

Joshua Moerman

Curriculum Vitae

Personal Information

Name Joshua Moerman
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Website <https://joshuamoerman.nl>
Nationality Dutch

Education

- 2015–present **PhD Computer Science**, *Radboud University*, Nijmegen.
Research: Active automata learning
Supervisors: Frits Vaandrager, Bas Terwijn, and Alexandra Silva
6 months research visit at UCL (London)
Schools and courses attended during PhD:
2018 IPA Course on Formal methods
2017 IPA Fall days on System and Software Analysis
2017 Marktoberdorf summer school: Logical Methods for Safety and Security of Software Systems
2016 BSR winter school: Big Software on the Run: Where Software meet Data
2016 IPA Fall days on Communication, Safety and Privacy in IoT
2016 IPA Course on Algorithms and Complexity
2015 TOPDRIM summer school: Topology driven methods for complex systems
- 2013–2015 **Master Mathematics**, *Radboud University*, Nijmegen.
Track: Algebra & Topology. Judicium: Summa Cum Laude
Supervisor master thesis: Ieke Moerdijk
- 2009–2013 **Bachelor Computer Science**, *Radboud University*, Nijmegen.
Judicium: Summa Cum Laude
- 2009–2013 **Bachelor Mathematics**, *Radboud University*, Nijmegen.
Judicium: Summa Cum Laude
- 2003–2009 **VWO**, *Christiaan Huygens College*, Eindhoven.
Profile: NT (Natuur & Techniek) met Economie 1, 2

Research Interests

Formal verification
Active automata learning
PAC learning
Black-box testing
Formal language theory

Service

Reviewer Conferences and workshops: LICS 2018, TACAS 2018, CALCO 2017, LATA 2017, POPL 2017, LFCS 2016, CSL 2015
Journals: IEEE Transactions on Software Engineering, Journal of Logical and Algebraic Methods, Science of Computer Programming, Mathematical Problems in Engineering

Member ICFP 2017 artefact committee

Teaching experience

2011–present **Radboud University**, *teaching assistant*.
2015–2018 Supervision of students: Joep Veldhoven (bachelor thesis), David Venhoek (master thesis), and Alexander Fedotov (master internship)
2014–2017 Algoritmen en Datastructuren (2nd year computer science course)
2015, 2017 Complexity Theory (master course, mathematics)
2016 Computability Theory (master course, mathematics)
2015, 2016 Testing Techniques (master course, computer science)
2013 Reflectie (elective course on lambda calculus)
2013 Ringen en Lichamen 2 (2nd year mathematics course)
2012 Symmetrie (2nd year mathematics course)
2012 Inleiding Combinatoriek (1st year computer science course)
2012 Inleiding Wiskunde (1st year computer science course)
2011 Discrete Wiskunde (same course as Inleiding Wiskunde / Combinatoriek)

Awards and other activities

2017–present Jury member of the BAPC (Benelux Algorithm Programming Contest)
2017–present Member of the PhD Council of IPA (Institute for Programming research and Algorithmics)
2016 Coach of Radboud University team at the ACM ICPC world finals, Phuket, Thailand. Award: first to solve problem A

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- 2015 Coach of “That empty teamname”, second place at BAPC, gold medal at NWERC (Northwestern Europe regional contest)
- 2014 Award: Bronze medal (tenth place) at the NWERC
- 2014 Award: Second place at the BAPC
- 2012–2014 Member of the website committee and the magazine committee of the mathematics student association Desda
- 2011 Volunteered at the IMO in Amsterdam
- 2011 Award: Second place at the Global Game jam at the HKU
- 2010 Nominated for the Dutch Game Awards with the game *Dubble*
- 2010–2014 PR for the double bachelor programme (Mathematics and Computer Science) at the Radboud University

Other professions

- 2011–present **Self-employed developer**, *Vadovas*, <https://vadovas.nl/apps/>. KvK Nijmegen: 53323505. Released the following apps in the Apple Appstore: *Cuboom* (co-created), *Zen Zoom* and *Gravity Beats*.
- 2010 **Software developer**, *Rodo*. Released the game *Dubble* in the Apple Appstore.

Publications

- ICTSS 2017 *n-Complete Test Suites for IOCO* - Petra van den Bos, Ramon Janssen, and Joshua Moerman
- POPL 2017 *Learning Nominal Automata* - Joshua Moerman, Matteo Sammartino, Alexandra Silva, Bartek Klin, and Michał Szyrwelski
- LATA 2016 *Minimal Separating Sequences for All Pairs of States* - Rick Smetsers, Joshua Moerman, and David N. Jansen
- ICFEM 2015 *Applying Automata Learning in Embedded Control Software* - Wouter Smeenk, Joshua Moerman, Frits Vaandrager, and David N. Jansen

Further publications

- 2017 *Learning Product Automata* - Joshua Moerman (Poster presentation at LearnAut 2017)
- 2016 *Complementing Model Learning with Mutation-Based Fuzzing* - Rick Smetsers, Joshua Moerman, Mark Janssen, and Sicco Verwer (arXiv)

— Programming skills

Advanced Haskell, C++

Basic C, Go, Java, \LaTeX , Obj-C, Python

— Languages

Dutch **Mothertongue**

English **Fluent**