

Full Curriculum Vitae – Jaco van de Pol – March 2026

1 General Information

Name : Prof. Dr. J.C. (Jaco) van de Pol
Born : April 6, 1969 in Barneveld, The Netherlands

Current Affiliations

Aarhus University (full-time)	University of Twente (part-time)
Dept. of Computer Science	Formal Methods and Tools
Åbogade 34, Turing Building	P.O.-box 217, Zilverling
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2 Research Interests

Quantum Software, quantum circuit optimization and compilation. Model checking, theorem proving, SAT/SMT solving and testing techniques, for the analysis and optimization of safety, dependability, efficiency and security aspects of software-intensive computer systems. More specifically, the development of new algorithms, based on symbolic techniques (e.g. abstraction, confluence, fixpoint equation systems, constraint solving, binary decision diagrams, parameter synthesis) and high-performance computing (e.g. distributed model checking, multi-core and out-of-core algorithms). Application domains include distributed and embedded systems, socio-technical and biological systems, quantum systems.

3 Working Experience

- Nov 2018 – current: Professor of Computer Science, Aarhus University, Denmark.
- Sept 2007 – current: Full Professor University of Twente, The Netherlands. Faculty of EEMCS, Research Institute CTIT, *Chair Formal Methods and Tools*.
- May 2004 – Aug 2007: Associate Professor (UHD, 0.2 fte) at the Technische Universiteit Eindhoven, Subsection: *Design and Analysis of Systems* (OAS).
- Sept 2004 – Aug 2007: Theme Leader at the Centrum voor Wiskunde en Informatica, Amsterdam, Theme SEN 2: *Specification and Analysis of Embedded Systems*.
- May 1999 – Sept 2004: Senior researcher at the Centrum voor Wiskunde en Informatica, Amsterdam, Dept. of Software Engineering (SEN 2).
- Nov 1996 – May 1999: Postdoc at the Eindhoven University of Technology, Department of Computing Science, Section Technical Applications.
- May 1994 – Jan 1995: Scientific assistant at the Ludwig Maximilian Universität München, Mathematisches Institut, section Mathematical Logic.
- Dec 1992 – Oct 1996: PhD at Utrecht University, Department of Philosophy, Section of Theoretical Philosophy, Applied Logic.

4 Management Positions

- Sep 2025 – : Head of Degree Programme Computer Science (BSc+MSc)
- Apr 2016 – Jun 2017: Vice Dean Faculty of EEMCS
- Jan 2014 – Jun 2017: Head of Department Computer Science, University of Twente
- Jan 2014 – Jan 2015: Scientific Director CTIT (ad interim)

5 Education

- **Master degree:** December 1992
University : Utrecht University, Department of Computer Science
Main subject : Theoretical Computer Science (Modularity in Term Rewriting)
Predicate : Cum laude
- **Doctoral degree:** 11 December 1996
University : Utrecht University, Department of Philosophy
Supervisor : Prof. Dr. J.A. Bergstra
Title of thesis : Termination of Higher-order Rewrite Systems
- Research Management/Academic Leadership courses
(Leeuwendaal 2005, Eva Wilthing 2008, Krauthammer 2011)
- BKO – University Teaching Qualification UTQ 2013

