

Curriculum Vitæ

Personal data

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Marital status Married to Rikke Aahave Jensen

Research Interests

My research interests are in the practical application of theory of programming languages and analysis. In my PhD thesis I concentrate on static analysis and verification of web applications. I have built a web framework called JWIG which among other things includes dynamic dispatching, session based communication, and an XML model (XACT). The goal is to create precise analysis of concrete problems for web applications built withing this framework, for example by extracting grammars of possible output of the program. My work also includes extracting grammars from standard Servlets and JSP pages to prove properties about the output of these programs.

Degrees

2010 MSc Computer Science (Cand. scient, Datalogi), Aarhus University
2007 BSc Computer Science (Bachelor, Datalogi), Aarhus University

Education

2008- PhD student, Computer Science, Aarhus University
2007 - 2008 MSc Computer Science major, Aarhus University
2004 - 2007 BSc Computer Science major, Aarhus University
2001 - 2004 High School, Horsens Statsskole

Courses attended outside Aarhus University

- Web Technologies, Workshop, Google Zürich 2010
- Types at Work, Summer School, DTU Copenhagen 2009
- Separation Logic, Summer School, ITU Copenhagen 2008

Position

Since August 2008 PhD student at the Department of Computer Science, Aarhus university at the PhD school Basic Research in Computer Science (BRICS) advised by Anders Møller.

Previous positions

August 2009 - November 2009	Research intern at <i>Microsoft Research</i> , Redmond
February 2007 - July 2008	Student programmer at <i>Brics, Aarhus University</i> developing a web framework and static analysis tools
May 2006 - February 2007	Student programmer at <i>Rambøll Management</i> developing software for statistical analysis of surveys

Administrative Duties at Aarhus University

- Member of the PhD Committee 2009 at the Faculty of Science

Teaching

- Lecturer of Server-Based Web Programming for grad students, Fall 2011
- Lecturer of Client-Based Web Programming for grad students, Fall 2011
- Lecturer of Web Technology Project for continuing education students, Spring 2010
- Lecturer of Web Technologies for continuing education students, Spring 2010
- Lecturer of XML Technologies for continuing education students, Spring 2010
- TA of Web Technology lectured by Michael Schwartzbach, Spring 2009
- TA of Virtual Machine for Object Oriented Languages lectured by Lars Bak and the Google V8 team, Fall 2008

Peer-reviewed publications

- [1] Anders Møller and Mathias Schwarz. Jwig: Yet another framework for maintainable and secure web applications. In *Proc. 5th International Conference on Web Information Systems and Technologies, WEBIST '09*, March 2009.
- [2] Anders Møller and Mathias Schwarz. HTML validation of context-free languages. In *Proc. 14th International Conference on Foundations of Software Science and Computation Structures, FoSSaCS '11*, 2011.

Talks

- *HTML validation of Context Free languages*, FoSSaCS 2011
- *Static Output Analysis for Java Servlets and JSP*, Dansas 2010
- *Yet another framework for maintainable and secure web applications*, WEBIST 2009

Computer Languages and Systems

I have extensive experience with all majors operating systems (Windows, OS X, and Linux) as well as with most of the standard software such as word processing, spreadsheets, and slide shows, primarily in Microsoft Office and L^AT_EX.

I have extensive experience with a number of programming languages including Java, C[#], JavaScript, and many web markup and programming languages such as HTML, XSLT, and XQuery. Furthermore, from academic courses I know a large number of programming languages including C, C++, OCaml, and Standard ML.

My knowledge of programming environments includes IntelliJ Idea, Vim, Eclipse and Visual Studio

Other activities

I work actively to improve the social life at the Department of Computer Science. Thus, for a number of years I have been on the board of Computer Science Friday Café which hosts bars, parties and other social events at the department. My responsibilities have included being the treasurer, ordering items, and dealing with Food Administration.

Previously, I was also a deputy member of the board of the PhD Association which hosts lectures and other academic events.

Furthermore, I have also been involved in the 'Rullende Universitet' and 'Natur i Teltet' projects. Both projects arrange (Computer) Science talks for high school and primary school students respectively.

Selected software packages

- JWIG (<http://www.brics.dk/JWIG/>)
program analyzer and runtime system for the JWIG programming language, developed with Anders Møller (previous version also by Aske Simon Christensen)
- COURSEADMIN (<http://www.brics.dk/~schwarz/CourseAdmin/>)
Course administration tool developed as case study for JWIG. Developed with Anders Møller. Widely used for all compulsory courses at the department of Computer Science, Aarhus University
- SERVLETVALIDATOR (<http://www.daimi.au.dk/~amoeller/ServletValidator/>)
Tool for verification of security and output generated by Servlets and JSP applications