October 4, 2022

Curriculum Vitae

ANDERS MØLLER

Born:	January 16, 1976
Citizenship:	Danish
Marital status:	married
Children:	two daughters

Address

Office: Department of Computer Science
Aarhus University
IT-parken, Aabogade 34
DK-8200 Aarhus N
Denmark

Home: Flinthøjen 46
DK-8382 Hinnerup
Denmark

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Phone: +45 2330 9994

Position

since 2017	Professor
2006–2017	Associate Professor
2002–2005	Assistant Professor
	at Department of Computer Science, Aarhus University
since 2011	Manager of CASA - Center for Advanced Software Analysis http://casa.au.dk/

Research Interests

My research is in programming languages and software engineering, with focus on static and dynamic program analysis.

Degrees

June 2000	M.Sc. Computer Science (Cand. Scient., Datalogi), Aarhus University
September 2002	Ph.D., Aarhus University

Grants and Awards

August 1998–July 2002	Ph.D. scholarship from Aarhus University and BRICS / The Danish National Research Foundation
January 2003–December 2005	grant from the Carlsberg Foundation (1.4 M DKK) Project title: "Verification of software systems"
July 2007	IBM Faculty Award ($30,000)
January 2008–June 2012	grant from The Danish Research Council for Technology and Production Sciences, FTP (3.7 M DKK) Project title: "Languages and Analyses for Web Programming"
December 2009	gift from Google ($90,000)
May 2010	research contract with Fujitsu Laboratories of America ($15,000)
July 2010	Google Research Award ($65,000)
December 2010	IBM Faculty Award ($20,000)
August 2011–December 2015	grant from The Danish Research Council for Technology and Production Sciences, FTP (4.8 M DKK) Project title: "Tools for Rich Internet Applications"
August 2011–July 2015	**Sapere Aude, DFF Starting Grant (Forskningsleder)** 2010 The Danish Council for Independent Research (7.9 M DKK) Project title: "Static Analysis for Dynamic Languages"
June 2012	ACM SIGSOFT Distinguished Paper Award at ICSE 2012 for the paper [19]
July 2012	ACM SIGSOFT Distinguished Paper Award at ISSTA 2012 for the paper [48]
October 2014	ACM SIGPLAN OOPSLA Artifact Award at OOPSLA 2014 for the TSCheck tool accompanying the paper [53]
August 2015–January 2022	**ERC Consolidator Grant** (€1.9 M) Project title: "Automated Program Analysis for Advanced Web Applications"
July 2015	ACM SIGSOFT Distinguished Paper Award at ISSTA 2015 for the paper [55]

August 2015	gift from Samsung Research America ($5,000)
May 2016	ACM SIGSOFT Distinguished Paper Award at ICSE 2016 for the paper [57]
July 2016	ACM SIGSOFT Distinguished Paper Award at ISSTA 2016 for the paper [58]
June 2017	ACM SIGPLAN PLDI Distinguished Reviewer Award
October 2017	ACM SIGPLAN Distinguished Paper Award at OOPSLA 2017 for the paper [23]
December 2018	gift from Oracle Labs ($50,000)
February 2020	the **Elite Research Prize (EliteForsk)**, by the Danish Ministry for Higher Education and Science (1.2 M DKK)
November 2021	InnoExplorer grant from Innovation Fund Denmark (1.5 M DKK)
February 2022	Proof of Concept grant from the European Research Council (€150 K)
October 2022	ACM SIGSOFT Distinguished Paper Award at ASE 2022 for the paper [75]

Workshop Organization, Program Committee Work, etc.

- Member of **IFIP Working Group 2.4**, Software Implementation Technology since 2010, Vice-Chair since July 2015
- Committee member of Ecma TC52 (Technical Committee for Dart Standardization), 2014–2018
- PC member of European Symposium on Programming (ESOP) 2005
- PC member of International Workshop on Programming Language Technologies for XML (PLAN-X) 2005, 2007, and 2009
- **General Chair** of International Workshop on Programming Language Technologies for XML (PLAN-X) 2006
- PC member of International Workshop on the Web and Databases (WebDB) 2007
- PC member of International Conference on Compiler Construction (CC) 2008
- PC member of Workshop on Testing, Analysis and Verification of Web Services and Applications (TAV-WEB) 2008
- Member of the Management Committee of EU COST Action IC0701: Formal Verification of Object-Oriented Software, 2008-2011
- PC member of International Static Analysis Symposium (SAS) 2009

- PC member of Workshop on Analysis and Programming Languages for Web Applications and Cloud Applications (APLWACA) 2010
- PC member of International Conference on Formal Verification of Object-Oriented Software (FoVeOOS) 2010 and 2011
- PC member of Symposium on Principles of Programming Languages (POPL) 2011
- PC member of International Conference on Data Engineering (ICDE) 2011
- ERC member of Conference on Programming Language Design and Implementation (PLDI) 2011
- PC member of International Conference on the Principles and Practice of Programming in Java (PPPJ) 2011
- PC member of Workshop on Program Analysis for Software Tools and Engineering (PASTE) 2011
- PC member of International Symposium on Engineering Secure Software and Systems (ESSoS) 2012
- ERC member of Symposium on Principles of Database Systems (PODS) 2012
- PC member of European Symposium on Programming (ESOP) 2012
- PC member of Conference on Programming Language Design and Implementation (PLDI) 2012
- PC member of International Static Analysis Symposium (SAS) 2012
- PC member of International Symposium on Engineering Secure Software and Systems (ESSoS) 2013
- ERC member of Conference on Programming Language Design and Implementation (PLDI) 2013
- PC member of International Conference on Web Engineering (ICWE) 2013
- PC member of International Workshop on Automated Specification and Verification of Web Systems (WWV) 2013
- PC member of International Workshop on the State Of the Art in Java Program Analysis (SOAP) 2013
- PC member of Conference on Programming Language Design and Implementation (PLDI) 2014
- PC member of International Workshop on the State Of the Art in Java Program Analysis (SOAP) 2014
- PC member of Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2014
- PC member of International Workshop on Automated Specification and Verification of Web Systems (WWV) 2014
- PC member of International Static Analysis Symposium (SAS) 2014
- **PC chair** of Workshop on Tools for Automatic Program AnalysiS (TAPAS) 2014

- PC (tool track) member of International Working Conference on Source Code Analysis and Manipulation (SCAM) 2014
- ERC member of Conference on Programming Language Design and Implementation (PLDI) 2015
- **PC chair** of International Workshop on the State Of the Art in Program Analysis (SOAP) 2015
- ERC member of Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2015
- PC member of International Symposium on Document Engineering (DocEng) 2015
- PC member of European Symposium on Programming (ESOP) 2016
- ERC member of European Conference on Object-Oriented Programming (ECOOP) 2016
- PC member of International Conference on the Principles and Practice of Programming in Java (PPPJ) 2016
- PC member of Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2016
- Co-organizer of International Workshop on Programming Technology for the Future Web (ProWeb) 2017
- PC member of Conference on Programming Language Design and Implementation (PLDI) 2017
- PC member of European Conference on Object-Oriented Programming (ECOOP) 2017
- PC member of International Static Analysis Symposium (SAS) 2017
- PC member of Web Programming, Design, Analysis, and Implementation (WPDAI@WWW) 2018
- PC member of International Workshop on Programming Technology for the Future Web (ProWeb) 2018
- PC member of International Symposium on Software Testing and Analysis (ISSTA) 2018
- PC member of Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2018
- **PC chair** of International Symposium on Software Testing and Analysis (ISSTA) 2019
- **Associate Editor** of ACM Transactions on Programming Languages and Systems (TOPLAS) 2018–2021
- PC member of International Workshop on Programming Technology for the Future Web (ProWeb) 2019
- PC member of International Static Analysis Symposium (SAS) 2019
- **AEC co-chair** at Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2020
- ERC member of Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2020
- PC member of Dynamic Languages Symposium (DLS) 2020