6 Academic Duties and Honours

6.1 Prizes and Awards

- Distinguished Paper Award with Magnus Madsen, ECOOP 2023
- Outstanding Domain Submission Award with Irfansha Shaik, IPC 2023
- Best Paper Award with Simon Wimmer and Frédéric Herbreteau, FORMATS 2020
- Best Student Paper Award with Vincent Bloemen, BPM 2018 (Sydney, Australia)
- Best Paper Award with Wytse Oortwijn, Tom van Dijk at SPIN 2017 (CA, USA)
- MCC competition 2016: LTSmin wins gold medal in LTL category
- RERS challenge 2016, LTSmin overall winner Parallel Problems (ISOLA, Corfu)
- RERS challenge 2013, 1st prize with LTSmin tool (ASE'13, Silicon Valley, CA, USA)
- RERS challenge 2012, 1st prize with LTSmin tool (ISOLA, Crete)
- MSc student Djurre van der Wal: Dutch Internet Thesis Prize 2018
- MSc student Thomas Neele: 2nd Dutch M&I Informatics Thesis Prize 2016
- MSc student Vincent Bloemen: U Twente thesis prize 2016
- MSc student Tom van Dijk: 2nd Dutch M&I Informatics Thesis Prize 2012
- MSc student Elwin Pater: ENIAC Thesis prize 2011
- PhD student Alfons Laarman: graduated cum laude, NWO-VENI personal grant
- PhD Mark Timmer: cum laude, IPA dissertation '13 and Overijssel PhD award '13
- PhD Marcus Gerhold and Vincent Bloemen: 2nd and 3rd PhD-award VERSEN 2020

6.2 International Activities

- Editorial Board Member of Elsevier's *Science of Computer Programming* (2014-)
- Editorial Board Member of Springer's *Software Tools for Technology Transfer* (2017-)
- Invited Speaker at conferences, workshops, summerschools, panels:
 - Joint keynote speaker: CONCUR+FMICS+FORMATS, Antwerpen, 2023
 - Keynote: CONCUR+FMICS (Concurrency Theory), Amsterdam, 2019
 - Keynote: TTCS (Topics in Theoretical Computer Science), Tehran, Iran, 2017
 - Keynote: Petri Nets and ACSD, Zaragoza, Spain, 2017
 - Keynote: RP (Reachability Properties), Aalborg, Denmark, 2016
 - Keynote: NWPT (Nordic WS on Programming Theory), Tallinn, Estonia, 2013
 - Keynote: AVOCS (Automated Verification of Critical Systems), Germany, 2012
 - Keynote: HIBI (High-performance computing in Biology), Trento, Italy, 2009
 - Invited: DMCD (Dutch Model Checking Day), Utrecht, The Netherlands, 2018
 - Invited: MLQA (Modelling/Analysis of Quantitative Systems), Scotland, 2012
 - Invited: PDMC (Parallel and Distributed Model Checking), Utah, USA, 2011
 - Invited: Dagstuhl and Lorentz workshops (2001, 2007, 2008, 2010, 2013, 2014)
 - Panel Organiser: Competitions: Expectations, Progress, Impact (ISOLA, 2016)
 - Panel Member: Can formal methods help cleaning our software? (ISOLA, 2016)
 - Lecturer: VTSA summerschool, Luxembourg, 2014 (7 hours)
On: Verification Technology, Systems and Applications
 - Lecturer: Types Summerschool, Giens, France, 1999.
 - Tutorial: "Problem solving with Model Checking Techniques" at ICAPS (Automated Planning and Scheduling), Freiburg, Germany, 2011.
 - Tutorial: "Concurrent Algorithms for Model Checking" at FSTTCS Colocated Workshop "Advances in Verification", Bits-Pilani, Goa, India, 2020.
- Steering Committee member of SPIN *Model Checking of Software* (2017-)
- Chair (2019-2022) and Vice-chair (2003-2018) of the ERCIM working group FMICS (Formal methods for Industrial Critical Systems)
- Organizer FMQC '25 Aarhus, '26 Lisboa (Formal Methods in Quantum Computing)
- Organiser Lorentz Workshop "Advancing Verification Competitions as a Scientific Method", Feb. 2019
- Coordinator FP6 project EC-MOAN (2007-2010)
(Modeling and Analysis of Emergent Cell Behaviour in *Escherichia Coli*)
- Project proposal review boards:
 - Reviewer Research Proposal for Austrian Science Fund, FWF (2023)
 - Academy of Finland, CS Panel (Member: '13, '14, Chair: '16, '17)
 - Peer Reviewer ERC Advanced Grant proposal (2017)
 - Reviewer Research Proposal for Swiss National Science Foundation (2013)
 - Evaluator of European ITEA-project 'Sophocles' (2002, 2003).
- Selection committee best tool paper awards ETAPS (2022, 2023, 2024)

