.