- PC member of International Static Analysis Symposium (SAS) 2020
- **Associate Editor** of ACM Transactions on Software Engineering and Methodology (TOSEM) 2020–2023
- PC member, **area chair of software testing/debugging/program analysis** of International Conference on Software Engineering (ICSE) 2021
- **General Chair** of European Conference on Object-Oriented Programming (ECOOP) 2021
- **AEC co-chair** at Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2021
- **Vice-Chair of ACM SIGPLAN**, July 2021 – June 2024
- PC member of International Conference on Software Engineering (ICSE) 2022
- PC member of European Conference on Object-Oriented Programming (ECOOP) 2022
- PC member of International Symposium on Software Testing and Analysis (ISSTA) 2022
- PC member of Object-Oriented Programming Systems, Languages, and Applications (OOPSLA) 2023
- PC member of European Conference on Object-Oriented Programming (ECOOP) 2023
- PC member of International Conference on Software Engineering (ICSE) 2024

External Thesis Committees

- Marcus Nilsson, Ph.D., University of Uppsala, March 2005
- Phillip Heidegger, Ph.D., Freiburg University, June 2012
- Josip Maras, Ph.D., Mälardalen University, April 2014
- Arlen Cox, Ph.D., University of Colorado Boulder, November 2014 and Ecole Normale Supérieure, April 2015
- Vincent Laporte, Ph.D., IRISA/Inria Rennes, November 2015
- Luciano Bello, Ph.D., Chalmers University of Technology, January 2016
- Jens Nicolay, Ph.D., Vrije Universiteit Brussel, May/June 2016
- Yue Li, Ph.D., University of New South Wales, June 2016
- Martin Bodin, Ph.D., IRISA/Inria Rennes, November 2016
- Lucas Brutschy, Ph.D., ETH Zurich, December 2017
- Johannes Späth, Ph.D., University of Paderborn, January 2019
- Raphaël Monat, Ph.D., LIP6, Sorbonne Université, 2021
- Alexandra Bugariu, Ph.D., ETH Zurich, 2022

Talks at Conferences, Seminars, etc.

June/July 1998	CAV 1998, Vancouver, BC
January 1999	Technical University of Denmark
May 1999	University of Aalborg
March 2000	ESOP 2000, Berlin
June 2000	Meeting on XML/SGML based Interchange Formats for Petri Nets, 21st International Conference on Application and Theory of Petri Nets (**invited speaker**)
July 2000	CIAA 2000, London, Ontario
August 2000	FMSP 2000, Portland, Oregon
November 2000	University of California, Berkeley
January 2001	SPACE 2001, London
March 2001	IT University of Copenhagen
June 2001	AT&T Labs Research, New Jersey
June 2001	PLDI 2001, Snowbird, Utah
November 2002	IT University of Copenhagen
March 2003	Seminar on *Reasoning about Shape*, Schloss Dagstuhl, Germany
March 2003	LinuxForum 2003, Copenhagen (**invited speaker**)
June 2003	Dresden University of Technology
September 2003	5th International Workshop on Verification of Infinite-State Systems, INFINITY 2003, Marseilles, France (**invited speaker**)
January 2005	PLAN-X 2005, Los Angeles, California
February 2005	University of Aalborg
March 2005	University of Uppsala
June 2005	Seminar on *Types for Tools: Applications of Type Theoretic Techniques*, Schloss Dagstuhl, Germany
August 2006	SAS 2006, Seoul, Korea
October 2006	University of Aalborg
January 2007	IT University of Copenhagen
January 2007	Seminar on *Programming Paradigms for the Web*, Schloss Dagstuhl, Germany
May 2007	IFIP WG 2.4 meeting, Lake Arrowhead, California
July 2007	IBM T.J. Watson, New York
July 2007	University of Oregon, Eugene, Summer School on Language-Based Techniques for Integrating with the External World (**invited lecturer**)
August 2007	Estonian Summer School in Computer and System Science, ESSCaSS 2007 (**invited lecturer**)
December 2007	Softwareudvikling-på-tværs 2007, Danish Technological Institute, Copenhagen (**invited speaker**)
January 2008	PLAN-X 2008, San Francisco, California
January 2008	University of California, Davis
June 2008	COST Action IC0701 meeting, Chalmers, Sweden
January 2009	UNF, Aalborg
May 2009	IFIP WG 2.4 meeting, Fort Worden, Washington
June 2009	COST Action IC0701 meeting, Lisbon, Portugal
August 2009	IBM T.J. Watson, New York
August 2009	DANSAS 2009, Odense
October 2009	University of Aalborg
January 2010	IFIP WG 2.4 meeting, Berg en Terblijt, Netherlands
March 2010	Microsoft Research, Redmond, Washington
August 2010	SAS 2010, Perpignan, France
October 2010	POPL PC workshop, University of Maryland, College Park

October 2010	University of Wisconsin–Madison
November 2010	Google, New York
December 2010	University of Copenhagen
June 2011	Microsoft Research, Redmond, Washington
September 2011	Workshop on Web Quality, Security, and Testing, WebQUeST 2011, Szeged, Hungary (**invited speaker**)
September 2011	Workshop on Tools for Automatic Program AnalysiS, TAPAS 2011, Venice, Italy (**invited speaker**)
September 2011	IFIP WG 2.4 meeting, Cape May, New Jersey
May 2012	IFIP WG 2.4 meeting, Vadstena, Sweden
June 2012	STOP 2012, Beijing, China
June 2012	Workshop on JavaScript Tools, JSTools 2012, Beijing, China (**invited speaker**)
June 2012	ACM SIGPLAN International Workshop on the State Of the Art in Java Program Analysis, SOAP 2012, Beijing, China (**invited speaker**)
June 2012	Freiburg University, Germany
July 2012	ISSTA 2012, Minneapolis, Minnesota
August 2012	DANSAS 2012, Odense
October 2012	Seoul National University (SNU), South Korea
October 2012	Korea Advanced Institute of Science and Technology (KAIST), South Korea
October 2012	Nordic Workshop on Programming Theory, NWPT'12, Bergen, Norway (**invited speaker**)
March 2013	IFIP WG 2.4 meeting, Mysore, India
April 2013	Seminar on *Pointer Analysis*, Schloss Dagstuhl, Germany
July 2013	ETH Zürich, Switzerland
September 2013	Hong Kong University of Science and Technology
September 2013	City University Hong Kong
September 2013	Tsinghua University
September 2013	Peking University
February 2014	IFIP WG 2.4 meeting, Asilomar, California
May 2014	OOPSLA PC workshop, UCLA
July 2014	Seminar on *Scripting Languages and Frameworks*, Schloss Dagstuhl, Germany
July 2014	Workshop on Higher-Order Program Analysis, HOPA'14, Vienna, Austria (**invited speaker**)
October 2014	Workshop on Software Correctness and Reliability, WSCR'14, Zürich, Switzerland (**invited speaker**)
November 2014	IFIP WG 2.4 meeting, Stellenbosch, South Africa
February 2015	Google, Mountain View, California
February 2015	UC Davis, California
March 2015	Samsung Research America, California
March 2015	Workshop on Formal Methods for JavaScript, Inria, Paris, France
July 2015	Workshop on Tools for JavaScript Analysis, JSTools'15, Prague, Czech Republic (**invited speaker**)
September 2015	Static Analysis Symposium, SAS'15, Saint-Malo, France (**invited speaker**)
December 2015	Workshop on Advances in Programming Languages and Systems, APLS'15, Frankfurt, Germany (**invited speaker**)
February 2016	SECENTIS Winter School Trento, Italy (**invited lecturer**)
April 2016	IFIP WG 2.4 meeting, Victoria, BC, Canada
May 2016	Seminar on *Synergies among Testing, Verification, and Repair for Concurrent Programs*, Schloss Dagstuhl, Germany