- International PhD reviews/juries and habilitations: Chalmers U of Technology, Sweden (2008), Technical U of Lisboa, Portugal (2010), Masaryk U Brno, CR (2012, 2015), U Paris-Est, France (2012), U of Malaga, Spain (2013), Bar-Ilan University, Israel (2014), U Paris VI, France (2014, 2016, 2017), Saarbrücken U, Germany (2015), U of Aalto, Finland (2017), U of Luxembourg (2017, 2020), U of Aalborg (2018), U Paris 13, LIPN, France (2019, 2019), Budapest U of T&E (2020), Sokendai/NII Japan (2020).
- Research visits
 - Paris 13, LIPN, Invited Professor (2024, two weeks)
 - University of Nancy, Invited Professor (2022, one month)
 - Paris 13, LIPN, Invited Professor (2022, three weeks)
 - Paris 13, LIPN, Invited Professor (9/2019, three weeks)
 - Paris 13, LIPN (9/2018, one week)
 - Paris UPMC, LIP6, Invited Professor (10/2017, one month)
 - University of Swansea, Railway Workshop (7/2017, one week)
 - Paris 13, LIPN, Invited Professor (6/2017, one month)
 - Paris 13, LIPN, Invited Professor (6/2016, one month)
 - Masaryk University, Brno, (12/2006, two weeks)
 - INRIA Grenoble, France (2005, one week)
 - AIST-Amagasaki, Japan, 03/2003 (two weeks)
 - LMU München, 1994/95 (9 months)
- Co-organizer SENVA workshops (CWI/INRIA) 06/'04, 06/'05, 11/'05, 04/'06, 06/'06
- Conference co-chair of International Conferences and Workshops
 - CONCUR 2025, 36th IC on Concurrency Theory, Aarhus, Denmark
 - appFM 2021, 1st IW on Applicable Formal Methods, Beijing, China
 - SYNCOP 2019, IW Synthesis of Complex Parameters, Prague
 - TACAS 2015, IC on Tools & Algs for the Construction and Analysis, tool chair
 - AVOCS 2014, IW on Automated Verification of Critical Systems, Twente, NL
 - SPIN 2010, IW on Model Checking Software, Twente, The Netherlands
 - PDMC 2009, Parallel and Distributed Methods in Verification, Eindhoven
 - PDMC 2006, IW on Parallel and Distributed Methods in Verification, Bonn
 - PDMC 2005, IW on Parallel and Distributed Methods in Verification, Lisbon
 - IFM 2005, IC on Integrated Formal Methods, Eindhoven, The Netherlands
- PC-member of >100 International Conferences and Workshops:
 - ECAI '25 (Outstanding PC member): European Conf. on Artificial Intelligence
 - CONCUR '21, '25: Concurrency Theory
 - TACAS '04,'06,'14,'15,'17,'20,'21: Tools & Algs for Construction and Analysis
 - FM '09,'19,'21,'26: Formal Methods
 - ACSD '17,'18,'19: Applications of Concurrency in System Design

