

Curriculum Vitae for Sverker Holmgren

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Born January 2 1963 in Gävle, Sweden. Married to Karolina Malm Holmgren. Six children: Hanna (1987), Johan (1992), David (1995), Stina (1999), Felix (2004) and Viggo (2006).

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Degrees

Professor in Scientific Computing, Uppsala University, 2010.

Docent (Associate Professor) in Numerical Analysis, Uppsala University, 1999.

Ph.D. in Numerical Analysis, Department of Scientific Computing, Uppsala University, 1993. Thesis title: Fast Solvers for PDE Problems. Thesis advisor: Professor Bertil Gustafsson.

M.Sc. in Engineering Physics, specialization in Scientific Computing, Uppsala University, 1987.

Appointments

2010- Professor in Scientific Computing, Head (and initiator) of the Computational Science research program at Uppsala University.

1993-2010 Universitetslektor ("University Lecturer") in Scientific Computing.
On paternal leave 25% for six months during 1996 and 50% for four months during 2000.

1987-1993 PhD student, Department of Scientific Computing, Uppsala University.

PhD Student Supervision

Principal advisor for five PhD exams: H. Brandén, 2001 [Numerical Analysis], P. Sundqvist, 2005 [Numerical Analysis], shared with H. Brandén, K. Ljungberg, 2006 [Scientific Computing], K. Mishchenko, 2008 [Applied Mathematics, University of Mälardalen], M. Jayawardena, 2010 [Scientific Computing]. **Advisor for three other PhD exams:** D. Wallin, 2006 [Computer Science], H. Löf, 2006 [Scientific Computing], M. Nordén, 2006 [Scientific Computing]. **Principal advisor for seven Licentiate exams,** theses defended 1999, 2003, 2003, 2007, 2009, 2010, 2010 (H. Brandén, P. Sundqvist, K. Ljungberg, M. Jayawardena, K. Kormann, S. Toor, C. Nettelblad). **Advisor for six other Licentiate exams,** theses defended 2001, 2003, 2004, 2004, 2008, 2010 (Å. Petersson [Quantum Chemistry], D. Wallin [Computer Science], M. Nordén, H. Löf, A. Hellander, A. Nissen).

Currently principal advisor for five PhD students (S. Toor, K. Kormann, C. Nettelblad, M. Gustafsson, M. Holm), **and advisor for three other PhD students** (A. Hellander, A. Nissen, M. Tillenius).

Summary of Research Articles and Presentations

26 articles in international scientific journals. 17 other articles in reviewed conference proceedings, most of these are in the fields of parallel algorithms/supercomputing where this is the standard means for publishing new research. **3 other articles under review.** 5 other technical reports. **22 oral presentations at international conferences. One keynote presentation and five other invited presentations.** Co-author of many more presentations.

Assignments

Coordinator (jointly with K. Hermansson) **for the Strategic Research Area Consortium eSSENCE,** which is one of the two national e-Science initiatives supported by the Ministry of Education and Vetenskapsrådet. eSSENCE includes the universities in Uppsala, Lund and Umeå University and is granted more than 100 Mkr during 2010-2014.

Head of Research for the Department of Information Technology (<http://www.it.uu.se>) since 2006 (This assignment includes strategic planning and coordination of the different research areas at the department, but not direct leading of research).

Opposition: Licentiate thesis, Bengt Hallinger, Department of Mathematics, Linköping University, 1996. PhD thesis, Saara Hyvonen, Institute of Mathematics, Helsinki University of Technology, Finland, 1999. Licentiate thesis, Mohammed Motamed, Department of Numerical Analysis, KTH, 2006. PhD thesis, Martin Sandve Alnæs, Department of Informatics, University of Oslo, 2009. PhD thesis, Tore Birkeland, Department of Mathematics, University of Bergen, 2009.

Member of the PhD examination committee for: Johan Steensland, 2002 (Scientific Computing, Uppsala University), Daniel Spångberg, 2003 (Materials Chemistry, Uppsala University), Jan Conrad, 2003 (High Energy Physics, Uppsala University), Erik Larsson, 2004 (Electrical Engineering, Uppsala University), Milena Ivanova, November 2005 (Computer Science, Uppsala University), Sandy Sefi, Januari 2006 (Numerical Analysis, KTH), Håkan Zeffer, October 2006 (Computer Science, Uppsala University), Robert Arnell, January 2007 (Chemistry, Uppsala University), Mohammed Motamed, May 2008 (Numerical Analysis, KTH), Lars Kristen Selberg Daldorff, January 2009 (Physics and Astronomy, Uppsala University).

Deputy Chairman for the VR evaluation group for Mathematics and Technical Mathematics (NT-R) 2007-2009 and 2010-2012 (not participating in the work 2009). **Member of NT-R** in 2004. **Member of the Norwegian Research Council evaluation panel on mathematics/computational science** in 2009. **Member of the NGSSC application evaluation committee** in 1998, 1999, 2002, 2003, 2007-10. Reviewer for a large number of NGSSC applications. **Member of the Göran Gustafsson Foundation evaluation committee in 2006-2010.**

Reviewer for a large number of research articles in, e.g., SIAM J. Sci. Comput., SIAM J. Matrix Anal. Appl., J. Comput. Phys. and BIT.

Director for the Swedish National Infrastructure for Computing (SNIC) (<http://www.snic.vr.se>) since July 2006 (50% of full time). SNIC is the national computing infrastructure initiative within the Swedish Research Council (VR) with a mandate to provide and coordinate the development of HPC-, grid- and large-scale storage resources for academia in Sweden. During 2010, SNICs budget from the Research Council is 97,8 MSEK.

Director for the Uppsala Multidisciplinary Center for Advanced Computational Science (UPPMAX) (<http://www.uppmax.uu.se>) January 2003 – June 2006. During this period, the center was built up to provide resources and a common environment for researchers in computational science and engineering at Uppsala University.

Director for the National Graduate School in Scientific Computing (NGSSC) (<http://www.ngssc.vr.se>) January 2001 – June 2006, Chairman since July 2006.

Chairman of the board for the Nordic Data Grid Facility (NDGF) (<http://www.ndgf.org>) during 2009. Deputy Chairman during 2008. Board member during 2010. NDGF is a collaborative effort by the Nordic research councils for building and operating a Nordic production grid facility.

Swedish representative in the European Grid Initiative (EGI) Council (<http://www.egi.eu>) since 2007. **Member of the EGI.eu Executive Board** since 2010. **Swedish representative in the EGI-InSPIRE Collaboration Board** since 2010. The goal of EGI is to create and operate a sustainable European grid infrastructure. **Swedish representative in the Enabling Grids for E-Science (EGEE) Collaboration Board** (<http://www.eu-egee.org>) 2007-2010. The EC project EGEE has built the largest multi-disciplinary grid infrastructure in the world.

Appointed by the Ministry of Education as the **Swedish representative in the European e-Infrastructure Reflection Group (e-IRG)** (<http://www.e-irg.eu>) since December 2008. Member of the e-IRG executive board 2009-2010, including the Swedish EU presidency during autumn 2009.

Representing the Swedish Research Council in the NORIA-net group The Nordic eScience Initiative (eNORIA) since April 2008. eNORIA is funded by NordForsk. Among other assignments, eNORIA has a mandate from the Nordic Council of Ministers to produce a plan for future Nordic eScience, which was published in 2009.