May 2016	Vrije Universiteit Brussel
May 2016	OOPSLA PC workshop, TU Delft
August 2016	DANSAS 2016, Odense
October 2016	Workshop on Software Correctness and Reliability, WSCR'16, Zürich, Switzerland (**invited speaker**)
December 2016	IFIP WG 2.4 meeting, Dresden, Germany
June 2017	Workshop on Tools for JavaScript Analysis, JSTools'17, Barcelona, Spain (**invited speaker**)
September 2017	NII Shonan Meeting on Memory Abstraction, Emerging Techniques and Applications, Japan
October 2017	IFIP WG 2.4 meeting, Essex, Vermont
March 2018	Workshop on Formal Methods for JavaScript, London, UK
July 2018	ECOOP and ISSTA Summer School, Amsterdam, Netherlands (**invited lecturer**)
October 2018	Dutch Institute for Programming research and Algorithmics (IPA), Netherlands (**invited speaker**)
March 2019	IFIP WG 2.4 meeting, Paihia, New Zealand
May 2019	Programming Language Implementation Summer School (PLISS), Italy (**invited lecturer**)
September 2019	Driving IT, Aarhus (**invited speaker**)
November 2019	Driving IT, Copenhagen (**invited speaker**)
January 2020	IFIP WG 2.4 meeting, Port Elizabeth, South Africa
March 2020	The Royal Danish Academy of Sciences and Letters, Copenhagen (**invited speaker**)
March 2021	International Conference on Code Quality, ICCQ'21, (**invited speaker**)
September 2022	Huawei Strategy and Technology Workshop 2022, (**invited speaker**)

Teaching

Lecturing at Aarhus University:

Spring 2000	*XML and Related Technologies*(28 students)
Fall 2002	*Interactive Web Services* (56 students)
Fall 2003 (2nd quarter)	*Software Verification* (20 students)
Spring 2004 (3rd quarter)	*Web Technology* (125 students)
Spring 2004 (3rd quarter)	*Regularity and Automata* (178 students)
Spring 2004 (4th quarter)	*Static Analysis* (two weeks, 11 students)
Fall 2004 (2nd quarter)	*Advanced XML* (49 students)
Spring 2005 (3rd quarter)	*Web Technology* (114 students)
Spring 2005 (4th quarter)	*Regularity and Automata* (97 students)
Fall 2005 (1st quarter)	*Computer Science in Perspective – Automatic Validation of HTML Input Fields* (one week, 104 students)
Spring 2006 (3rd quarter)	*Web Technology* (84 students)
Spring 2006 (4th quarter)	*Programming Languages* (two weeks, 80 students)
Spring 2006 (4th quarter)	*Regularity and Automata* (125 students)
Fall 2006 (1st quarter)	*Computer Science in Perspective – Automatic Validation of HTML Input Fields* (one week, 75 students)
Fall 2006 (2nd quarter)	*Advanced Web Technology* (78 students)
Spring 2007 (3rd quarter)	*Web Technology* (139 students)
Spring 2007 (4th quarter)	*Software Verification* (13 students)
Spring 2007 (4th quarter)	*Regularity and Automata* (115 students)
Fall 2007 (1st quarter)	*Computer Science in Perspective – Formal Languages and Web Technology* (one week, 76 students)
Fall 2007 (2nd quarter)	*Advanced Web Technology* (33 students)
Spring 2008 (4th quarter)	*Software Verification* (14 students)

Spring 2008 (4th quarter)	*Regularity and Automata* (103 students)
Fall 2008 (1st quarter)	*Computer Science in Perspective – Formal Languages and Web Technology* (one week, 110 students)
Fall 2008 (1st quarter)	*Concurrency* (158 students)
Fall 2008 (2nd quarter)	*Advanced Web Technology* (34 students)
Spring 2009 (4th quarter)	*Regularity and Automata* (129 students)
Fall 2009 (1st quarter)	*Computer Science in Perspective – Formal Languages and Web Technology* (one week, 110 students)
Fall 2009 (1st quarter)	*Concurrency* (107 students)
Fall 2009 (1st quarter)	*Databases* (three weeks, 78 students)
Fall 2009 (2nd quarter)	*Advanced Web Technology* (23 students)
Spring 2010 (3rd quarter)	*Static Analysis* (25 students)
Spring 2010 (4th quarter)	*Software Verification* (15 students)
Spring 2010 (4th quarter)	*Regularity and Automata* (110 students)
Fall 2010 (1st quarter)	*Concurrency* (118 students)
Fall 2010 (1st quarter)	*Computer Science in Perspective – Formal Languages and Web Technology* (one week, 112 students)
Fall 2010 (1st quarter)	*Server-based Web Programming* (68 students)
Fall 2010 (2nd quarter)	*Client-based Web Programming* (76 students)
Spring 2011 (3rd quarter)	*Web Technology* (140 students)
Spring 2011 (4th quarter)	*Regularity and Automata* (120 students)
Fall 2011 (1st quarter)	*Concurrency* (97 students)
Fall 2011 (1st quarter)	*Server-based Web Programming* (50 students)
Fall 2011 (2nd quarter)	*Client-based Web Programming* (45 students)
Spring 2012 (3rd quarter)	*Static Analysis* (18 students)
Spring 2012 (4th quarter)	*Software Verification* (10 students)
Spring 2012 (4th quarter)	*Regularity and Automata* (125 students)
Fall 2012 (1st quarter)	*Server-based Web Programming* (47 students)
Fall 2012 (2nd quarter)	*Client-based Web Programming* (60 students)
Spring 2013 (3rd quarter)	*Static Analysis* (11 students)
Spring 2013 (4th quarter)	*Regularity and Automata* (120 students)
Fall 2013 (1st quarter)	*Server-based Web Programming* (68 students)
Fall 2013 (2nd quarter)	*Client-based Web Programming* (70 students)
Fall 2013 (2nd quarter)	*Concurrency* (103 students)
Spring 2014 (3rd quarter)	*Static Analysis* (27 students)
Spring 2014 (4th quarter)	*Regularity and Automata* (133 students)
Fall 2014 (2nd quarter)	*Advanced Web Programming* (113 students)
Spring 2015 (4th quarter)	*Static Analysis* (40 students)
Spring 2015 (4th quarter)	*Regularity and Automata* (117 students)
Fall 2015 (2nd quarter)	*Advanced Web Programming* (106 students)
Spring 2016 (4th quarter)	*Regularity and Automata* (167 students)
Spring 2017 (3rd quarter)	*Static Analysis* (18 students)
Spring 2017 (4th quarter)	*Regularity and Automata* (121 students)
Fall 2017	*Program Analysis and Verification* (21 students)
Spring 2018	*Programming Languages* (175 students)
Fall 2018	*Program Analysis and Verification* (20 students)
Spring 2019	*Programming Languages* (188 students)
Fall 2019	*Program Analysis and Verification* (23 students)
Spring 2020	*Programming Languages* (153 students)
Fall 2020	*Program Analysis and Verification* (24 students)
Spring 2021	*Programming Languages* (175 students)
Fall 2021	*Program Analysis* (16 students)
Spring 2022	*Programming Languages* (156 students)
Fall 2022	*Program Analysis* (18 students)