- AMAST '04,'06: Algebraic Methodology And Software Technology
 - FORTE '19: Formal Techniques for Distributed Systems
 - FMCAD '18: Formal Methods in Computer Aided Design
 - FMICS '07,'09-'11,'13-'15,'18-'24: Formal Methods in Industrial Critical Systems
 - FMICS/AVOCS '16,'17
 - AVOCS '13,'14,'15: Automated Verification of Critical Systems
 - FORTE/FMOODS '13: Formal Techniques for Distributed Systems
 - FSCD '19: Formal Structures for Computation and Deduction
 - ICFEM '14,'15,'16,'17,'18,'19,'20: Formal Engineering Methods
 - IFM '05,'07,'22: Integrated Formal Methods
 - LATA '15: Language and Automata Theory and Applications
 - NFM '25: Nasa Formal Methods
 - PECCS '13,'14: Pervasive, Embedded Computing and Communicating Systems
 - Petri Nets'21,'22,'23
 - SOFSEM '11: Current Trends in Theory and Practice of Computer Science
 - SPIN '10,'12,'14,'15,'18,'19,'21,'22,'24: Model Checking of Software
 - SETTA'19,'20,'21: Symp. on Dependable Software Engineering
 - SBMF '19: Brazilian Symposium on Formal Methods
 - TASE'23: Theoretical Aspects of Software Engineering
 - TMPA '17: Tools & Methods of Program Analysis
 - CG '24: Computer Games
 - SynCoP '18: Synthesis of Complex Parameters
 - RSSRail '17, '25: Reliability, Safety and Security of Railway Systems
 - MEMICS '12: Mathematical and Engineering Methods in Computer Science
 - GRAPHITE '12: Graph Inspection and Traversal Engineering
 - TTSS '11: Harnessing Theories for Tool Support in Software
 - FOCLASA '10,'11: Coordination Languages and Software Architectures
 - HIBI '09,'10: High-performance Computational Systems Biology
 - COMPMOD '09: Computational Models of Cell Processes
 - PDMC '05,'06,'07,'08,'09,'10,'11: Parallel Distributed Methods in Verification
 - WRS '04,'06,'07,'11: Reduction Strategies in Rewriting and Programming
 - EXPRESS '04: Expressiveness in Concurrency
 - FM Doctoral Symposium '16,'19
- Guest editor for special issues in international journals:
STTT (2004, 2005), ENTCS (2006, 2007), EPTCS (2009, 2021), SCP (2016)
 - Reviewer for international journals: ACM Programming Languages, Communications of the ACM, Computers and Security, Computational and Applied Mathematics, Concurrency and Computation (practice and experience), Engineering Applications of Artificial Intelligence, Formal Aspects of Computing, Foundations of Computer Science, Fundamenta Informaticae, IEEE Access, J. of Parallel and Distributed Computing, J. of Systems and Software, J. of Systems Architecture, Logical Methods in Computer Science, Natural Computing, Parallel Computing, Quantum,

Quantum Information & Computation, Science of Computer Programming, Software Tools and Technology Transfer, Theoretical Computer Science, Trans. on Parallel and Distributed Systems, Trans. on Software Engineering, IEEE/ACM Trans. on Computational Biology and Bioinformatics, IEEE Trans. on Reliability.

6.3 National Activities (The Netherlands / Denmark)

- Member WG DeiC - Danish Quantum Algorithm Academy - DQA (2024-)
- Chairman Advisory Board “Blockchain Research” (ICT topteam/NWO) (2018)
- Chairman NVTI (Nederlandse Vereniging voor Theoretische Informatica) ('09-'13)
- Secretary NVTI (Nederlandse Vereniging voor Theoretische Informatica) ('05-'09)
- Advisory Board The Hague Security Delta ('14-'17)
- Board member IPN, ICT Platform Netherlands, ('16-'18)
- Board Member IPA (Instituut voor Programmatuurkunde en Algoritmen) ('07-'14)
- PC member VSNU Student Research Conference (SRC'11,'12,'13,'14,'15,'16)
- Member NWO VENI EW Selection Committee (Member: '12, Chair: '14, '15)
- Member NWO TOP-proposals Selection Committee (2018)
- (Co-)organized national events:
 - DIREC workshop, *Verifiable and Robust AI*, Sandbjerg, Denmark, 2023.
 - BSR Winterschool, *Big Software on the Run*, Ede, NL, 10/2016.
 - CTIT Symposium, *Dependable ICT - who cares?*, Twente, NL, 06/2010.
 - DMCD'09,'14,'16, Dutch Model Checking Day, Twente, 04/2009, 05/2014, 07/2016.
- Co-promotor PhD students:
 - Simona Orzan (VU, 25/11/2004)
 - Miguel Valero (VU, 5/12/2005)
 - Bahareh Badban (VU, 7/9/2006)
- Promotor PhD students:
 - Anton Wijs (VU, 2/10/2007)
 - Mohammed Dashti (VU, 27/2/2008)
 - Jens Calamé (UT, 4/9/2008)
 - Taolue Chen (VU, 21/09/2009)
 - Wouter Kuijper (UT, 07/12/2012)
 - Mark Timmer (UT, 13/09/2013) (cum laude)
 - Tri Minh Ngo (UT, 17/04/2014)
 - Alfons Laarman (UT, 9/05/2014) (cum laude)
 - Axel Belinfante (UT, 18/09/2014)
 - Maciej Gazda (TU/e, 15/03/2016) (2nd promotor)
 - Tom van Dijk (UT, 13/07/2016)
 - Waheed Ahmad (UT, 13/04/2017)
 - Oguzcan Oguz (UT, 16/02/2018)

