References

- Gail Alverson, William Griswold, Calvin Lin, David Notkin, and Lawrence Snyder. Abstractions for portable, scalable parallel programming. *IEEE Transactions on Parallel and Distributed Systems*, 9(1):71–86, January 1998.
- [2] Gail Alverson, William Griswold, David Notkin, and Lawrence Snyder. A flexible communication abstraction for nonshared memory parallel computing. In *Proceedings of the ACM Conference on Supercomputing*, 1990.
- [3] Richard J. Anderson and Lawrence Snyder. A comparison of shared and nonshared memory models of parallel computation. *Proceedings of the IEEE*, 79(4):480–487, April 1991.
- [4] Bradford L. Chamberlain. *The Design and Implementation of a Region-Based Parallel Language*. PhD thesis, University of Washington, November 2001.
- [5] Bradford L. Chamberlain, Sung-Eun Choi, Steven J. Deitz, and Lawrence Snyder. The high-level parallel language ZPL improves productivity and performance. In *Proceedings of the IEEE International Workshop on Productivity and Performance in High-End Computing*, 2004.
- [6] Bradford L. Chamberlain, Sung-Eun Choi, E Christopher Lewis, Calvin Lin, Lawrence Snyder, and W. Derrick Weathersby. Factor-join: A unique approach to compiling array languages for parallel machines. In *Proceedings* of the Workshop on Languages and Compilers for Parallel Computing, 1996.
- [7] Bradford L. Chamberlain, Sung-Eun Choi, E Christopher Lewis, Calvin Lin, Lawrence Snyder, and W. Derrick Weathersby. The case for high level parallel programming in ZPL. *IEEE Computational Science and Engineering*, 5(3):76–86, July–September 1998.
- [8] Bradford L. Chamberlain, Sung-Eun Choi, E Christopher Lewis, Calvin Lin, Lawrence Snyder, and W. Derrick Weathersby. ZPL's WYSIWYG performance model. In *Proceedings of the IEEE Workshop on High-Level Parallel Programming Models and Supportive Environments*, 1998.
- [9] Bradford L. Chamberlain, Sung-Eun Choi, E Christopher Lewis, Calvin Lin, Lawrence Snyder, and W. Derrick Weathersby. ZPL: A machine independent programming language for parallel computers. *IEEE Transactions on Software Engineering*, 26(3):197–211, March 2000.
- [10] Bradford L. Chamberlain, Sung-Eun Choi, and Lawrence Snyder. A compiler abstraction for machine independent parallel communication generation. In *Proceedings of the Workshop on Languages and Compilers for Parallel Computing*, 1997.
- [11] Bradford L. Chamberlain, Steven J. Deitz, and Lawrence Snyder. A comparative study of the NAS MG benchmark across parallel languages and architectures. In *Proceedings of the ACM Conference on Supercomputing*, 2000.
- [12] Bradford L. Chamberlain, E Christopher Lewis, Calvin Lin, and Lawrence Snyder. Regions: An abstraction for expressing array computation. In *Proceedings of the ACM International Conference on Array Programming Languages*, 1999.
- [13] Bradford L. Chamberlain, E Christopher Lewis, and Lawrence Snyder. A region-based approach for sparse parallel computing. Technical Report UW-CSE-98-11-01, University of Washington, Seattle, WA, November 1998.
- [14] Bradford L. Chamberlain, E Christopher Lewis, and Lawrence Snyder. Array language support for wavefront and pipelined computations. In *Proceedings of the Workshop on Languages and Compilers for Parallel Computing*, 1999.

