



Curriculum Vitae

# Jesper Wilhelmsson

**Born:** May 7, 1975  
**Family:** Wife, 3 children born 2002 – 2007

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## Work experience

- Senior Software Engineer, Oracle** (Principal member of technical staff, IC4) 2008-06 –  
Office safety officer ("skyddsombud"). 2017-05 –  
Responsible for recruitment in the Stockholm office. 2016-06 –  
Security point of contact for the JVM – responsible for handling security vulnerabilities. 2015-10 –  
Responsible for gatekeeping (code quality assurance), initially for the JVM, later for the entire JDK. 2014-09 –  
Project lead, feature development. Total project responsibility. Involved five different product teams. 2013-04 – 2014-12  
Acting team manager. 2012-04 – 2012-09  
Lead for component team in a strategically important feature development project with lots of challenges. 2010-10 – 2013-06  
Project lead in a controversial project to change how developers work. Mediation and politics. 2010-08 – 2010-11  
Team lead, product development team. 11 team members in three time zones. 2009 – 2012-11  
Responsible for University collaborations and coordinator for technical presentations at the office. 2008 –  
Feature development, low-level debugging, bug management, refactorisations, hacking C/C++. 2007-11 – 2016-06
- Software Engineer, BEA Systems Engineering Stockholm AB** 2007-11 – 2008-06  
Java virtual machine development (JRockit JVM). BEA was acquired by Oracle in April 2008. I was part of the team that developed the memory management system (Garbage Collection) in the JVM.
- PhD student, Uppsala University.** Thesis topic: Memory management 2002-04 – 2007-11  
Research was mainly implemented in the Erlang/OTP virtual machine and starting 2006-04 in the JRockit JVM.
- Network technician, Dalängskolan, Lidköping** 1996-03 – 1997-06
- Network admin. / teacher in computer science, Fredriksdalsskolan, Lidköping** 1995-10 – 1997-06
- Runs private business, "Fantasi"** 1995 –  
The most common assignment has been to develop and maintain websites but I have also designed and manufactured electronics, catalogues and promotional materials.

During my time as a student at Uppsala University I worked with network administration, website development, giving courses in HTML, phone support at Utfors (a local ISP) etc.

## Education

- Uppsala University, post grad. Computer science - Automatic memory management** 2002-04 – 2007-11
- Uppsala University, Licentiate exam** 2005-05
- Uppsala University, under grad. Computer science** 1997-08 – 2002-04
- Elementary school etc. in Lidköping 1982-08 – 1994-06

During my time at the university I attended several different courses designed for university teachers with topics such as pedagogy, didactics, how to teach computer science, how to present science, mentoring, supervising theses, and group dynamics and psychology.

At Oracle I have had the opportunity to attend courses in time management, project teamwork, Franklin Covey's 7 habits for managers, and a course called Business brain training.

Before I decided what I wanted to work with I also took (and passed) admission tests in Arts and wood- and metal craft at Linköping's University.

## Other responsibilities

- Raising three children 2002-08 –
- Responsible for Oracle's attendance and represented Oracle at a number of work fair days 2010 –
- Board member in the community association (133 households) 2017-04 –
- Board member of PhD council for technical and natural sciences 2005-09 – 2007-09
- Ran a small business selling food, snacks etc. to employees at the university 2002-02 – 2007-10
- Member of organizing committee at PLI '03 (Computer science conference) 2003-08
- Administrator at AmigaRulez.com (Discussion board for Amiga computer users) 2001-09 – 2005
- Company host at IT-forum (Work fair day at Uppsala University) 1999-09
- Board member of the computer science's party organization (Klubbverket) Spr00, Aut00, Spr02

## Pedagogical experiences and achievements

Starting in the autumn of 1999 I've assisting in different programming courses at the university, and during my five years as a PhD student my employment included 20% teaching. During this period I assisted in 15+ course instances, mainly teaching Java programming. Being an assistant means giving lectures, assisting in labs and in some cases develop course materials. Starting in the spring of 2005 I designed and had complete course responsibility (including the bureaucracy) of two courses, "C programming basics", and "Imperative programming" - in total four course instances. During this time I developed and evaluated a tool for automatic assessment of assignments handed in by students.

In the spring of 2001 I got involved in a mentor program called Supplemental Instruction (SI) and helped out in adapting the concepts of SI for programming courses. Using the SI methodology in programming courses had not been very successful in the past but I designed a model for this that was well received by the students.

I have also been mentoring several groups of young students and supervised three master thesis students.

After leaving the university I've stayed in touch with the university and have given several guest lectures in different courses. At Oracle I'm also driving a research cooperation together with UU and KTH.

## Publications

Heap architectures for concurrent languages using message passing

*Proceedings of ISMM 2002: ACM SIGPLAN International Symposium on Memory Management, June 2002*

Message analysis for concurrent languages

*Static Analysis: Proceedings of the 10th International Symposium, number 2694 in LNCS, June 2003*

Message analysis-guided allocation and low-pause incremental garbage collection in a concurrent language

*Proceedings of ISMM 2004: ACM SIGPLAN International Symposium on Memory Management, Oct. 2004*

Efficient Memory Management for Message-Passing Concurrency

*Licentiate thesis, Uppsala University, May 2005*

Mark and split

*Proceedings of ISMM 2006: ACM SIGPLAN International Symposium on Memory Management, June 2006*

Message analysis for concurrent programs using message passing

*ACM Transactions on Programming Languages and Systems, vol 28, number 4, July 2006*

Efficient memory management for concurrent programs that use message passing

*Science of computer programming, vol 62, number 2, October 2006*

## Spoken languages

**First language:** Swedish

**Fluid in:** English

**Studied but never practiced:** German

## Programming languages and similar

**Using regularly:** C, C++, Java, Javascript, Python, Unix shell script (sh/bash), awk, sed, PHP, HTML, XML, XSD, SSI, CSS, Json

**Used to use:** Erlang, Amiga E, Prolog, Pascal, Ada, LaTeX, SQL, SML, Assembler (MC68k, x86, PIC, MIPS, PDP10), Basic (CBM Basic, Amiga Basic, AMOS, QBasic, Visual Basic), ARexx

## Software competences – stuff that I've used more than a little at some point

Mac OSX, Linux (Ubuntu, RedHat), UNIX (Solaris), AmigaOS, Windows, gcc, gdb / DDD, Mercurial, CVS, P4, Solaris Studio, Eclipse, Emacs, vi, GIMP, NodeJS, Jenkins, Fusion 360, Adobe Photoshop, xfig, Novell Netware, StormC, Libre office, MS Office, Scribus

## Samples of my work

**Publications:** All my publications are available for download on my website.

**Development in OpenJDK:** A lot of my development work at Oracle has been contributed to OpenJDK and is available through `openjdk.java.net`. OpenJDK user name `jwilhelm`.

**Memory architecture:** While working on my licentiate thesis I developed a new memory model for Erlang. It is called "Hybrid Heap" and can be found in the open source distribution of Erlang at `www.erlang.org`.

**Misc projects:** Some of my software and hardware projects are available on my website.