- Marcus Gerhold (UT, 12/12/2018)
- Vincent Bloemen (UT, 10/07/2019)
- Jeroen Meijer (UT, 20/09/2019)
- Irfansha Shaik (AU, 25/10/2023)
- Steffan Sølvsten (AU, 15/05/2025)
- Freark van der Berg (UT, 07/11/2025)

4 PhD students are still ongoing

- Reading Committee and/or Opposition in 65 PhD/Habilitation defenses

7 Managerial Activities

7.1 Aarhus University

- 2025-now : Head of Degree Programme Computer Science (BSc + MSc)
- 2024-now : Co-leadership (trio) Quantum Campus Aarhus
- 2021-now : Member of the Academic Council at Natural Sciences
- 2020-now : Chair DIGIT WP8 “Automated Verification and Synthesis”
- 2019-now : Member of the Education Board at Computer Science

7.2 University of Twente

- Vice Dean Faculty EEMCS (apr 2016-jun 2017)
- Head of Department Computer Science (jan 2014-jun 2017)
- Scientific Director ad interim CTIT (jan 2014-jan 2015)
- Board member Faculty Club UT (2013-2017)
- Programme Leader Twente Graduate School on *Dependable and Secure Computing*
- Coordinator 3TU.CeDICT-Twente (Centre on Dependable ICT Systems)
- Chair of FMT group (Formal Methods and Tools) (2007-2018)

8 Teaching

8.1 Teaching at Aarhus University

- 2019-2024: 22 BSc + 7 MSc thesis students
- from 2019: Computability & Logic, 1st/2nd-year BSc (10EC course)
- from 2022: Algorithmic Model Checking, MSc (10EC course)
- from 2022: Member of the Danish Censor List in CS (censorkorpset i datalogi)

8.2 Teaching at University of Twente

- 2007-2018: 1st supervisor of 22 MSc thesis, 10 BSc thesis projects
- 2015-2018: Languages & Machines (BSc INF + Math, Discrete Models)
- 2008-2013: Basic models in Computer Science (BSc INF + Math)
- 2011-2013: Concurrent and Distributed Programming (BSc INF)
- 2010-2014: Verification Engineering (BSc INF, project course)
- 2016-2018: Logic Programming (BSc INF, Programming Paradigms)
- 2013-2017: Bachelor Referaat (BSc INF, end project)
- 2012-2013: Honours Bachelor: Individual Project (UT Honours Programme BSc)
- 2008-2017: Modelling and Analysis of Computer Systems 1 (MSc course)
- 2009-2017: Modelling and Analysis of Computer Systems 2 (MSc course)
- 2016-2018: Software Security (MSc course, 75 students)
- 2016-2018: Security Verification (MSc seminar)

8.3 Guest Lectures

- 2016: 3 Guest Lectures Radboud University: High-performance Model Checking
- 2005, 2006, 2007: Lecturer “Algorithms for Model Checking” 2IW50 (MSc TU/e)
- 2005-2007: Supervision of 4 internships and students at UU, TU/e, VU and CWI.
- 1998: Exercises classes Models of Computation (TU/e, 3rd year)
- 1998: PVS course (TU/e, OOTI, post-master students)
- 1997: Exercise classes Language and Proof (TU/e, 1st year)
- 1995,1996: Lectures + Exercise classes Logic Programming (UU/CKI, 1st year)