- [15] Bradford L. Chamberlain, E Christopher Lewis, and Lawrence Snyder. Problem space promotion and its evaluation as a technique for efficient parallel computation. In *Proceedings of the ACM International Conference on Supercomputing*, 1999.
- [16] Bradford L. Chamberlain and Lawrence Snyder. Array language support for parallel sparse computation. In *Proceedings of the ACM International Conference on Supercomputing*, 2001.
- [17] Sung-Eun Choi. *Machine Independent Communication Optimization*. PhD thesis, University of Washington, March 1999.
- [18] Sung-Eun Choi and Steven J. Deitz. Compiler support for automatic checkpointing. In *Proceedings of the International Symposium on High Performance Computing Systems and Applications*, 2002.
- [19] Sung-Eun Choi and Lawrence Snyder. Quantifying the effects of communication optimizations. In *Proceedings* of the IEEE International Conference on Parallel Processing, 1997.
- [20] Steven J. Deitz. Renewed hope for data parallelism: Unintegrated support for task parallelism in ZPL. Technical Report UW-CSE-2003-12-04, University of Washington, Seattle, WA, December 2003.
- [21] Steven J. Deitz. Tired of MPI: The pocket guide to ZPL, 2003.
- [22] Steven J. Deitz. *High-Level Programming Language Abstractions for Advanced and Dynamic Parallel Computations*. PhD thesis, University of Washington, February 2005.
- [23] Steven J. Deitz, Bradford L. Chamberlain, Sung-Eun Choi, and Lawrence Snyder. The design and implementation of a parallel array operator for the arbitrary remapping of data. In *Proceedings of the ACM Conference on Principles and Practice of Parallel Programming*, 2003.
- [24] Steven J. Deitz, Bradford L. Chamberlain, and Lawrence Snyder. Eliminating redundancies in sum-of-product array computations. In *Proceedings of the ACM International Conference on Supercomputing*, 2001.
- [25] Steven J. Deitz, Bradford L. Chamberlain, and Lawrence Snyder. High-level language support for user-defined reductions. *Journal of Supercomputing*, 23(1), 2002.
- [26] Steven J. Deitz, Bradford L. Chamberlain, and Lawrence Snyder. Abstractions for dynamic data distribution. In Proceedings of the IEEE Workshop on High-Level Parallel Programming Models and Supportive Environments, 2004.
- [27] Marios D. Dikaiakos, Calvin Lin, Daphne Manoussaki, and Diana E. Woodward. The portable parallel implementation of two novel mathematical biology algorithms in ZPL. In *Proceedings of the ACM International Conference on Supercomputing*, 1995.
- [28] William Griswold, Gail Harrison, David Notkin, and Lawrence Snyder. Scalable abstractions for parallel programming. In Proceedings of the Fifth Distributed Memory Computing Conference, 1990.
- [29] E Christopher Lewis. Achieving Robust Performance in Parallel Programming Languages. PhD thesis, University of Washington, February 2001.
- [30] E Christopher Lewis, Calvin Lin, and Lawrence Snyder. The implementation and evaluation of fusion and contraction in array languages. In *Proceedings of the ACM Conference on Programming Language Design and Implementation*, 1998.
- [31] E Christopher Lewis, Calvin Lin, Lawrence Snyder, and George Turkiyyah. A portable parallel n-body solver. In *Proceedings of the SIAM Conference on Parallel Processing for Scientific Computing*, 1995.
- [32] E Christopher Lewis and Lawrence Snyder. Pipelining wavefront computations: Experiences and performance. In Proceedings of the IEEE Workshop on High-Level Parallel Programming Models and Supportive Environments, May 2000.

- [33] Calvin Lin. The Portability of Parallel Programs Across MIMD Computers. PhD thesis, University of Washington, 1992.
- [34] Calvin Lin and Lawrence Snyder. A comparison of programming models for shared memory multiprocessors. In *Proceedings of the IEEE International Conference on Parallel Processing*, 1990.
- [35] Calvin Lin and Lawrence Snyder. A portable implementation of SIMPLE. *International Journal of Parallel Programming*, 20(5):363–401, 1991.
- [36] Calvin Lin and Lawrence Snyder. ZPL: An array sublanguage. In *Proceedings of the Workshop on Languages* and Compilers for Parallel Computing, 1993.
- [37] Calvin Lin and Lawrence Snyder. Accommodating polymorphic data decompositions in explicitly parallel programs. In *Proceedings of the International Parallel Processing Symposium*, 1994.
- [38] Calvin Lin and Lawrence Snyder. SIMPLE performance results in ZPL. In *Proceedings of the Workshop on Languages and Compilers for Parallel Computing*, 1994.
- [39] Calvin Lin, Lawrence Snyder, Ruth Anderson, Bradford L. Chamberlain, Sung-Eun Choi, George Forman, E Christopher Lewis, and W. Derrick Weathersby. ZPL vs. HPF: A comparison of performance and programming style. Technical Report UW-CSE-95-11-05, University of Washington, Seattle, WA, November 1995.
- [40] Calvin Lin and W. Derrick Weathersby. Towards a machine-independent solution of sparse cholesky factorization. In *Proceedings of the Third International Conference on Parallel Computing*, 1993.
- [41] Ton Ahn Ngo and Lawrence Snyder. On the influence of programming models on shared memory computer performance. In *Proceedings of the Scalable High Performance Computing Conference*, 1992.
- [42] Ton Ahn Ngo, Lawrence Snyder, and Bradford L. Chamberlain. Portable performance of data parallel languages. In *Proceedings of the ACM Conference on Supercomputing*, 1997.
- [43] Ton Anh Ngo. The Role of Performance Models in Parallel Programming and Languages. PhD thesis, University of Washington, 1997.
- [44] Wilkey Richardson, Mary L. Bailey, and William H. Sanders. Using ZPL to develop a parallel chaos router simulator. In *Proceedings of the Winter Simulation Conference*, 1996.
- [45] Lawrence Snyder. Type architecture, shared memory and the corollary of modest potential. *Annual Review of Computer Science*, 1:289–317, 1986.
- [46] Lawrence Snyder. Foundations of practical parallel programming languages. In *Portability and Performance for Parallel Processing*, pages 1–19. John Wiley & Sons, Ltd., 1994.
- [47] Lawrence Snyder. Experimental validation of models of parallel computation. In Computer Science Today: Recent Trends and Developments, Lecture Notes in Computer Science, volume 1000, pages 78–100. Springer Verlag, 1995.
- [48] Lawrence Snyder. Programming Guide to ZPL. MIT Press, Cambridge, MA, 1999.
- [49] Lawrence Snyder. Parallel computation: MM +/- X. In Informatics: 10 Years Back, 10 Years Ahead, Lecture Notes in Computer Science, volume 2000, pages 234–250. Springer Verlag, 2001.
- [50] W. Derrick Weathersby. *Machine-Independent Compiler Optimizations for Collective Communication*. PhD thesis, University of Washington, August 1999.