Theses Advised

- Christian Kirkegaard† (Cand. Scient. Datalogi 2003, **Ph.D.** 2006):
  Dynamic XML Processing with Static Validation
- Mathias Schwarz (Cand. Scient. Datalogi 2010, **Ph.D.** 2013):
  Design and Analysis of Web Application Frameworks
- Simon Holm Jensen (Cand. Scient. Datalogi 2010, **Ph.D.** 2013):
  Static Analysis for JavaScript
- Asger Feldthaus (Cand. Scient. Datalogi 2012, **Ph.D.** 2015):
  Pointer Analysis for JavaScript Programming Tools
- Casper Svenning Jensen (**Ph.D.** 2015):
  Automated Testing of Event-Driven Applications
- Magnus Madsen (Cand. Scient. Datalogi 2012, **Ph.D.** 2015):
  Static Analysis of Dynamic Languages
- Esben Andreasen (Cand. Scient. Datalogi 2014, **Ph.D.** 2016):
  Designing Abstractions for JavaScript Program Analysis
- Fabio Strocco (**Ph.D.** 2016):
  Type Soundness in the Dart Programming Language
- Christoffer Quist Adamsen (Cand. Scient. Datalogi 2015, **Ph.D.** 2018):
  Automated Testing Techniques for Event-Driven and Dynamically Typed Software Applications
  Google PhD Fellow 2017
- Erik Krogh Kristensen (Cand. Scient. Datalogi 2017, **Ph.D.** 2019):
  Automated Techniques for Creation and Maintenance of TypeScript Declaration Files
- Benjamin Barslev Nielsen (Cand. Scient. Datalogi 2018, **Ph.D.** 2021):
  Static Analysis for Node.js
- Martin Toldam Torp (Cand. Scient. Datalogi 2019, **Ph.D.** 2021):
  Techniques and Tools for Supporting Maintenance of Node.js Programs
- Oskar Haarklou Veileborg (Cand. Scient. Datalogi 2020, **Ph.D.** 2019–2023)
- Georgian-Vlad Saioc (**Ph.D.** 2020–2024)
- Wenyuan Xu (**Ph.D.** 2022–2025)
- Henning Böttger (Cand. Scient. Datalogi, 2004):
  Improving Cooperation Between Programmers and HTML Designers Using Contracts
- Gunner Olesen (Master IT, 2004):
  System Integration With Web Services on the Business Intranet
- Torben Ruby (Cand. Scient. Datalogi 2004):
  Specification, Implementation, and Verification of Web Services
- Mads Østerby Olesen† (Cand. Scient. Datalogi 2004):
  Static Validation of XSLT
- Alexander Harrow (Cand. IT, 2005):
  XML and Relational Databases – A Survey
- Martin Mosegaard Jensen (Cand. Scient. Datalogi, 2006):
  Understanding Parametric Shape Analysis
- Janus Dam Nielsen (Cand. Scient. Datalogi, 2006):
  Relations between Schema Languages for XML
- Søren Kuula† (Cand. Scient. Datalogi, 2006):
  Practical Type-Safe XSLT 2.0 Stylesheet Authoring

- Michael Ustrup† (Cand. Scient. Datalogi, 2006):
  Coding Conventions
- Colin Samuel Rosenthal† (Cand. IT, 2007):
  Contract-Based Web Development
- Henrik Thuesen (Cand. Scient. Datalogi, 2007):
  Type Checking for JavaScript
- Jonas Krarup Dam (Cand. Scient. Datalogi, 2007):
  Static Analysis for Java Servlets and JSP
- Rasmus Nygaard Andersen (Cand. Scient. Datalogi, 2007):
  Web Application Frameworks
- Rune Simonsen and
- Rasmus Kromann-Larsen (Cand. Scient. Datalogi, 2007):
  Analyzing JavaScript Programs
- Bárdur Háskor (Cand. Scient. Datalogi, 2007):
  Analysis of String Expressions
- Anders Jacobsen (Cand. Scient. Datalogi, 2007):
  Analysis of SAX Applications
- Sune Koch Hansen (Cand. Scient. Datalogi, 2008):
  Call-Graph Analysis for JavaScript
- Kasper Hansen (Cand. Polyt., 2008):
  Web Service Standards
- Lea Troels Møller Pedersen (Cand. Scient. Datalogi, 2009):
  Program Slicing for String Analysis
- Ronny Rundberg Bruus (Cand. Scient. Datalogi, 2009):
  Safety Analysis for Web Applications
- Simon Corfix Lykke (Cand. Scient. Datalogi, 2010):
  Streaming XSLT
- Jakob Benjamin Boisen Juhl (Cand. Scient. Datalogi, 2010):
  Scripting in OpenEngine
- Smári Vidarsson Waage (Cand. Scient. Datalogi, 2010):
  A Study of Trace-Based Compilation
- Kristian Klüver Jensen (Cand. Scient. Datalogi, 2010):
  Type Checking SQL/XML
- Anders Viskum (Cand. Scient. Datalogi, 2010):
  Web Application Testing
- Peter Bugge Andersen (Dipl. IT, 2010):
  Caching in JEE Backends
- Jesper Ilsøe Nielsen† (Cand. Scient. Datalogi, 2011):
  Engineering Sub-Cubic Flow Analysis
- Valerio Bruno (M.Sc. CS, 2011):
  Concolic Testing with PALE
- Martin Castberg Thuesen (Cand. Scient. Datalogi, 2011):
  Contracts for jQuery
- Alexander Bjerremand Hansen† (Cand. Scient. Datalogi, 2011):
  Exception Analysis in MLton
- Casper Bach Poulsen (Cand. Scient. Datalogi, 2011):
  Methods and Tools for Automated Testing of JavaScript Web Applications

- Asger Eriksen (Cand. Scient. Datalogi, 2012):
  Dart's Type System and Success Types
- Morten Poulsen (Master IT, 2013):
  An Upgrade of a Legacy Web Service Infrastructure
- Jacob Hougaard and
- Kasper Føns (Cand. Scient. Datalogi, 2014):
  A Study of the DASH Algorithm for Software Property Checking
- Nils Asbjørn Joensen (Cand. Scient. Datalogi, 2014):
  Identification of Classes and Modules in JavaScript
- Morten Passow Odgaard (Master IT, 2014):
  JavaScript Type Inference using Dynamic Analysis
- Troels Leth Jensen and
- Jesper Lindstrøm Nielsen (Cand. Scient. Datalogi, 2015):
  Type Inference for Dart
- Ulrik Sahl Lystbæk (Cand. Scient. Datalogi, 2015):
  Demand-driven pointer analysis optimized for code completion in JavaScript
- Christian Budde Christensen and
- Randi Hillerøe (Cand. Scient. Datalogi, 2015):
  Type Analysis for PHP Arrays
- Alex Fuller Fischer (Cand. Scient. Datalogi, 2018):
  Static Analysis for WebAssembly