9 Research Projects

9.1 Project Leader/(co-)Applicant/Coordinator/Supervisor

- NNF NQCP, “Circuit Optimization for Quantum Error Correction”, 2 PhD, 2025
- DeiC DQAA, “QoptiQ: The Quest for Optimal Quantum Circuits”, 1 PhD, 2025
- Innovationsfonden DK, “Automated Planning for Quantum Circuit Optimization”, with Kvantify and Aarhus University (company postdoc I Shaik), 2023
- SYNATIC, co-supervised with Laure Petrucci, LIPN, Sorbonne Paris Nord, 2022 (SYNthesis in PArametric TImed games with Concurrency and data)
- DIREC Bridge project “Secure Internet of Things”, Nov 2021 (joint with AU, AAU, CBS, DTU and eight industrial partners)
- Amazon Research Award 60,000 USD, July 2021 (Type Inference with Boolean Unification, with Magnus Madsen)
- H2020 MSCA Individual Fellowship for PD Simon Wimmer at Aarhus, 2021 (Certywhere: Safe Real-Time Systems: Certification Everywhere)

- PAMPAS, NUFFIC Van Gogh Programme, 2018-2019
(Parallel Algorithms for Model-checking and Parameter Synthesis; Paris-Twente)
- 3TU.BSR, coordinator Twente site, 2PhD + 1 PD
On: Big Software on the Run (monitoring, testing, conformance checking)
- STW project SUMBAT, co-applicant, 1PhD + 0.5 programmer (2015-2019)
On: Super-Sizing Model-Based Testing
- FP7 IP TresPass: WP leader, 2015-2016, 1 PhD
On: Risk Estimation of Socio-Technical Security
- FP7 STREP: SENSATION, WP leader, Co-applicant. 11/2012-11/2015, 1 PhD
On: Self Energy-Supporting Autonomous Computing.
- NWO-EW project MaDriD. Applicant. 05/2012-05/2016, 1 PhD
On: Multicore Decision Diagrams.
- NWO-EW project VOCHS. Co-applicant. 09/2010-09/2014, 1 PhD
On: Verification of complex hierarchical systems
- NWO-EW project Syrup. Co-applicant. 03/2009-03/2013, 1 PhD
On: Symbolic Reduction of Probabilistic Models.
- EU FP7-TRANSPORT: INESS. Co-applicant. 10/2008-10/2011, 1 Postdoc
On: Integrated European Railway Signalling System.
- EU FP6-NEST-PATH: EC-MOAN. Project Coordinator, 2/2007-2/2010, 1 Postdoc
On: “Scalable Modeling and Analysis Techniques to Study Emergent Cell-behaviour.
- NWO-EW project VEMPS. Co-applicant. 09/2006-08/2010, 1 PhD
On: Multi-party security protocol analysis with Process Theory and Epistemic Logic.
- NWO-Focus project VeriGEM. Co-applicant. 11/2005-11/2008, 1 Postdoc
On: Verification Grid for Enhanced Model Checking.
- NWO-EW project MoveBP. Co-applicant. 01/2004-01/2008, 1 PhD
On: Modeling and Verification of Business Processes
- NWO-EW project IT-VDS. Applicant, project leader, 10/2001–10/2005, 1 PhD
On: Integrating Techniques for the Verification of Distributed Systems
- STW/Progress project. Applicant, project leader, 03/2000–03/2005, 2 PhD
On: Formal methods for Shared Dataspace Architectures.

9.2 Active Project Member

- ROCKS: NWO-DFG network, 2009–2013. On: RigorOus dependability analysis using model CheckKing for Stochastic systems
- Quasimodo: FP7 project on Quantitative Modeling and Analysis. Partners: U Aalborg, Aachen, Brussel, CNRS, Saarbrücken, ESI; Chess IT, Therma, Hydac.
- SENVA: International Joint Research Team on Safety-Critical Systems. Partners: CWI (SEN2), INRIA (Vasy).
- BSIK-BRICKS: On: Parallel and Distributed Computing, Algorithms. Partners: CWI, NWO, TU-Delft, TU/e, U Twente, U Utrecht.

