

Curriculum Vitae

M. Oliver Möller

Business Address:

(looking for employment)

Current Address :

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Personal information

Place of Birth	Burgau, Germany
Date of Birth	7 June 1972
Citizenship	German
Language Skills	German, English (fluent); Danish (reasonable); Swedish, Latin (basic)

Degrees

Diplom in Informatik, Universität Ulm, Germany, March 1998

(corresponds to a master in computer science)

Title of Diploma Thesis: “Solving Bit-Vector Equations – A Decision Procedure for Hardware Verification”

Diploma rated 1.0

Qualifying Exam of the BRICS PhD School, Aarhus, Denmark, February 2000

Title: “Automation for Formal Verification: Exploiting Structure”

(Completing the first part of two-part PhD studies; corresponds to completing a masters degree in Denmark)

PhD thesis (computer science) at University of Aarhus, February 2002

Title: “Structure and Hierarchy in Real-Time Systems”

Under supervision of Kim G. Larsen

Defended: 19 April 2002,

Awarded: 7 May 2002.

Teaching experience

Teaching Assistant: Introduction to Artificial Intelligence, taught by Prof.

Friedrich von Henke et al., University of Ulm, autumn 1996 and autumn 1997

Teaching Assistant: Fundamentale Modeller, taught by Flemming Nielson,

Aarhus University, spring 1999

Instructor: Verification, PhD level course, held by Kim G. Larsen at Aarhus

University, spring 2000 and spring 2001

Additional education

required PhD level courses at BRICS:

- E98 Logic for Computer Science (Ulrich Kohlenbach)
- E98 Distributed Computation (Vladimiro Sassone, Mogens Nielsen)
- E98 Programming Languages (Michael I. Schwartzbach and Olivier Danvy)
- E98 Discrete Mathematics (Sasa Pekec and Peter Bro Miltersen)
- E98 Algorithms (Gerth Stølting Brodal)
- F99 Analysis for Algorithms (Kevin Compton)
- F99 Semantics (Glynn Winskel)
- F99 Verification (Kim Guldstrand Larsen)
- F99 Cryptography (Ivan Damgård)

International Summer School on Computational Logic, Edinburgh 1999

Professional skills

Programming experience in Java, C, C++, Lisp, Assembler, SML, and Prolog

Practical experience with scripting languages like Perl, Awk

Practical experience with macro expander M4, and the Make utility

Reasonable knowledge of web publishing, HTML, XML, and Javascript

User and partially developer experience with various Formal Verification Tools, including PVS, Mocha, Uppaal, Mona, Otter, and SPIN

Reasonable understanding of UNIX/Linux operating system and shell programming (bash)

Familiarity with text processing system \LaTeX and the graphical editor xfig

Familiarity with Emacs editor and extensions

Miscellaneous experience

1992—1998 Leader status in the DPSG, Germany's largest scout organization (Woodbadge Education)

Autumn 1997 Foundation member of the ACM chapter at University of Ulm
Member of the organization team for the South-West European ACM contest 1997

Publications**Papers at Refereed Conferences**

- “An Efficient Decision Procedure for the Theory of Fixed-Sized Bitvectors”, with David Cyrluk and Harald Rueß at CAV’97: *Computer Aided Verification. 9th International Conference*. Haifa, Israel. June 22–25, 1997: Proceedings, LNCS 1254.
- “Solving Bit-Vector Equations”, with Harald Rueß at FMCAD’98. *Formal methods in computer aided design: Second International Conference*. Palo Alto, CA, USA. November 4–6, 1998: Proceedings, LNCS 1522.
- “Heuristics for Hierarchical Partitioning with Application to Model Checking”, with Rajeev Alur at *Correct Hardware Design and Verification Methods (CHARME’01)*. Edinburgh, Scotland. September 2001: Proceedings, LNCS 2144.
- “UPPAAL - Present and Future”, with Gerd Behrman, Alexandre David, Kim G. Larsen, Paul Pettersson, and Wang Yi at *40th IEEE Conference on Decision and Control (CDC’01)*. Orlando, Florida, USA. 4-7 December 2001.
- “Formal Verification of UML Statecharts with Real-time Extensions”, with Alexandre David and Wang Yi at *Fundamental Approaches to Software Engineering (FASE’2002)*. Grenoble, France; part of ETAPS. 8.-12 April 2002.
- “Predicate Abstraction for Dense Real-Time Systems”, with Harald Rueß and Maria Sorea at *Theory and Practice of Timed Systems (TPTS’2002)*. Grenoble, France; part of ETAPS. 5.-6 April 2002.
- “Parking Can Get You There Faster - Model Augmentation to Speed up Real-Time Model Checking”, (single-authored) at *Theory and Practice of Timed Systems (TPTS’2002)*. Grenoble, France; part of ETAPS. 5.-6 April 2002.

Papers at Unrefereed Conferences

- “UPPAAL - Now, Next, and Future”, with Tobias Amnell, Gerd Behrman, Johan Bengtsson, Pedro R. D’Argenio, Alexandre David, Ansgar Fehnker, Thomas Hune, Bertrand Jeannot, Kim G. Larsen, Paul Pettersson, Carsten Weise, and Wang Yi in *Proceedings of Modeling and Verification of Parallel Processes (MOVEP’2k)*. Nantes, France. 19-23 June 2000. LNCS Tutorial 2067, pages 100-125.
- “Tools for Real-Time UML: Formal Verification and Code Synthesis”, with Tobias Amnell, Alexandre David, Elena Fersman, Paul Pettersson, and Wang Yi at *Specification, Implementation and Validation of Object-oriented Embedded Systems (SIVOES’2001)*. Budapest Hungary. 18-22 June 2001.

Academic travels

September–October 1996:

internship at the Stanford Research Institute SRI international, Menlo Park, California, USA

September–November 1999:

external stay at the University of Pennsylvania, USA

September 2000–February 2001:

external stay at the University of Uppsala, Sweden

July–August 2001:

research visit at the Stanford Research Institute SRI international, Menlo Park, California, USA