

Publication list

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August 8th 2006

I have in all these publications been the main author except for:

- [6] where I was one of three authors writing the paper. The other authors were E. Ayguadé and M. Winkler. The paper describes a consorted effort and all participating project members were listed in alphabetical order.
- [13] where I was one of several authors of the tutorial. I wrote one third of the tutorial.
- [14] where I was co-author to the tutorial. The tutorial is a heavily revised version of [13]. I have contributed roughly half of the contents in the tutorial.
- [15] where I was co-author to the thesis. Roughly half of the thesis was written by me.
- [19] where I was maintainer for that particular version.
- [21] where I was part of a team developing the software.
- [24] where I am the main architect and developer for the software. Several project workers have helped me and have implemented parts of the software under my lead.
- [26] which is a revised version of [14]
- [27] which was developed in collaboration with Axis Communication AB, Lund.
- [28] which is based on earlier versions of the lecture notes for the same course but heavily revised.
- [29] which is based on earlier versions of a course held by Prof. Mats Brorsson.

All authors are listed with the main author first unless otherwise noted above. The most important publications are marked with a '*’.

1 Refereed journal contributions

- [1] * S. Karlsson and M. Brorsson, *Priority Based Messaging for Software Distributed Shared Memory — Model and Implementation*, Int. Journal of Cluster Computing 6(2) 161-169 (2003). Published in 2003 by Kluwer Academic Publishers.

2 Refereed conference and workshop contributions

- [2] * S. Karlsson and M. Brorsson. A comparative characterization of communication patterns in applications using MPI and shared memory on an IBM SP2. In *Proceedings of Network-Based Parallel Computing. Communication, Architecture, and Applications. Second International Workshop, CANPC '98*, pages 189-201, January 1998. Published in 1998 by Springer Verlag
- [3] * S. Karlsson and M. Brorsson. Producer-push-a protocol enhancement to page-based software distributed shared memory systems. In *Proceedings of ICPP'99: 1999 International Conference on Parallel Processing*, pages 291-300, September 1999. Published in 1999 by IEEE Computer Society Press.
- [4] * S. Karlsson and M. Brorsson. An infrastructure for portable and efficient software DSM. In *Proceedings of the 1st Workshop on Software Distributed Shared Memory (WSDSM'99)*, June 1999. Proceedings published in 1999 by the workshop organizers.

- [5] S. Karlsson and M. Brorsson, Priority Based Messaging for Software Distributed Shared Memory, in *Proceedings of Workshop on Communication Architecture for Clusters (CAC '01)*, April 2001. Published in 2001 by IEEE Computer Society Press.
- [6] E. Ayguadé, M. Brorsson, H. Brunst, H.-C. Hoppe, S. Karlsson, X. Martorell, W.E. Nagel, F. Schlimbach, G. Utrera, and M. Winkler. OpenMP performance analysis in the INTONE project. In *Proceedings of EWOMP'2001*, September 2001. Proceedings published in 2001 by the workshop organizers.
- [7] * S. Karlsson, S.-W. Lee, and M. Brorsson. A fully compliant OpenMP implementation on software distributed shared memory. In *Proceedings of the 2002 International Conference on High Performance Computing (HiPC'02)*, December 2002. Published in 2002 by Springer Verlag.
- [8] * S. Karlsson and M. Brorsson, A Free OpenMP Compiler and Run-Time Library Infrastructure for Research on Shared Memory Parallel Computing, in *Proceedings of The 16th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS 2004)*, November 2004. Published in 2004 by ACTA Press.
- [9] S. Karlsson, A portable and efficient thread library for OpenMP, in *Proceedings of EWOMP'2004*, October 2004. Proceedings published in 2004 by the workshop organizers.
- [10] * S. Karlsson, An Introduction to Balder – An OpenMP Run-time Library for Clusters of SMPs, in *Proceedings of IWOMP'2005*, June 2005. To be published by Springer Verlag.