[†]Project advisor or co-advisor

Postdocs

August 2011 – July 2012	Peter A. Jonsson
February 2013 – January 2014	Mathias Schwarz
February 2013 – July 2014	Jan Midtgaard
March 2014 – March 2018	Gianluca Mezzetti
January 2015 – December 2015	Thomas Heinze
June 2016 – August 2017	Esben Andreasen
September 2017 – September 2019	Yue Li
September 2017 – September 2019	Tian Tan
February 2019 – January 2020	Andre Takeshi Endo
December 2020 – December 2021	Benjamin Barslev Nielsen

Administrative Duties at Aarhus University

- Vice Head of Department of Computer Science, since August 2020
- Chairman of the Computer Science program committee at the Graduate School of Natural Sciences (formerly: Aarhus Graduate School of Science / Graduate School of Science and Technology), since April 2011
- Chairman of the Faculty of Science and Technology Information Security and Data Management Committee, since November 2019
- Member of the Faculty of Science and Technology Research Committee, since September 2015

- Member of the Faculty of Science and Technology PhD Committee, February 2012 – 2024
- Member of the Dept. of CS Research Committee, since October 2014
- Member of the Dept. of CS PhD Committee, since July 2007
- Member of the Dept. of CS Seminar Committee, November 2006 – February 2016
- Member of the Dept. of CS Teaching Committee, November 2006 – February 2012
- Chairman of 36 local PhD evaluation committees

Selected Software Packages

- MONA (`http://www.brics.dk/mona/`)
  decision procedure for monadic second-order logics, developed with Nils Klarlund
- PALE (`http://www.brics.dk/PALE/`)
  extension of MONA for program verification with Pointer Assertion Logic
- JWIG (`http://www.brics.dk/JWIG/`)
  program analyzer and runtime system for the JWIG programming system, developed with Aske Simon Christensen and Mathias Schwarz
- XACT (`http://www.brics.dk/Xact/`)
  Java-based XML transformation library and program analyzer, developed with Aske Simon Christensen, Christian Kirkegaard and Asger Feldthaus
- `dk.brics.automaton` (`http://www.brics.dk/automaton/`)
  DFA/NFA and regular expression operations
- `dk.brics.grammar` (`http://www.brics.dk/grammar/`)
  context-free grammar parsing and ambiguity analysis
- `dk.brics.schematools` (`http://www.brics.dk/schematools/`)
  tool for working with XML graphs, XML Schema, and Restricted RELAX NG, developed with Christian Kirkegaard
- JSA (`http://www.brics.dk/JSA/`)
  Java String Analyzer tool, developed with Aske Simon Christensen, Bárdur Háskor and Asger Feldthaus
- TAJS (`http://www.brics.dk/TAJS/`)
  Type Analyzer for JavaScript, developed with Simon Holm Jensen, Peter Thiemann, Magnus Madsen, and Esben Andreasen
- COURSEADMIN (`http://cs.au.dk/courseadmin/`)
  a course administration system written in JWIG developed with Mathias Schwarz, Esben Andreasen, and Kasper Nielsen
- REAP
  an administration system for managing research applications at Aarhus University
- GONZALES
  an administration system for managing schedules and portfolios at Aarhus University
- GLOBETROTTER
  an administration system for managing travel applications at Department of Computer Science, Aarhus University

Refereeing (as external reviewer)

(See also program committee work above.)

Journals:

- Computers & Security (CompSec)
- Data & Knowledge Engineering (DKE)
- Formal Methods in System Design (FMSD)
- Higher-Order and Symbolic Computation (HOSC)
- Information Systems (IS)
- Internet Computing (IC)
- IEICE Transactions on Information and Systems (IEICE)
- International Journal of Foundations of Computer Science (IJFCS)
- Journal of Functional Programming (JFP)
- Journal of Information Processing Systems (JIPS)
- Journal of Object Technology (JOT)
- Journal of Logic and Algebraic Programming (JLAP)
- Journal of Systems and Software (JSS)
- Science of Computer Programming (SCP)
- Software Practice and Experience (SP&E)
- International Journal on Software Tools for Technology Transfer (STTT)
- Software Testing, Verification and Reliability (STVR)
- Transactions on Computational Logic (TOCL)
- Transactions on Database Systems (TODS)
- Transactions on Dependable and Secure Computing (TDSC)
- Transactions on Programming Languages and Systems (TOPLAS)
- Transactions on Reliability (TR)
- Transactions on Software Engineering and Methodology (TOSEM)
- Transactions on Software Engineering (TSE)
- World Wide Web Journal (WWWJ)

Conferences/workshops:

- International Conference on Computer Aided Verification (CAV)
- Computability in Europe (CiE)
- International Conference on Data Base Programming Languages (DBPL)
- Dynamic Languages Symposium (DLS)
- European Conference on Object-Oriented Programming (ECOOP)
- European Symposium on Programming (ESOP)
- Formal Methods (FM)
- Foundations of Software Science and Computation Structures (FOSSACS)

- International Colloquium on Automata, Languages and Programming (ICALP)
- International Conference on Functional Programming (ICFP)
- International Symposium on Mathematical Foundations of Computer Science (MFCS)
- Object-Oriented Programming, Systems, Languages and Applications (OOPSLA)
- Workshop on Program Analysis for Software Tools and Engineering (PASTE)
- International Workshop on Programming Language Technologies for XML (PLAN-X)
- Conference on Programming Language Design and Implementation (PLDI)
- Symposium on Principles of Database Systems (PODS)
- Symposium on Principles of Programming Languages (POPL)
- Symposium On Applied Computing (SAC)
- International Static Analysis Symposium (SAS)
- International Workshop on Tools and Algorithms for Construction and Analysis of Systems (TACAS)
- International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI)
- International Conference on Web Information System Engineering (WISE)

Other reviewing / committees:

- ACM SIGPLAN Dissertation Award committee
- ACM SIGSOFT Dissertation Award committee
- ACM SIGSOFT Impact Paper Award committee
- ESEC/FSE Test of Time Award committee
- Austrian Science Fund (FWF)
- Deutsche Forschungsgemeinschaft (DFG)
- EPSRC (British Research Council)
- ERC Starting Grants and Consolidator Grants
- EU FP7
- Department of Mathematics and Computer Science, University of Southern Denmark (IMADA)
- IT University of Copenhagen (ITU)
- Swiss National Science Foundation (SNSF)
- National Science Center, Poland (NCN)
- The Netherlands Organisation for Scientific Research (NWO)
- City University of Hong Kong
- Natural Sciences and Engineering, Research Council of Canada (NSERC)
- Pearson Education
- French National Research Agency (ANR)

Publications

(Most of the publications have used alphabetical order of authors.)

Theses

[1] "**MONA, DSD, and <bigwig>**," Ph.D. progress report (equivalent to master's thesis), June 2000.

[2] "**Program Verification with Monadic Second-Order Logic & Languages for Web Service Development**," Ph.D. dissertation, Department of Computer Science, Aarhus University, June 2002. xvi+337 pp.

Books

[3] "**An Introduction to XML and Web Technologies**," with Michael I. Schwartzbach, Addison-Wesley, January 2006, 568 pp, ISBN: 0-321-26966-7.