- European ITEA-project TT-medal; ITEA best-achievement Award-winner 1995. Site leader, staff member, 01/2004–01/2005.
- NWO-EW project ACCOUNT. Staff member, 01/2004-01/2008. On: accountability in electronic commerce protocols. Partners: CWI, UT, VU.
- NWO-EW project TIPSy. Staff member, 07/2003-07/2007. On: tools for performance analysis and system verification. Partners: TU/e, ASML, CWI.
- KTV-project Min. of Defense. staff member, 02/2002–04/2002. On: formal methods for data-acquisition in a LYNX helicopter. Partners: Dutch Royal Navy, NLR, CWI.
- Systems Validation Center (SVC). Project member, 09/1999–12/2002. On: model checking and theorem proving for Telecom systems. Partners: Telematica Institute, UT, CMG, IBM, KPN, Lucent, CWI.
- Philips Natlab internal project. Project member, 05/2000–12/2000. On: automated test generation for MPEG-audio decoders. Partners: Philips Natlab, CWI.
- Senter ORKEST. Postdoc, 11/1996–05/1999. Formal requirements specification of C&C systems. Partners: Hollandse Signaalapparaten, TU/e, RUG, UvA, CWI.
- EU Science Twinning Contract. Scientific assistant, 05/1994–01/1995. On: Termination, proofs and computation. Partners: LMU Munich, Leeds U, Oslo U.

10 List of Publications

According to Google Scholar: h-index 37, 5368 citations (19 Mar 2025).

See publications in DBLP or ORCID.

10.1 International refereed conference proceedings

1. Irfansha Shaik, Jaco van de Pol, *Optimal Clifford Synthesis as Planning*. In: Accepted for ICAPS'26, Dublin, Ireland, 2026.
2. Kostiantyn V. Milkevych, Jaco van de Pol, Irfansha Shaik. *Practical Subarchitectures for Optimal Quantum Layout Synthesis*. In: Accepted for Q-SE'26, Rio de Janeiro, Brazil, 2026.
3. Steffan Christ Sølvsten, Jaco van de Pol, *Multi-variable Quantification of BDDs in External Memory using Nested Sweeping*. In: VMCAI, Rennes, France, LNCS 16417, pp 359-382, 2026.
4. I. Shaik, Jaco van de Pol, *CNOT-Optimal Clifford Synthesis as SAT*. In: IC on Theory and Applications of Satisfiability Testing, SAT'25, Glasgow, Scotland, 2025.
5. Anna B. Jakobsen, Anders B. Clausen, Jaco van de Pol, Irfansha Shaik, *Depth-Optimal Quantum Layout Synthesis as SAT*. In: IC on Theory and Applications of Satisfiability Testing, SAT'25, Glasgow, Scotland, 2025.
6. Jens Emil Christensen, Søren Fuglede Jørgensen, Jaco van de Pol and Andreas Pavlogiannis, *On Exact Sizes of Minimal CNOT Circuits*. In: IC on Reversible Computation, RC'25, Odense, Denmark, 2025.
7. Mikael Bisgaard Dahlsen-Jensen, Baptiste Fievet, Jaco van de Pol and Laure Petrucci, *Controller Synthesis for Parametric Timed Games*, In: IC on Quantitative Evaluation of Systems and Formal Modeling and Analysis of Timed Systems, QEST+FORMATS'25, Aarhus, Denmark, 2025.
8. Giovanna Kobus Conrado, Adam Husted Kjelstrøm, Andreas Pavlogiannis, Jaco van de Pol, *Program Analysis via Multiple Context Free Languages*. Proc. of the ACM on Programming Languages 9(18), POPL, pp 509-538, 2025.
9. I. Shaik, J. van de Pol, *Optimal Layout-Aware CNOT Circuit Synthesis with Qubit Permutation*. ECAI'24, Frontiers in Artificial Intelligence and Applications, Volume 392, pp 4207-4215, 2024.
10. I. Shaik, J. van de Pol, *Optimal Layout Synthesis for Deep Quantum Circuits on NISQ Processors with 100+ Qubits*. SAT'24, LIPIcs, Volume 305, pp. 26:1-18, 2024.
11. S.C. Sølvsten, C.M. Rysgaard, J. van de Pol, *Random Access on Narrow Decision Diagrams in External Memory*. In: SPIN'24, LNCS 14624, 2024.
12. A.B. Jakobsen, R.S.M. Jørgensen, J. van de Pol, A. Pavlogiannis, *Fast Symbolic Computation of Bottom SCCs*. In: TACAS'24 (part III), LNCS 14571. 2024
13. M. B. Dahlsen-Jensen, B. Fievet, L Petrucci, J. van de Pol, *On-The-Fly Algorithm for Reachability in Parametric Timed Games*. In: TACAS'24, LNCS 14571. 2024
14. I. Shaik, V. Mayer-Eichberger, J. van de Pol, A. Saffidine, *Implicit State and Goals in QBF Encodings for Positional Games*. In: Advances in Computer Games (ACG'23), LNCS 14528, pp. 1-13, 2024