3 Other scientific contributions

- [11] S. Karlsson, and M. Brorsson, Investigating Producer-Push Techniques for Software Distributed Shared Memory Systems, in *proceedings of the seventh Swedish Workshop on Computer Systems Architecture*, pages 49-52, 1998. Proceedings published in 1998 by the workshop organizers.
- [12] * S. Karlsson, *Balder – An OpenMP run-time library for clusters of SMPs*, Technical report, TRITA-IMIT/LECS R 04:01, ISSN 1651-4661, ISRN KTH/IMIT/LECS/R-04/01--SE, Department of Microelectronics and Information Technology, Royal Institute of Technology, KTH, August 2004.

3.1 International tutorials

- [13] E. Ayguadé, M. Brorsson, M. Gonzalez, S. Karlsson, X. Martorell, *OpenMP implementation and performance issues*, Tutorial given at the European Workshop on OpenMP (EWOMP'2002), Rome, Italy, September 2002. Co-organised with Mats Brorsson (KTH), Eduard Ayguadé, Xavier Martorell and Marc Gonzales (UPC, Barcelona).
- [14] M. Brorsson and S. Karlsson, *OpenMP implementation and performance issues*, Tutorial co-organised with Mats Brorsson and presented in conjunction with PACT'03, The Twelfth International Conference on Parallel Architectures and Compilation Techniques in New Orleans, September 2003.

3.2 Theses

- [15] * S. Lundberg and S. Karlsson, *CELP based speech compression – a VLSI implementation*, M.Sc. thesis, Department of Applied Electronics, Lund University, Sweden, 1996.
- [16] S. Karlsson, *Performance Aspects of Software Based Shared Memory in Multicomputers*, Lic. thesis, Department of Information Technology, Lund University, Sweden, 2000.
- [17] * S. Karlsson, *Shared Memory and OpenMP on Clusters*, Ph.D. thesis, Department of Microelectronics and Information Technology, KTH, Royal Institute of Technology, Sweden, 2004.

4 Other publications

4.1 Selected computer programs

- [18] S. Karlsson and A. Gustavsson, *DigiComposer*, A music sequencer software for the Atari ST/TT range of computers, 1991.
- [19] S. Karlsson et al. *FreeMINT v1.14*, Multitasking operating system with virtual memory and memory protection for the Atari ST/TT range of computers, 1995.
- [20] S. Karlsson, *CodeAss*, Assembler for the Atari Jaguar game console system, 1996.
- [21] S. Karlsson et. al. *The official 1998 Lundakarnevalen computer game*, 1998
- [22] S. Karlsson, *Port of a MIPS GCC backend to SimpleScalar*, 2004, available on request.
- [23] S. Karlsson, *Port of a MIPS GNU Binutils tool set to SimpleScalar*, 2004, available on request.
- [24] S. Karlsson et. al., *OdinMP - an OpenMP C/C++ compiler*, An OpenMP compiler for C and C++, <http://www.odinmp.com>, 2004, approximately 55000 lines of C++ source code.
- [25] S. Karlsson, *Balder - a cluster capable OpenMP run-time*, A run-time library for OpenMP, <http://www.odinmp.com>, 2005, approximately 20000 lines of C source code.

4.2 Selected tutorials

- [26] S. Karlsson, *OpenMP implementation and performance issues*, Tutorial held at ARM Ltd. Cambridge, UK, 2004.

4.3 Selected course material

- [27] S. Karlsson and Axis Communication, *Internet Inuti laboration manual and project description*, Department of Information Technology, Lund University, Sweden, 1997-2000.
- [28] S. Karlsson, *Lecture notes for 2G1316/2G1317*, Department of Teleinformatics, KTH, Royal Institute of Technology, Sweden, 2001.
- [29] S. Karlsson, *Lecture notes for HY425/CS425 Computer Architecture*, Department of Computer Science, University of Crete, Greece, 2005.