[4] "**Proceedings of the 28th ACM SIGSOFT International Symposium on Software Testing and Analysis, ISSTA 2019, Beijing, China, July 15–19, 2019**," with Dongmei Zhang, ACM, July 2019, ISBN: 978-1-4503-6224-5.

[5] "**Proceedings of the 35th European Conference on Object-Oriented Programming, ECOOP 2021, Aarhus, Denmark (Virtual Conference), July 11–17, 2021**," with Manu Sridharan, LIPIcs 194, Schloss Dagstuhl – Leibniz-Zentrum für Informatik, July 2021, ISBN: 978-3-95977-190-0.

Refereed Journal Publications

[6] "**A Runtime System for Interactive Web Services**," with Claus Brabrand, Anders Sandholm, and Michael I. Schwartzbach, in *Computer Networks*, Vol. 31 No. 11–16: 1391–1401, Elsevier, 1999; also in *WWW8, Proc. 8th International World Wide Web Conference*, Elsevier, 1999.

[7] "**PowerForms: Declarative Client-Side Form Field Validation**," with Claus Brabrand, Mikkel Ricky, and Michael I. Schwartzbach, in *World Wide Web Journal*, Vol. 3, No. 4: 205–214, Baltzer Science Publishers, 2000.

[8] "**MONA Implementation Secrets**," with Nils Klarlund and Michael I. Schwartzbach, in *International Journal on Foundations of Computer Science*, Vol. 13, No. 4: 571–586, World Scientific, 2002; preliminary version in CIAA'00, *Proc. 5th International Conference on Implementation and Application of Automata*, LNCS 2088, Springer-Verlag, 2000.

[9] "**The DSD Schema Language**," with Nils Klarlund and Michael I. Schwartzbach, in *Automated Software Engineering*, Vol. 9, No. 3: 285–319, Kluwer, 2002; preliminary version in *FMSP'00, Proc. 3rd Workshop on Formal Methods in Software Practice: 101-111*, ACM, 2000.

[10] "**The <bigwig> Project**," with Claus Brabrand and Michael I. Schwartzbach, in *Transactions on Internet Technology*, Vol. 2, No. 2: 79–114, ACM, May 2002.

[11] "**Language-Based Caching of Dynamically Generated HTML**," with Claus Brabrand, Steffan Olesen, and Michael I. Schwartzbach, in *World Wide Web Journal*, Vol. 5, No. 4: 305–323, Kluwer, 2002.

[12] "**Extending Java for High-Level Web Service Construction**," with Aske Simon Christensen and Michael I. Schwartzbach, in *Transactions on Programming Languages and Systems*, Vol. 25, No. 6, 814–875. ACM, 2003.

[13] "**Static Analysis of XML Transformations in Java**," with Christian Kirkegaard and Michael I. Schwartzbach, in *Transactions on Software Engineering*, Vol. 30, No. 3, 181–192, IEEE, March 2004.

[14] "**Contracts for Cooperation between Web Service Programmers and HTML Designers**," with Henning Böttger and Michael I. Schwartzbach, in *Journal of Web Engineering*, Vol. 5, No. 1, 65–89, Rinton Press, 2006.

[15] "**Static Validation of XSL Transformations**," with Mads Østerby Olesen and Michael I. Schwartzbach, in *Transactions on Programming Languages and Systems*, Vol. 29, No. 4, ACM, 2007.

[16] "**Dual Syntax for XML Languages**," with Claus Brabrand and Michael I. Schwartzbach, in *Information Systems*, Vol. 33, No. 4, Elsevier, June 2008; preliminary version in *DBPL'05, Proc. 10th International Symposium on Database Programming Languages*, LNCS 3774, Springer-Verlag, 2005.

[17] "**Analyzing Ambiguity of Context-Free Grammars**," with Claus Brabrand and Robert Giegerich, in *Science of Computer Programming*, Vol. 75, No. 3, Elsevier, March 2010; preliminary version in *CIAA'07, Proc. 12th International Conference on Implementation and Application of Automata*, Springer-Verlag, 2007.

[18] "**XML Graphs in Program Analysis**," with Michael I. Schwartzbach, in *Science of Computer Programming*, Vol. 76. No. 6, Elsevier, June 2011; preliminary version invited paper in *PEPM'07, Proc. ACM SIGPLAN Workshop on Partial Evaluation and Program Manipulation*, 2007.

[19] "**Automated Detection of Client-State Manipulation Vulnerabilities**," with Mathias Schwarz, in *Transactions on Software Engineering and Methodology*, Vol. 23, No. 4, Article 29, ACM, August 2014; earlier version in *ICSE'12, Proc. 34th International Conference on Software Engineering*, ACM, June 2012. ***ACM SIGSOFT Distinguished Paper Award***

[20] "**Message Safety in Dart**," with Erik Ernst, Mathias Schwarz, and Fabio Strocco, in *Science of Computer Programming*, Vol. 133, Part 1, Elsevier, January 2017; earlier versions in *DLS'15, Proc. Dynamic Languages Symposium*, October 2015, and *FOOL'14, 21th International Workshop on Foundations of Object-Oriented Languages*, October 2014.

[21] "**QuickChecking Static Analysis Properties**," with Jan Midtgaard, in *Software Testing, Verification and Reliability*, Vol. 27, No. 6, Wiley, September 2017; earlier version in *ICST'15, Proc. 8th IEEE International Conference on Software Testing, Verification, and Validation*, April 2015.

[22] "**A Survey of Dynamic Analysis and Test Generation for JavaScript**," with Esben Andreasen, Liang Gong, Michael Pradel, Marija Selakovic, Koushik Sen, and Cristian-Alexandru Staicu, in *ACM Computing Surveys*, Vol. 50, No. 5, Article 66, September 2017.

[23] "**Practical Initialization Race Detection for JavaScript Web Applications**," with Christoffer Quist Adamsen and Frank Tip, in *Proceedings of the ACM on Programming Languages, OOPSLA'17, 30th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, 66:1–66:22, October 2017. ***ACM SIGPLAN Distinguished Paper Award***

[24] "**Type Test Scripts for TypeScript Testing**," with Erik Krogh Kristensen, in *Proceedings of the ACM on Programming Languages, OOPSLA'17, 30th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, 90:1–90:25, October 2017.

[25] "**Static Analysis with Demand-Driven Value Refinement**," with Benno Stein, Benjamin Barslev Nielsen, and Bor-Yuh Evan Chang, in *Proceedings of the ACM on Programming Languages, OOPSLA'19, 32nd ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, October 2019.

[26] "**A Principled Approach to Selective Context Sensitivity for Pointer Analysis**," with Yue Li, Tian Tan, and Yannis Smaragdakis, in *Transactions on Programming Languages and Systems*, Vol. 42, No. 2, ACM, 2020. extended version of "**Precision-Guided Context Sensitivity for Pointer Analysis**," in *Proceedings of the ACM on Programming Languages, OOPSLA'18, 31st ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, 141:1–141:29, November 2018.

[27] "**Eliminating Abstraction Overhead of Java Stream Pipelines using Ahead-of-Time Program Optimization**," with Oskar Haarklou Veileborg, in *Proceedings of the ACM on Programming Languages, OOPSLA'20, 33rd ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, November 2020.

[28] "**Detecting Locations in JavaScript Programs Affected by Breaking Library Changes**," with Benjamin Barslev Nielsen and Martin Toldam Torp, in *Proceedings of the ACM on Programming Languages, OOPSLA'20, 33rd ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, November 2020.