15. I. Shaik, J. van de Pol, *Optimal Layout Synthesis for Quantum Circuits as Classical Planning*. In: ACM/IEEE IC on Computer Aided Design (ICCAD), 2023.
16. M. Madsen, J. van de Pol, T. Henriksen, *Fast and Efficient Boolean Unification for Hindley-Milner-Style Type and Effect Systems*. In: OOPSLA 2023.
17. S.C. Sølvsten, J.C. van de Pol, *Predicting Memory Demands of BDD Operations using Maximum Graph Cuts*. In: Automated Technology for Verification and Analysis (ATVA), LNCS 14216, pp. 72-92, 2023.
18. I. Shaik, M. Heisinger, M. Seidl and J.C. van de Pol *Validation of QBF Encodings with Winning Strategies*. In: Theory and Applications of Satisfiability Testing (SAT), LIPIcs 271, pp. 24:1-10, 2023.
19. M. Madsen, J.C. van de Pol, *Programming with Purity Reflection: Peaceful Coexistence of Effects, Laziness, and Parallelism*. In: ECOOP 2023, LIPIcs, Volume 263, pp. 18:1-27, 2023. **(Distinguished Paper Award)**
20. S.C. Sølvsten, J.C. van de Pol, *Adiar 1.1: Zero-suppressed Decision Diagrams in External Memory*. Nasa Formal Methods (NFM), LNCS 13903, pp. 464-471, 2023.
21. C.A. Larsen, S.M. Schmidt, J. Steensgaard, A.B. Jakobsen, J.C. van de Pol and A. Pavlogiannis, *A Truly Symbolic Linear-Time Algorithm for SCC Decomposition*. In: TACAS, LNCS 13994, pp. 353-371, 2023.
22. J.C. van de Pol, *Exploring a Parallel SCC Algorithm - Using TLA+ and the TLC Model Checker*. In: Isola (1), LNCS 13701, pp. 535-555, 2022.
23. M. Seisenberger, M.H. ter Beek, X. Fan, A. Ferrari, A.E. Haxthausen, P. James, A. Lawrence, B. Luttik, J.C. van de Pol, S. Wimmer: *Safe and Secure Future AI-Driven Railway Technologies: Challenges for Formal Methods in Railway*. In: ISoLA (4), LNCS 13704, pp. 246-268, 2022.
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10.4 Edited volumes

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10.6 Abstracts / Invited Talks

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2. Irfansha Shaik and Jaco van de Pol, *Concise QBF Encodings for Games on a Grid*. QBF Workshop 2023.
3. Jaco van de Pol and Irfansha Shaik, *Encoding Planning and Games in SAT and QBF*. FORMATS 2023 (Invited Talk)
4. Jaco van de Pol and Laure Petrucci, *On Completeness of Liveness Synthesis for Parametric Timed Automata (Extended Abstract)*. WADT 2020 (Invited talk), LNCS 12669, pp. 1-8, 2021.
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10.7 Technical Reports (only work not mentioned before)

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10.8 Popular and Professional Press

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10.9 Theses

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