Other Refereed or Invited Research Publications (excluding papers published in journals)

[29] "**MONA 1.x: New Techniques for WS1S and WS2S**" (tool paper), with Jacob Elgaard and Nils Klarlund, in *CAV'98, Proc. 10th International Conference on Computer-Aided Verification: 516–520*, LNCS 1427, Springer-Verlag, 1998.

[30] "**Compile-Time Debugging of C Programs Working on Trees**," with Jacob Elgaard and Michael I. Schwartzbach, in *ESOP'00, Proc. 9th European Symposium on Programming: 119–134*, LNCS 1782, Springer-Verlag, 2000.

[31] "**The Pointer Assertion Logic Engine**," with Michael I. Schwartzbach, in *PLDI'01, Proc. Conference on Programming Language Design and Implementation*, ACM, 2001.

[32] "**Static Validation of Dynamically Generated HTML**," with Claus Brabrand and Michael I. Schwartzbach, in *PASTE'01, Proc. Workshop on Program Analysis for Software Tools and Engineering*, ACM, 2001.

[33] "**Static Analysis for Dynamic XML**," with Aske Simon Christensen and Michael I. Schwartzbach; presented at *PLAN-X'02, Programming Language Technologies for XML*, October 2002; also in BRICS Report Series, RS-02-24, Department of Computer Science, Aarhus University, May 2002.

[34] "**Precise Analysis of String Expressions**," with Aske Simon Christensen and Michael I. Schwartzbach, in *SAS'03, Proc. 10th International Static Analysis Symposium: 1–18*, LNCS 2694, Springer-Verlag, 2003.

[35] "**A Runtime System for XML Transformations in Java**," with Aske Simon Christensen and Christian Kirkegaard, in *XSym'04, Proc. 2nd International XML Database Symposium: 143–157*, LNCS 3186, Springer-Verlag, 2004.

[36] "**Type Checking with XML Schema in XACT**," with Christian Kirkegard, presented at *PLAN-X'06, Programming Language Technologies for XML*, January 2006; also in BRICS Report Series, RS-05-31, Department of Computer Science, Aarhus University, September 2005.

[37] "**The Design Space of Type Checkers for XML Transformation Languages**" (invited paper), with Michael I. Schwartzbach, in *ICDT'05, Proc. 10th International Conference on Database Theory: 17–36*, LNCS 3363, Springer-Verlag, 2005.

[38] "**Static Analysis for Java Servlets and JSP**," with Christian Kirkegaard, in *SAS'06, Proc. 13th International Static Analysis Symposium*, LNCS 4134, Springer-Verlag, 2006. Full version available in BRICS Report Series, RS-06-10, Department of Computer Science, Aarhus University, June 2006.

[39] "**Static Analysis for Event-Based XML Processing**," presented at *PLAN-X'08, Programming Language Technologies for XML*, January 2008; also in BRICS Report Series, RS-08-01, Department of Computer Science, Aarhus University, January 2008.

[40] "**JWIG: Yet Another Framework for Maintainable and Secure Web Applications**," with Mathias Schwarz, in *WEBIST'09, Proc. 5th International Conference on Web Information Systems and Technologies*, 2009. Full version available in BRICS Report Series, RS-09-02, Department of Computer Science, Aarhus University, March 2009.

[41] "**Type Analysis for JavaScript**," with Simon Holm Jensen and Peter Thiemann, in *SAS'09, Proc. 16th International Static Analysis Symposium: 238–255*, LNCS 5673, Springer-Verlag, 2009.

[42] "**Interprocedural Analysis with Lazy Propagation**," with Simon Holm Jensen and Peter Thiemann, in *SAS'10, Proc. 17th International Static Analysis Symposium*, LNCS 6337, Springer-Verlag, 2010.

[43] "**HTML Validation of Context-Free Languages**," with Mathias Schwarz, in *FoSSaCS'11, Proc. 14th International Conference on Foundations of Software Science and Computation Structures*, LNCS 6604, Springer-Verlag, 2011.

[44] "**A Framework for Automated Testing of JavaScript Web Applications**," with Shay Artzi, Julian Dolby, Simon Holm Jensen, and Frank Tip, in *ICSE'11, Proc. 33rd International Conference on Software Engineering*, ACM, May 2011.

[45] "**Modeling the HTML DOM and Browser API in Static Analysis of JavaScript Web Applications**," with Simon Holm Jensen and Magnus Madsen, in *ESEC/FSE'11, Proc. 8th European Software Engineering Conference / ACM SIGSOFT International Symposium on Foundations of Software Engineering*, September 2011.

[46] "**Tool-supported Refactoring for JavaScript**," with Asger Feldthaus, Todd Millstein, Max Schäfer, and Frank Tip, in *OOPSLA'11, Proc. 26th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, October 2011.

[47] "**Improving Tools for JavaScript Programmers (Position Paper)**," with Esben Andreasen, Asger Feldthaus, Simon Holm Jensen, Casper S. Jensen, Peter A. Jonsson, and Magnus Madsen, in *STOP'12, Proc. International Workshop on Script to Program Evolution*, June 2012.

[48] "**Remedying the Eval that Men Do**," with Simon Holm Jensen and Peter A. Jonsson, in *ISSTA'12, Proc. 21st International Symposium on Software Testing and Analysis*, ACM, July 2012. ***ACM SIGSOFT Distinguished Paper Award***

[49] "**Automated Testing with Targeted Event Sequence Generation**," with Casper S. Jensen and Mukul R. Prasad, in *ISSTA'13, Proc. 22nd International Symposium on Software Testing and Analysis*, ACM, July 2013.

[50] "**Server Interface Descriptions for Automated Testing of JavaScript Web Applications**," with Casper S. Jensen and Zhendong Su, in *ESEC/FSE'13, Proc. 9th European Software Engineering Conference / ACM SIGSOFT International Symposium on Foundations of Software Engineering*, August 2013.

[51] "**Semi-Automatic Rename Refactoring for JavaScript**," with Asger Feldthaus, in *OOPSLA'13, Proc. 28th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, October 2013.

[52] "**Sparse Dataflow Analysis with Pointers and Reachability**," with Magnus Madsen, in *SAS'14, Proc. 21st International Static Analysis Symposium*, September 2014.

[53] "**Checking Correctness of TypeScript Interfaces for JavaScript Libraries**," with Asger Feldthaus, in *OOPSLA'14, Proc. 29th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, October 2014. ***ACM SIGPLAN OOPSLA 2014 Artifact Award***

[54] "**Determinacy in Static Analysis of jQuery**," with Esben Andreasen, in *OOPSLA'14, Proc. 29th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, October 2014.

[55] "**Systematic Execution of Android Test Suites in Adverse Conditions**," with Christoffer Quist Adamsen and Gianluca Mezzetti, in *ISSTA'15, Proc. 24th International Symposium on Software Testing and Analysis*, July 2015. ***ACM SIGSOFT Distinguished Paper Award***

[56] "**Stateless Model Checking of Event-Driven Applications**," with Casper Svenning Jensen, Veselin Raychev, Dimitar Dimitrov, and Martin Vechev, in *OOPSLA'15, Proc. 30th ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications*, October 2015.

[57] "**Feedback-Directed Instrumentation for Deployed JavaScript Applications**," with Magnus Madsen, Frank Tip, Esben Andreasen, and Koushik Sen, in *ICSE'16, Proc. 38th International Conference on Software Engineering*, ACM, May 2016. ***ACM SIGSOFT Distinguished Paper Award***

[58] "**Analyzing Test Completeness for Dynamic Languages**," with Christoffer Quist Adamsen and Gianluca Mezzetti, in *ISSTA'16, Proc. 25th International Symposium on Software Testing and Analysis*, July 2016. ***ACM SIGSOFT Distinguished Paper Award***

[59] "**Type Unsoundness in Practice: An Empirical Study of Dart**," with Gianluca Mezzetti and Fabio Strocco, in *DLS'16, Proc. Dynamic Languages Symposium*, November 2016.

[60] "**Type Safety Analysis for Dart**," with Thomas S. Heinze and Fabio Strocco, in *DLS'16, Proc. Dynamic Languages Symposium*, November 2016.

[61] "**Inference and Evolution of TypeScript Declaration Files**," with Erik Krogh Kristensen, in *FASE'17, Proc. 20th International Conference on Fundamental Approaches to Software Engineering*, April 2017. ***ETAPS 2017 Best Paper Award Nominee***

[62] "**Repairing Event Race Errors by Controlling Nondeterminism**," with Christoffer Quist Adamsen, Rezwana Karim, Manu Sridharan, Frank Tip, and Koushik Sen, in *ICSE'17, Proc. 39th International Conference on Software Engineering*, IEEE / ACM, May 2017.

[63] "**Systematic Black-Box Analysis of Collaborative Web Applications**," with Marina Billes and Michael Pradel, in *PLDI'17, Proc. 38th Conference on Programming Language Design and Implementation*, ACM, June 2017.

[64] "**Systematic Approaches for Increasing Soundness and Precision of Static Analyzers**," with Esben Sparre Andreasen and Benjamin Barslev Nielsen, in *SOAP'17, Proc. 6th International Workshop on the State Of the Art in Program Analysis*, ACM SIGPLAN, June 2017.

[65] "**Type Regression Testing to Detect Breaking Changes in Node.js Libraries**," with Gianluca Mezzetti and Martin Toldam Torp, in *ECOOP'18, Proc. 32nd European Conference on Object-Oriented Programming*, July 2018.

[66] "**Practical AJAX Race Detection for JavaScript Web Applications**," with Christoffer Quist Adamsen, Saba Alimadadi, and Frank Tip, in *ESEC/FSE'18, Proc. 26th European Software Engineering Conference / ACM SIGSOFT International Symposium on Foundations of Software Engineering*, November 2018.

[67] "**Scalability-First Pointer Analysis with Self-Tuning Context-Sensitivity**," with Yue Li, Tian Tan, and Yannis Smaragdakis, in *ESEC/FSE'18, Proc. 26th European Software Engineering Conference / ACM SIGSOFT International Symposium on Foundations of Software Engineering*, November 2018.

[68] "**Reasonably-Most-General Clients for JavaScript Library Analysis**," with Erik Krogh Kristensen, in *ICSE'19, Proc. 41st International Conference on Software Engineering*, IEEE / ACM, May 2019.

[69] "**Model-Based Testing of Breaking Changes in Node.js Libraries**," with Martin Toldam Torp, in *ESEC/FSE'19, Proc. 27th European Software Engineering Conference / ACM SIGSOFT International Symposium on Foundations of Software Engineering*, August 2019.

[70] "**NodeRacer: Event Race Detection for Node.js Applications**," with André Takeshi Endo, in *ICST'20, Proc. International Conference on Software Testing, Verification, and Validation*, IEEE, March 2020.

[71] "**Extracting Taint Specifications for JavaScript Libraries**," with Cristian-Alexandru Staicu, Martin Toldam Torp, Max Schäfer, and Michael Pradel, in *ICSE'20, Proc. 41st International Conference on Software Engineering*, ACM, May 2020.

[72] "**Value Partitioning: A Lightweight Approach to Relational Static Analysis for JavaScript**," with Benjamin Barslev Nielsen, in *ECOOP'20, Proc. 34th European Conference on Object-Oriented Programming*, July 2020.

[73] "**Semantic Patches for Adaptation of JavaScript Programs to Evolving Libraries**," with Benjamin Barslev Nielsen and Martin Toldam Torp, in *ICSE'21, Proc. 42nd International Conference on Software Engineering*, IEEE / ACM, May 2021.

[74] "**Modular Call Graph Construction for Security Scanning of Node.js Applications**," with Benjamin Barslev Nielsen and Martin Toldam Torp, in *ISSTA'21, Proc. 30th International Symposium on Software Testing and Analysis*, ACM, July 2021.

[75] "**Detecting Blocking Errors in Go Programs using Localized Abstract Interpretation**," with Oskar Haarklou Veileborg and Georgian-Vlad Saioc, in *ASE'22, Proc. 37th International Conference on Automated Software Engineering*, IEEE / ACM, October 2022. ***ACM SIGSOFT Distinguished Paper Award***

Other Publications

[76] "**Document Structure Description 1.0**," with Nils Klarlund and Michael I. Schwartzbach, in BRICS Notes Series, NS-00-7, Department of Computer Science, Aarhus University, December 2000. 40 pp.

[77] "**MONA Version 1.4 User Manual**," with Nils Klarlund, in BRICS Notes Series, NS-01-1, Department of Computer Science, Aarhus University, January 2001. 83 pp. Revision of BRICS NS-98-3.

[78] "**The XML Revolution — Technologies for the future Web**," with Michael I. Schwartzbach, in BRICS Notes Series, NS-01-8, Department of Computer Science, Aarhus University, December 2001. 186 pp. Revision of BRICS NS-00-8.

[79] "**Interactive Web Services with Java**," with Michael I. Schwartzbach, in BRICS Notes Series, NS-02-1, Department of Computer Science, Aarhus University, April 2002. 99 pp.

[80] "**JWIG User Manual**," with Aske Simon Christensen, in BRICS Notes Series, NS-02-6, Department of Computer Science, Aarhus University, June 2002. 35 pp. (Revised February 2003.)

[81] "**Document Structure Description 2.0**," in BRICS Notes Series, NS-02-7, Department of Computer Science, Aarhus University, December 2002. 29 pp.

[82] "**Verifikation af Softwaresystemer**" (in Danish), in Carlsbergfondets Årsskrift, 2005.

[83] "**The Big Manual for the Java String Analyzer**," with Asger Feldthaus, Department of Computer Science, Aarhus University, September 2009. 32 pp.

[84] "**Static Program Analysis**," with Michael Schwartzbach, Department of Computer Science, Aarhus University, 2008–2018. 132 pp.

[85] "**In Defense of Soundiness: A Manifesto**," with Benjamin Livshits, Manu Sridharan, Yannis Smaragdakis, Ondrej Lhotak, J. Nelson Amaral, Bor-Yuh Evan Chang, Samuel Z. Guyer, Uday P. Khedker, and Dimitrios Vardoulakis, in *Commun. ACM*, February 2015.

[86] "**ArtForm: A Tool for Exploring the Codebase of Form-based Websites**," with Benjamin Spencer, Michael Benedikt, and Franck van Breugel, in *ISSTA'17 Demonstrations Track*, ACM SIGSOFT, July 2017.

[87] "**Technical Perspective – WebAssembly: A Quiet Revolution of the Web**," in *Commun. ACM*, Vol. 61 No. 12, Page 106, December 2018.